

SYMPOSIUM ON THE REVISION OF THE UNITED STATES  
PHARMACOPOEIA.\**(Continued from p. 202, February issue, Journal A. Ph. A.)*UNITED STATES PHARMACOPOEIA AND NATIONAL FORMULARY.\*  
FINANCING.

BY A. R. L. DOHME.

A symposium on U. S. P. revision would be incomplete without the question of its financing, and the same applies to the National Formulary. The whole problem of the revision of the U. S. P. is one that should receive the careful consideration of our leading thinkers and workers in pharmacy, because it should progress with the times and be kept strictly up to date, if it is to serve its real purpose as a legal authority and standard for medicines and chemicals. Anyone who has attended one or more Pharmacopoeial Conventions will appreciate that but little opportunity is offered, or can be offered there, to really affect or alter the *modus operandi* or any details as to methods or means of improving or changing the several divisions and branches of the revision work. For this reason suggestions for change in methods of the revision might advantageously come from without the Revision Committee, and accounts for this A. Ph. A. symposium. The prime error in the revision is, and always has been, that those engaged in it are at the same time engaged in other serious work, which takes up most of their time and thought. Coupled with this is the unnecessarily large committee of revision, making such membership rather an honor than a duty. The revision would be better done and in very much less time if the revision committee consisted of about three men, full and well paid, who would devote all of their time and thought to the work. The revision committee should be given authority and provided with a budget to employ such specialists in various branches of pharmacy, chemistry and medicine, as they would in their judgment need to cover the field.

Related conditions exist in some of our medical colleges where physicians in active practice teach medicine and, in consequence, they cannot give the subject that undivided attention which the best results in teaching really demand. While actual practice is needed, for certain of its branches particularly, to enable a medical man to keep up with his profession and to maintain dexterity and for best service and results, still the trend of medical thought to-day seems to be toward the so-called full-paid professor who devotes all his time to his lectures, clinics and students and no time to professional practice. The Carnegie-Rockefeller Foundations represent to-day about the last word in didactic science, both as to public and private secondary schools, as well as the higher education, and this is the very institution which is so strongly advocating full-paid teachers who shall devote all their time to keep abreast of the latest knowledge in their subject, and to personally study and watch their students in the courses of study. In the same way, it seems to me, the best results can be achieved by employing the best men known to pharmaceutical and chemical science who will devote all their time to revision of the Pharmacopoeia. Voluntary work seldom achieves the best results in any activity. From my own experience of some twenty-five years in connection with U. S. P. Revision I am quite convinced that we would have had better work, more thorough work and would have saved much time if we had had continuous service rather than voluntary spasmodic service in the revision. No revision, if properly managed and organized, should require more than two years at most, whereas that of 1900 required over six years and that of 1910 over five years. If carried on as a continuing body the Revision would be complete and ready for publication on the date of the year imprinted upon it, instead of several years later.

As to the financing of the U. S. P., I feel that from past revenue experience, there should be evolved a budget of the expenses to be incurred in the coming revision and experts contracted with and employed to cover the entire revision of the Pharmacopoeia. As it is now, the revision begins quite late and only part at a time, and it drags its weary length with part of the work not even as a rule begun when the bulk of it is completed. The work should be checked up at regular intervals and actually kept going, more or less continuously, from the chairman's office. This brings up the question of the chairmanship. I think he should also be full-paid and should de-

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\* Paper was read before Section on Education and Legislation A. Ph. A. by Chairman W. F. Rudd of the Section, owing to the absence of the author.

vote all his time to the work and not divide it, as has been the case, between other duties which must and do occupy much of his time. While the U. S. P. was practically a formulary for medical and pharmaceutical men the present system of revision was ample and satisfactory, but ever since the U. S. P. has become a national standard and a legal book, the whole aspect of the picture and our attitude, as well as that of the public, toward it has changed. The revenues received from the Pharmacopoeia are more than ample to supply all funds necessary to have full-paid men who would devote all their time to the work, and make its revision a continuous one. I predict that, unless this is done, the Government will take over the revision work and do it in some such way as I have indicated. I further venture the opinion that, if the revision is done by a small committee with such full-paid experts as they shall select, the cost of the revision will be materially reduced and the actual cost of the finished book will be less than it is now. I do not think reducing the cost of the book is material or necessary, but by more modern, efficient and expeditious handling of the work of the revision and paying good prices for efficient service the actual net cost of the revision, and hence the sales price of the book, will be less. Revenues are received after the revision is complete and the book is published, although the revenues of the previous revision are available for the next revision. Whatever may be needed to anticipate expenses, however, can readily be borrowed by the Board of Trustees, so that financing the U. S. P. should not be difficult. Without having any actual data at hand, I feel reasonably sure that there is and has been a surplus of money on hand at all times, or most of the time, and this should be invested in securities paying a better interest than savings bank interest, and which can at the same time be readily sold because there is always a ready market for them.

As for the National Formulary, I have some criticism to offer, both as to its revision and its financing. As the N. F. preparations are intended for practical use, *i. e.*, for actual manufacture and, in consequence, for qualities of permanence as well as efficiency, there should be a greater employment of experts instead of volunteers and of experts who have practical knowledge of how to make up a formula that will keep as well as act efficiently and be satisfactory to patient, physician and pharmacist. The work of N. F. revision has been from time immemorial more or less amateurish. In consequence N. F. preparations have not given satisfaction in many cases, and manufacturers have been unable to produce a product made by the N. F. formula that will give satisfaction. Another criticism is, that many of these formulas are unethical in principle, because they are and have been substitutes and imitations of proprietary preparations, well known and in large demand. Is it consistent and does it instil respect for the association to preach ethics and high principles and at the same time violate them in their own work and publication? If substitution by the pharmacist is good ethics, then preach it and teach it to students of pharmacy and, in doing so, do it consistently and efficiently and thoroughly. If, on the other hand, it is bad ethics and unworthy for a pharmacist to substitute one product for the real one ordered by the physician, or demanded by the public over the counter, then why not be consistent and eliminate from the N. F. those formulas which are admittedly imitations of and substitutes for the formulas which are the property of other people. Substitution is undoubtedly nothing more or less than robbery or the invasion of property rights. When the principle of the inviolability of property rights is successfully invaded and violated in a state, the freedom and democracy of the state are tottering and doomed. Let us, therefore, be honest with ourselves, the public and the owners of property rights and begin by putting our own house in order and eliminating from the N. F. those formulas which we all can agree upon as being substitutions and replacers of the property of others. Next, let us put the revision of the N. F. on a business-like basis by employing, at proper pay, the services of men competent to produce a result and formula that is alike creditable to the book and its owners, and to the public and the medical profession.

Finally, as to the financing of the N. F., let us name a committee to manage and publish the N. F. and make out a budget of expenses, based upon previous experience and prospective revenue; then employ, by contract, competent experts to work out for us the problems of those formulas that our committee has decided should properly be contained in the book and for which there is a legitimate and real demand from physicians, pharmacists and public; there is such legitimate demand and there are such legitimate formulas. Based upon this budget, with ample allowance for additional outlay, edit and publish the book and make the selling price such as to meet the budget, and allow besides a surplus for the next revision. This brings up the final ques-

tion of making the N. F. a source of income or meeting deficits of the A. Ph. A. If the council feels that the A. Ph. A. needs material revenue from the N. F., then make out a budget of such probable needs and add this to your N. F. budget, based solely upon its own cost of production, and then make your selling price ample to meet both. Do not, however, make the N. F. the actual agent of supplying the revenues to run the association, without actually putting such revenue down in the cost account of the N. F. If the N. F. Committee and budget need money to complete the expenses of its revision and publication, then have the A. Ph. A. borrow that money, by putting up its securities as collateral, and repay this borrowed money when the book is published and the revenues from its sale become available.

#### ABSTRACT OF DISCUSSION.

H. M. WHEPLEY: The paper by Dr. Dohme presents two definite propositions, namely, the finances of the Pharmacopoeia and the finances of the National Formulary. He makes certain suggestions. As far as the Pharmacopoeia is concerned, his recommendations are being carried out at the present time.

Dr. Dohme refers to the investment of the funds from the sales of the Pharmacopoeia so as to obtain a better rate of interest than paid on bank deposits. The U. S. Pharmacopoeial Convention at this time has about \$40,000.00 in hand, and of that sum \$30,000.00 is invested in U. S. bonds.

Some of the preceding discussions advised appropriations for expert work and various other expenses of the Committee on Revision. Grants are being made. The Chairman of the Committee on Revision has certain leeway in spending money for the Committee. The Board of Trustees represents the Convention in business matters. It consists of five elective members. The ex-officio members are the President of the Convention and the Chairman of the Committee on Revision. The Board of Trustees is really an executive committee of the Pharmacopoeial Convention and transacts the financial business of the Convention.

The Board selected in 1900 had to work out a precedent for the future. The Board of 1910 is now about to terminate its decennial term, and it is safe to say, has profited by the experiences of the previous ten years. The Convention of ten years ago received a balance of \$8,000.00 from the preceding Board. Just what the Convention of 1920 will receive it is impossible to say at this time, although there is at present about \$40,000.00 on hand. This money is derived entirely from the profit on the sale of the English edition of the Pharmacopoeia, of which about 55,000 copies have been printed. The gross profit per copy, not taking into consideration the initial expense of typesetting, plate making, etc., is \$1.45. The Board of Trustees published a Spanish edition of the U. S. P. VIII. This has just about met the expenses of production. It was not prepared as a money-making proposition, but for propaganda in the Spanish-speaking countries. An edition of the U. S. P. IX in Spanish is now in press and will soon be placed on the market.

I desire to emphasize the fact that the Board of Trustees works as an executive committee. Each member of the Board takes part in the disposition of every question that comes up for action; there are no sub-committees with final power to act. The Chairman of the Committee on Revision, being a member of the Board, has a voice in all of the transactions, and he is also in position to keep the Committee on Revision informed relative to the proceedings of the Board of Trustees. While it must be realized that the Board of Trustees cannot meet the wishes of everyone, I am convinced that each one of the members desires to act wisely on every question. You will appreciate that it is much easier to find laudable purposes for which the money of the Pharmacopoeial Convention can be expended than it is to find financial resources.


The National Formulary is financed differently from the Pharmacopoeia, for apparent reasons. The United States Pharmacopoeia belongs to the pharmaceutical and the medical profession of America. The National Formulary is a creation of the American Pharmaceutical Association, and is the property of this organization just as fully as any textbook is the property of the party or parties who own the copyright. The American Pharmaceutical Association meets all the expenses of revision and production, and receives all of the profits from the National Formulary. At the present time the American Pharmaceutical Association sets apart one-half of the income from the sales of the National Formulary as a fund known as the American

Pharmaceutical Association Research Fund. The interest from that fund, which at the present time amounts to \$25.00 a month, is used for a grant for certain research work, and the first grant was made by the Council at its recent meeting. By the time of the next annual meeting the sum that can be used will be about twice as large, because in the interim more money will have been added to the fund.

**JULIUS A. KOCH:** It seems to me that the financing of the Pharmacopoeia and the National Formulary is a very simple matter and has been carried out very efficiently and well. No paper has been presented criticizing the method of financing the Pharmacopoeia or the National Formulary. The only criticism presented is related to the expenditure of money for research or investigation or to the method of revision. This has nothing to do with the financing. Financing is a question of providing funds after it has been decided to do certain things. The method of publishing the Pharmacopoeia is, I think, very profitable to the Pharmacopoeial Convention. The contract for publication is given to the lowest bidder, and the sales of the books are placed in the hands of one house, who have handled the business very satisfactorily, I understand. I do not think a great problem of financing exists, so long as the Committee on Revision of the U. S. Pharmacopoeia has enough money to carry on its work—the work that it has been asked to do and that which the Convention instructs the Revision Committee to do.

### COÖPERATION IN PHARMACEUTICAL REVISION.

BY E. FULLERTON COOK.

The Pharmacopoeia, having been made a national standard by the Food and Drugs Act, has centered the attention upon itself of every related interest. The very nature of the publication enlists the best and most honest coöperation of every associated science, and the Ninth Revision embodied the most complete coöperative work which medicine or pharmacy has ever presented. The fact that this standard is published by an independent organization, having no commercial interest at stake and no rewards, other than honor, to distribute, and fortunately following a very democratic policy, has made it possible to secure the unstinted help of government laboratories, the research departments of scientific colleges and universities, the experimental data and experience of important commercial laboratories, and the unselfish labor of many individuals. Perhaps, this has been in the past partly due to the personality of the Chairman. The Revision Committee has been fortunate in selecting men whose integrity has been unimpeachable and who have worked consistently for the perfection of the revision. It must, therefore, be recognized that the Chairman has largely within his power the effectiveness of coöperation. All interests have demonstrated their willingness to help, and valuable contributions have always been made in former revisions. 

The machinery of revision and the way in which it is used will largely govern the amount of coöperation available for the next revision. Even now those interested in the U. S. P. revision work have been invited to contribute suggestions for improvements in the next Pharmacopoeia, and many responses have been received, which will doubtless be carefully studied by the present Committee, and recommendations and investigations result for the benefit of the next Committee. The Chairman and Executive Committee, who face the major problems of revision, could often secure an increasingly large amount of help in working out specific problems by assigning them to definite laboratories or individuals for investigation and report. This method has heretofore brought good results. In some instances, it is necessary to depend upon the conference method. No amount of correspondence at times can settle a problem. Under these conditions, satisfactory and prompt results are often obtained by calling together specialists in that particular problem and inviting frank discussion. This method was used in several instances, one covering the question of Opium assay; another, some of the volatile oil problems. Ready response has always been accorded such calls for a conference.

Summarizing these statements, the conclusion must be reached that medical, pharmaceutical, chemical botanical and every other interest in the United States would seem to-day to be willing and glad to give their best service toward the perfection of the Pharmacopoeia, that the utilization of these scientific workers and the splendid equipment available depend largely upon the organization which the Chairman is able to perfect, his willingness and ability to utilize these forces, and his judgment and tact in handling the organization.

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