the people or shall this work be left, as heretofore, in the hands of scientists chosen by the Pharmacopoeial Convention which represents incorporated medical and pharmaceutical colleges and associations?

We have had one revision under the latter auspices since the U. S. P. became the legal standard for drugs by act of Congress. From all reports, this revision has been, on the whole, eminently satisfactory and it is very doubtful whether the public interest could have been served better by placing the revision in any other hands. The strongest argument for the present method of revision, to my mind, is the thoroughly democratic policy which it is able to pursue. An open-minded revision committee under the present form of organization is in a position to permit all those interested in standards for drugs to submit their views and act upon such suggestions without fear or favor.

While a government bureau or a scientific foundation laboratory might start out with the best intention to maintain this same democratic spirit, it would soon lack that very thing. We have had enough examples to show that it is impossible in such organizations to eliminate the narrow and biased viewpoint. Symptoms of autocracy are sure to crop out here and there and while it is unlikely that any special interests would be served to the exclusion of others, the wholesome result of discussion pro and con between the various medical and pharmaceutical interests, which has led us so often to the happy medium, would be sorely lacking.

I do not mean to imply that the present revision committee is perfect, but a critical survey of its make-up will reveal a pretty well balanced organization with all the necessary viewpoints represented. Whenever revision committees of the U. S. P. are selected, it should be borne in mind that the best work can be accomplished by having a balanced organization, thoroughly democratic in its make-up, ready to listen to every point of view and willing to decide a case only on its merits. Physicians, pharmacists and chemists should make up the revision committee, but it should be arranged that under these three classes of professional men we have included expert bacteriologists, pharmacologists, plant chemists, and biological chemists, in addition to physicians and pharmacists representing laboratory medicine and practice; retail, wholesale and manufacturing pharmacy; research and routine chemistry. Furthermore, the addition of a few men whose training has been along pharmaco-legal and medico-legal lines and a hard-headed business man or two would help to round out the organization and make for greater efficiency.

ABSTRACT OF DISCUSSION.

CHARLES E. CASPARI: In replying to the question "Who shall do the work and why?" of U. S. P. revision, I may possibly encroach on some other questions; if I do, it will only be for reference and not for full discussion. It is possible for the Pharmacopoeia to be revised only in two ways: Either, as at present, by a committee elected by the U. S. P. Convention; or by the United States Government.

There was a time when I was in favor of turning the Pharmacopoeia over to the Government. Happily, I have gotten over that view and I believe that it should be revised along the same general lines as in the past; except, and this is rather a large exception, that the committee should not be composed of more than fifteen members. In my opinion a committe of fifty is cumbersome, as proved in a number of instances during the last revision. In selecting a number as large as 50 it is not always possible to select 50 men who are going to be animated by the same ambition to do the work. There is always some "dead wood" in such a large committee that is useless or worse than useless.

Furthermore, I think the committee selected should be a paid committee and held responsible for the prompt make-up, promptness and accuracy of the work.

In my own case, and I am sure I speak for a number of others, the pharmacopoeial work in the last revision was done following the work I was paid to do. That work had to be done first and any time left was devoted to the revision of the Pharmacopoeia. That is not as it should be. If the Committee is smaller and is paid a certain amount, I do not care what it is, the members make themselves responsible, and the work would be turned out very much more expeditiously than the last edition of the Pharmacopoeia.

If the committee is limited in number the expense of the revision will be very materially decreased. But whether the work of revision is to be done by a large committee or a small committee, I would advocate more frequent meetings of sub-committees. During the last revision

there were several meetings of sub-committees. At a meeting of the sub-committee on essential oils we accomplished more in eight or ten hours than we could have accomplished in as many or more weeks by correspondence. The joint meeting of the sub-committees on Organic and Inorganic Chemicals showed great results.

Summarizing what I have said: The Pharmacopoeia should be revised in a similar way as in the past, but by a much smaller, paid committee which shall hold frequent meetings in various places to agree upon results, rather than by correspondence. This will make for more expeditious and efficient revision.

A. G. DuMez: In attemping to discuss this question I shall assume that the present organization for revising the Pharmacopoeia will be much the same as in the past. The Revision Committee may be reduced in size or even enlarged for that matter, and similar changes may occur with respect to the of sub-committees. In either event I think the following remarks will apply.

At its inception, the Pharmacopoeia was intended to be a book which would serve as a guide to the pharmacists in recognizing the more important drugs and in the preparation of the more important medicaments. That feature has been altered to such a degree that the Pharmacopoeia is now essentially a book of standards and it has been recognized as such in the Pure Food and Drugs Act. It, therefore, seems to me that we are justified in expecting that the Pharmacopoeia should be the last word with respect to accuracy on all matters which it purports to control.

From the criticisms which have come to my notice, I am forced to conclude that it does not completely satisfy these expectations with respect to chemistry. I believe, therefore, that the chemist has not been represented on the Revision Committee to the extent which he should have been, and I would suggest that he be given—that is the commercial and analytical chemist—a greater representation on the next Revision Committee.

Another agency which it seems to me should participate to a greater extent in the revision of the Pharmacopoeia is the Federal Government. There are various bureaus of the Government —the Bureau of Standards, the Bureau of Chemistry and the Public Health Service—which have facilities for conducting research work of the nature required and these have accumulated much valuable information in carrying out their routine work. I believe an effort should be made to make greater use of these facilities and secure this information which at present we can only obtain when it is published, and much of it never will be published.

SAVING TIME IN U. S. P. REVISION.

BY JACOB DINER.

It is assumed that the general method of revision by committees is not to be changed, and that the scope is to be to establish standards for drugs and their preparations.

The success of any undertaking depends to its greatest extent upon two factors: The underlying foundation and the organization back of it. This is as true of the business of pharmacopoeial revision as of any other enterprise.

Theoretically, there is a sound foundation upon which the structure of pharmacopoeial revision is to be erected, namely, the previous edition of the United States Pharmacopoeia. Practically, however, it is merely a pen and ink sketch, not even a well-developed plane, giving detailed specifications. I am happy to state at this time that one of the suggestions, which I intended to make, has already been put into execution. Chairman Charles H. LaWall has sent out a number of letters asking pharmacists, chemists, teachers and others, to make such criticisms and comments as they have to offer. This, indeed, is a very splendid beginning, and promises much for the new edition of the U. S. P.

I would further suggest that, inasmuch as the committees are appointed for a term of ten years, each chairman of a committee or sub-committee should begin revision work immediately after the publication of the last edition of the U. S. P. In this way the different committees would, at the decennial meeting, be in a position to consider actual revision matter instead of taking up most of the time of that meeting with committee appointments and, to no little extent, with political wire-pulling. In that way we could start with a solid and well-planned foundation