THE SECTIONS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

ABSTRACTS OF THE MINUTES OF THE SESSIONS HELD IN MADISON, AUGUST 21 TO SEPTEMBER 2, 1933.

(See also brief summary in reports Final Session, House of Delegates, printed in the October JOURNAL—titles of papers will be given in the minutes; discussions, if any, will be printed when paper is published, if not included in the minutes. The Editor will be thankful for corrections of errors.)

SCIENTIFIC SECTION.

The First Session of the Scientific Section was called to order by Chairman W. J. Husa on Wednesday, August 30th, at 2:00 o'clock. The Chairman requested Vice-Chairman F. E. Bibbins to take the chair while he read his address. The Chairman's Address follows:

THE CHAIRMAN'S ADDRESS.

BY WILLIAM J. HUSA.

Meeting as we are this year in one of the centres of pharmaceutical research and with the spirit of a Century of Progress about us, we have the proper atmosphere and the proper setting for a very successful meeting. In this day every profession worthy of the name must be able to show a consistent development from year to year. Every new fact or principle discovered in the field of pure science may have many important applications. One of the functions of the research man in the professions is to consider new scientific developments from the standpoint of his own field, and to correlate, adapt and develop them into a form in which they can be used by his profession in the service of the human race. For many years our Scientific Section has had a wonderful influence in promoting and diffusing scientific research in pharmacy and I trust that each of you will find here new knowledge and new inspiration.

During the past year, your officers and committees have been actively engaged in looking after the affairs of the Section. On matters coming within their jurisdiction, the officers have taken positive, constructive action, and on other matters recommendations have been brought here for consideration by the Section.

Number of Sessions.—At the Toronto meeting the question was brought up of either adding an extra session of the Section, or holding the meeting in two divisions. Due to the large and increasing number of papers offered, it appeared that something should be done along this line. The proposition of breaking up the section into divisions has certain complications and it was not considered advisable to attempt this without having had definite previous consideration by the Section.

However, the plan of holding an additional session seemed feasible. In some former years, the Scientific Section had three sessions in addition to the joint session with the Section on Practical Pharmacy and Dispensing but for the last three meetings one session was discontinued in order to simplify the general program of the A. PH. A. and to lessen the conflicts with meetings of other sections. Your officers felt that in view of the 103 papers on the 1932 program of this Section, of which 54 were actually read, it was imperative to return to the plan of three sessions plus the joint session. Accordingly, a request for an extra session was placed before the proper authorities of the ASSOCIATION. After correspondence concerning all the factors involved, the request was granted. The extra session has been placed on Thursday morning with the idea that it would be easier to maintain interest if one session each day, from Wednesday to Friday, were devoted to scientific papers, in addition to the joint session on Thursday evening.

Joint Session.—During the negotiations concerning the addition of the extra session, consideration was given to the advisability of breaking up the Joint Session of the Scientific Section and Section on Practical Pharmacy and Dispensing into separate sessions. Although such a move would gain time, it appears that the joint session has a real function to perform, *i. e.*, to make the "scientific" members more practical and the "practical" members more scientific by bringing them together on common problems.

In past years the committee reports at the joint sessions have often taken so much time that it has been necessary to greatly shorten or postpone the papers and illustrated lectures of general interest. The committee reports and discussions have been well worth while, but some limitation of time must be inaugurated and enforced in the interest of orderly procedure.

Recommendation 1.—It is recommended that the maximum time allowed for presentation of committee reports at the Joint Session of the Scientific Section and Section on Practical Pharmacy and Dispensing shall be as follows: U. S. P. Report, 20 minutes, N. F. Report, 15 minutes, other committee reports, 10 minutes; the total time allowed for discussion of each report shall not exceed 10 minutes.

Divisional Meetings.—The congestion of our programs has led to occasional suggestions that the number of papers accepted by the Section be reduced. Some have placed this on the basis of refusing papers having little bearing on pharmacy, while others have suggested that too many papers should not be accepted from one source. While it would be desirable to refuse papers which are definitely outside the scope of our Section, I feel that this principle should be applied with caution. Papers on pure science need not necessarily be rejected provided the research was carried out in pharmaceutical colleges or establishments with the idea of ultimate application to pharmacy; if such papers are driven elsewhere, sometime it will be said that pharmacy has been robbed of credit for work done by pharmacists. The idea of not accepting too many papers from one source is also unsound; by so doing we would be hindering the development of pharmacy.

The additional session which has been granted should do much to relieve the congestion of scientific papers, whose presentation should certainly be encouraged. It would be wise, however, at this time, to make definite plans to be put into effect by the Section officers during any future year when the sessions now provided become inadequate. Since further sessions could hardly be arranged, we must look in the future to the plan of holding simultaneous group meetings. Many have said that they would dislike seeing the Scientific Section broken up into two or more independent sections. As far as I have observed there is no demand and no necessity for such a move. It is entirely practical to continue to function as one section in all matters pertaining to the business affairs of the section, but to break up some of our sessions into two or more divisions for the reading of papers, each division to be presided over by one of the regular section officers. This plan has been successfully used for years by the Division of Physical and Inorganic Chemistry of the American Chemical Society; this division has only two officers, a chairman and a secretary, each of whom presides over one of the group meetings, which are held in adjoining rooms, so that the members may move freely from one group to the other. We should give the officers of the Section authority to break up one or more of the sessions into two or more divisions as may be necessary to accommodate all the papers accepted in any given year. Each year at least one session might be held in which all members would join to hear more important papers or those of more general interest as selected by the officers. Such a plan would be flexible; during the middle of the week when attendance was heavy the divisional meetings could be scheduled, while on Friday, with diminishing attendance, only one program need be provided.

It is provided in Chapter VI, Article I of the By-Laws of the Section that additional sessions may be held when the officers of the Section may see fit, with the consent of the Council.

Recommendation 2.—It is recommended that the officers of the Scientific Section be authorized to make arrangements, in any future year, with the Committee on Standard Program, and Council, for holding one or more of the meetings of the Section in two or more divisions, which would meet simultaneously for the reading of papers classified into groups by the officers, each division to be presided over by a regular officer of the Section.

I feel that the above plan is practical and that it is not only correct in principle but has the necessary flexibility to meet any situation. Whenever desired, one of the group meetings could be devoted to a symposium on one certain topic, merely by proper classification of papers.

Arrangement of Program.—At the Toronto meeting action was taken by the Section requiring authors to indicate whether papers would be presented in person or by title. It is customary to include all papers on the printed program but papers presented by title might well be grouped at the end of the program of the section. Members are requested to coöperate fully with the secretary by indicating in each case how the paper is to be presented. Where a member presents a number of papers, it might be well to read only the more important ones and to designate the rest "by title."

There has been some suggestion that our Section might operate on a definite time schedule, indicating on the program the exact time when each paper is to be presented. This plan is used by some associations and is very advantageous when it works as planned, but 100% coöperation is needed for proper functioning. Under such a plan, it is possible to keep from falling behind schedule by not allowing anyone to exceed the allotted time. When the meeting gets ahead of schedule, the excess time may be used for discussion of any previous paper, thus avoiding the calling of any paper ahead of the scheduled time. Probably our Section is not quite ready for such a plan, but we may work toward it by taking up the papers in the order in which they appear on the program.

For the present year I have favored a plan, to which the secretary has graciously acceded, of putting the papers on the program approximately in order of receipt of the abstracts, thus having some papers at each session from each of the various branches, if they happen to come in that way, but not putting any one person on the program for more than two papers until every one else has been put down for one or two papers. Authors submitting a number of papers were allowed to designate an order of preference; thus the extra papers are placed at the end of the program, to be taken up if time permits. If some papers must be left off on the last day it will tend to be only the less important papers of the prolific contributors. I thought that for any one session, the papers might be classified somewhat, but we would have each day a little more variety which might stimulate interest and hold attention. In this way, a person who can only be present at the Wednesday session can hear some papers in each field, while if all the papers were outside the field of such a person, he might not even stay for Wednesday.

Manner of Presentation.—Another matter which was left with the officers was the suggestion that authors often attempt to give too many details in the time allowed, leading to a hasty presentation in which important points are obscured. In the notices calling for papers, the officers mentioned this matter and suggested that the following method of presentation be followed as far as possible:

(*a*) A brief statement as to purpose and scope of investigation.

(*b*) A statement of general methods, omitting details except those of particular importance.

(*c*) General statement of results and conclusions.

If the Section wishes to continue this plan after this year's trial, appropriate action should be taken.

Suggestions to Authors.—You are probably aware that for financial reasons it has been necessary for the ASSOCIATION to make some reduction in the number of pages in the JOURNAL for 1933. Authors of papers should coöperate during this emergency by striving to develop a condensed style. In some cases space can be saved by publishing typical data in full with the remainder in summarized form; in other cases less space need be given to negative results, preliminary results and duplications of previous work. Reviews of earlier work may be largely omitted in cases where adequate summaries are already easily accessible. We should coöperate with the editor by cutting down the length of articles wherever possible; this does not refer only to long papers, since we know that a short paper with little in it might be a better target for the pruning knife than a longer article based on a great deal of research.

Regardless of whether a paper is presented in person or by title, the complete paper should be in the hands of the secretary at the time of the meeting. I am informed that quite a number of papers which appear on our printed program are not turned in until several months or more after the meeting. Of course this could be prevented by requiring that all papers in completed form be in the hands of the secretary before the list is drawn up for the printed program. I hesitate to make such a recommendation because it would cause inconvenience to many authors who have never been at fault in this respect. I prefer to appeal to the members to always see that their papers are in the hands of the secretary at the time of the meeting. If this appeal does not largely eliminate this condition the Section may later well consider restrictive measures which would apply only to those who show themselves to be chronic offenders in this respect.

I feel that some of the research work reported before our Section would be very suggestive and very helpful to physicians. In some cases the conclusions go as far as the pharmaceutical research worker can go without encroaching on the medical field, and if the results were made available to physicians and medical research workers it would often give them a point of departure

for medical research. It has seemed to me that as a whole the medical profession is uninformed and unappreciative of the commendable research program of pharmacy. The average physician does not hear of any pharmaceutical research except through the detail men. One reason for this situation is that the JOURNAL OF THE A. PH. A. does not appear on the list of journals abstracted by the *Journal of the American Medical Association*. On one occasion I received a number of requests for reprints of one of my papers from medical men who happened to see the article or hear of it. This led me to take up the question with Dr. Fishbein, Editor of the *Journal of the American Medical Association*, as to whether his journal would not be rendering a useful service to medicine by including brief abstracts of such pharmaceutical articles as were deemed of value by the medical abstractors. Dr. Fishbein replied that it did not seem possible for them to undertake to list each issue of our JOURNAL and abstract all the articles but that they would be glad to abstract or comment on occasional contributions from our JOURNAL and he added that he would publish an abstract of the article which I had sent him as an example. These considerations lead me to suggest that members make it a point to send reprints of such of their papers as clearly have medical applications to medical journals; some of these may be abstracted, thus aiding in making a start in placing pharmaceutical research properly before the medical profession.

Suggestions to Association in Publication Matters.—The best means of maintaining and increasing the professional standing of pharmacy is an active research program. However, research loses much of its value if facilities are not available for prompt and adequate publication. People sometimes view publication too much from the standpoint that the author may be seeking publication for selfish reasons. On one occasion a noted Italian investigator isolated certain constituents from a drug and announced his discoveries in a prominent European journal. A little later another worker came forth with a claim to priority, indicating that he had previously published the same results in an obscure Scandinavian periodical. In acknowledging priority, the Italian said that not self love, but love for his colleagues, should cause the research man to publish his important results in a journal of general circulation.

The publication program of our ASSOCIATION must keep pace with our scientific and professional progress, and some method should be found to release the brakes of financial recession. If the regular sources of ASSOCIATION funds are insufficient, consideration might well be given to securing assistance by special endowments and by contributions from pharmaceutical manufacturers. It would be to the interest of pharmaceutical industry to support the publication of scientific pharmaceutical articles. We know that manufacturing is shifting from tinctures, fluidextracts, elixirs, etc., to specialties, and if the distribution of specialties is not to degenerate to a patent medicine level, everything possible must be done to maintain pharmacy on a high professional level, and nothing will contribute as much to this end as a strong program of research and publication.

Recommendation 3.—Since the best means of maintaining and increasing the professional standing of pharmacy is an active research program, which necessitates adequate facilities for publication, it is recommended that the Council consider the advisability of seeking contributions from pharmaceutical manufacturers and special endowments to support an adequate publication program for the increasing scientific and professional contributions of our ASSOCIATION.

In 1932 there were 1362 pages of text in our JOURNAL and among the other pages devoted to advertising and other material I find that about 110 pages were devoted to publishing the monthly list of officers and committees of the ASSOCIATION and its sections, and of state boards of pharmacy, other associations, etc. The use of 110 pages for printing the same list from month to month hardly seems justified; the space could well be used for other purposes.

Recommendation 4.—Since during 1932 about 110 pages in the JOURNAL OF THE A. PH. A. were devoted to publication of names of officers and committees of various organizations, it is recommended that the Council consider the advisability of saving space by publishing the names of only the main officers of the ASSOCIATION and sections each month, with the remainder of the names to be published only two or three times a year on a rotating schedule, with a note each month referring to previous issues for lists of other officers and committees.

Under the rules, Recommendations 3 and 4, if adopted by this Section, should be referred to the House of Delegates, which in turn is to refer them to the Council.

In closing I wish to express my thanks to every one who aided the Section during the year and particularly to acknowledge the kind coöperation of Secretary L. W. Rowe and First

Vice-Chairman F. E. Bibbins of our Section and Secretary E. F. Kelly of the ASSOCIATION. I also wish to thank the members for the honor conferred on me by electing me chairman of the Section; it has been a pleasure to serve you.

Following the usual order, Vice-Chairman Bibbins appointed the following Committee on the President's address: *Chairman*, J. C. Krantz, Jr., George D. Beal and G. L. Webster.

THE SECRETARY'S REPORT.

BY L. W. ROWE.

Members of the Scientific Section, American Pharmaceutical Association:

This year it was deemed wise to send out but one general notice to the nearly 300 names on the mailing list of the Scientific Section and this was done early in February: The response as you can see by the listing of nearly 100 titles on the printed program was very good—perhaps too good for the time at our disposal. We were able to obtain permission to hold an extra session of the Section this year and that will materially help our situation.

The coöperation of the members and particularly of the other officers of the Section has been very helpful and is greatly appreciated.

Respectfully submitted,
L. W. ROWE, *Secretary.*

Chairman Husa called for the Report of the Committee on Monographs. It was read by Chairman E. E. Swanson. (Printed on page 1196.)

The Report of the Board of Review of Papers was called for. Secretary Rowe made a brief report stating that progress was being made and he felt that with coöperation further advance will be made.

Chairman Husa appointed the following Committee on Nominations: *Chairman*, E. D. Davy, E. E. Swanson, F. F. Berg.

No further committees reported at this time.

Chairman Husa announced as the next order of business the reading of papers. He requested that on account of the large number of papers that anyone desiring to discuss the paper should rise promptly and have the discussion as brief as possible.

The following papers were presented:

"A Modified Assay Process for Alkali Benzoates and Salicylates," by Jacob E. Schmidt and John C. Krantz, Jr. (No discussion.) Printed in October JOURNAL, page 953.

"Isolation and Identification of Sucrose from Senega," by Ralph Bienfang, read by Loyd E. Harris. (No discussion.)

"The Gravimetric and Volumetric Determination of Antipyrine as Hydroferrocyanide in the Presence of Amidopyrine," by I. M. Kolthoff. (No discussion.) Printed in the October JOURNAL, page 947.

"The Gravimetric and Volumetric Determination of Brucine and Strychnine as Dichromate," by I. M. Kolthoff. (No discussion.)

"The Determination of Strychnine and Brucine as Hydroferrocyanides and Their Separation by Means of Ferrocyanide," by I. M. Kolthoff. (No discussion.)

The three foregoing papers were presented by Charles V. Netz.

"The Barbituric Acid Derivatives as Drugs," by J. H. Graham. (No discussion.)

"Tincture of Digitalis," by L. W. Rowe and W. L. Scoville. (No discussion.)

The following papers were presented by title:

"Two Species of Genus Ledum," by Russell A. Cain and E. V. Lynn.

"What Is an Important Drug?" by L. K. Darbaker.

"Some Plants of Western Pennsylvania Which Have Been Used in Medicine," by L. K. Darbaker.

"Some Poisonous Plants of Western Pennsylvania," by L. K. Darbaker.

"The Micro Projector," by L. K. Darbaker and Samuel H. Oswald, Jr.

The following paper, "Licorice Fern and Wild Licorice and Substitutes for Licorice," by Louis Fischer and E. V. Lynn, was read by E. V. Lynn. (No discussion.)

"Detection of Small Quantities of Carbon Monoxide in Medicinal Oxygen," by Jacob E. Schmidt and John C. Krantz, Jr.

Arthur Osol inquired whether Dr. Krantz had used palladium chloride for the detection of carbon monoxide. In its application a paper is impregnated with palladium chloride—the presence of carbon monoxide causes reduction.

The author stated that the latest chloride method is that of the British Pharmacopœia but that he had not found it as sensitive as the method described.

The next paper, "Further Studies on Psyllium Seed," was read by Heber W. Youngken (No discussion.)

L. W. Rowe presented a paper on "Fluidextract of Ergot," by L. W. Rowe and W. L. Scoville. (The paper is printed in the October issue, page 938.)

The paper on "The Hyperglycemic Action of Forty Amines," by Robert C. Anderson and K. K. Chen, was read by Robert C. Anderson.

The following papers were read:

"The Value of Senecio in Medicine," by Edgar A. Kelly and E. V. Lynn. (No discussion.)

"A Study of the Constituents of Siam Benzoin in Relation to Their Preservation Action on Lard," by William J. Husa and Donald E. Riley. (No discussion.)

"The Leaves of Pentstemon Cobæa, Nutt.," by Loyd E. Harris and Ruth Ann Conner. (No discussion.)

The following paper was read by the author: "A Comparative Study of the Maryland and the Official Sennas," by Frank J. Slama.

Heber W. Youngken, after inquiring about some of the characteristics, said that the paper was a very good one, offering some excellent facts in segregating the genus, however, he was not certain that sufficient differential characteristics had been brought out to make a new genus of the group. The author stated that this was only a suggestion. Dr. Youngken said the author had made a valuable contribution in morphology, which is bound to help the taxonomy. The author stated that this was only the first part of the work and he had obtained some gratifying results. In the second part the author is working on the whole plant, he is studying cross sections of all parts of the plant.

The next paper called for was on "A Comparative Study of Five Assay Procedures for Opium," by A. R. Bliss, Jr., E. D. Davy, Joseph Rosin, W. H. Blome, R. I. Grantham and R. W. Morrison. (The paper was not read.)

The next paper was on "The Water Content of Magnesium Oxide," by Jacob E. Schmidt and John C. Krantz, Jr. (No discussion.)

The following papers were presented by James C. Munch:

"Antidotes I. General Plan," by F. E. Carlough and James C. Munch; "Antidotes II. Barbituric Acid Compounds as Antidotes for Strychnine Poisoning," by D. A. Spencer and J. C. Ward; "Antidotes III. The Present Status of an Antidote for Thallium Poisoning," by James C. Munch, J. C. Ward and F. E. Garlough.

Wm. Gray inquired what importance Dr. Munch placed on catheterization of strychnine. The author replied that as far as effect on humans is concerned it was valuable, but in so far as the effect on animals is concerned it is impracticable because, when called in, the animal is about ready to die. Catheterization by gastric cavage is useful but too slow.

The next paper was on "The 'Co-Fe-Cu' Fluids as Applied to U. S. P. Tests," by H. V. Arny and A. Taub. (No discussion.) Published in October JOURNAL, pages 956–961.

The next paper, "The Colorimetric and Electrometric p_H Determination of Solutions of Certain Alkaloidal Salts," by Allen F. Peters and Arthur Osol. (No discussion.)

Chairman Husa announced that the next session of the Scientific Section would convene promptly at 9:00 o'clock in the Pompeian Room instead of in the Crystal Room.

This completed the First Session of the Scientific Section.

SECOND SESSION.

The Second Session of the Scientific Section was convened by Chairman W. J. Husa, Thursday, August 31st, at 9:00 o'clock. The first three papers, "Tincture of Stramonium Seed Free from 'Plant Dirt,'" by Ralph Clark and Edward Kremers; "Percolation Studies, Continued," by M. Wruble and Edward Kremers; "The Percolation of Drugs Mixed with Calcium

Hydroxide," by M. Wruble and Edward Kremers, were announced by Ralph W. Clark as not ready for presentation.

The next paper, "A Study of *Impatiens* Species and Their Pharmaceutical Preparations in the Treatment of Poison Ivy Poisoning," by C. H. Rogers, was not submitted.

The authors of the next two papers, "The Volatile Oil of Chrysanthemum Balsamita," by Ralph Voigt and E. B. Fischer; and "A Camphor-Like Constituent of Balsamita Vulgaris," E.B. Fischer were not present for presentation of their papers.

The next paper on the program, "The Standardization of Ergot, a Comparison of the British Pharmacopœia Assay for Extractum Ergotæ Liquidum with the Modified Smith Colorimetric Assay," by Asa N. Stevens, was presented by the author. (It is printed in the October JOURNAL, page 940.) It was discussed by Messrs. James C. Munch, G. L. Webster, S. H. Culter, F. O. Taylor and the author.

Replying to James C. Munch, the author stated that ergotoxine ethanesulphonate and ergotamine tartrate are identical in color value. Theoretically there is a difference in the relative amount of base present in each salt. However, in making these determinations, it has been found that their color values are the same.

In reply to G. H. Webster, the author explained that Table I, of the paper, gives the results from ten determinations while Table II contains the results from more. Individual determinations vary from zero to twenty per cent. A great many more determinations have been made while comparing various colorimetric methods with the Broom and Clark and the Cock's Comb Methods of Assay.

Between four and five hundred assays were made during the last three years.

Mr. Stevens said further, "no superiority has been claimed for the modified Smith Colorimetric Method. Furthermore, the results have not been selected. The fact that nearly five hundred determinations have been made was mentioned in order to show that a considerable amount of experience has served as the basis for this work.

S. H. Cultur inquired whether the author used a catalyzer in producing color?

Mr. Stevens replied that no catalyzer of any sort has been used. Sunlight was the only source of light although the carbon arc has been found to work equally as well. In replying to F. O. Taylor, the author said, "On dark cloudy days it is necessary to allow for an exposure of from four to six hours. However, this delay may be avoided by the use of the carbon arc on days when the sun is not shining."

Dr. Munch said, "If I am not too optimistic, then I might conclude that the various methods of chemical assay have no advantage over the much maligned Cock's Comb Method."

The next paper on "The Stability of Tissue Extract," by James C. Munch and Arnold Quici, was presented by James C. Munch.

E. V. Lynn inquired whether the author had any idea what is contained in tissue extract that causes this effect, either as specific substances, or as classes of substances. He also asked how this compared with the action of histamine and of acetyl choline.

In response Dr. Munch stated "The theory which has been developed and reported at the International Physiology Congress in Rome: Just as the cells of the suprarenal gland continually secrete epinephrine, which is poured into the blood stream and stimulated the sympathetic system, so the cells of the pancreas produce this hormone constantly stimulating the parasympathetic system. The blood pressure and muscle tonus at any given moment are due to the relative balance between epinephrine and tissue extract. Tissue extract coming from the pancreas circulates in the blood stream to the heart and voluntary muscles and the tissues, and eventually it is excreted in the urine.

The paper entitled, "The Pigeon as a Hematopoietic Test Animal," by Wm. A. Peabody and R. C. Neale, was presented by W. G. Crockett. James C. Munch thought this a most interesting report, being the latest of the bioassays. He stated that Dr. C. W. Edmunds had been studying the method intensively with a view to suggesting or for consideration in the U. S. Pharmacopœia.

The next paper was on "An Assay of Hyoscyamus," by Marval D. Evans and Edward D. Davy.

H. G. DeKay stated that they had been working with this assay of hyoscyamus for about $2^1/_2$ years. They had carried on a long series of experiments with the pure alkaloids and these results verify those of Professor Davy.

"Notes on the B. P. Colorimetric Test for Ergot," by F. A. Upsher Smith, was called for. James C. Munch stated that in the series of samples now being distributed by the Association of Official Agricultural Chemists for comparison of colorimetric assays they have provided a color standard. He inquired of the author of the paper whether he knew of it. He did not, and A. N. Stevens stated that the Association of Official Agricultural Chemists had a color standard but he could not recall the name. Mr. Glycart, associate referee in Chicago, has a blue color standard which he submitted to some laboratories for consideration and experimental work.

The following two papers were presented by James C. Munch: "Alkaloidal Reagents V. Dragendorff Reagent," by Frank C. Crossley, James C. Munch, Walter H. Hartung and Harry J. Pratt.

"Alkaloidal Reagents VI. The Aconite Alkaloids," by James C. Munch, Harry J. Pratt, Walter H. Hartung and Frank C. Crossley.

Dr. Munch said, "Several years ago, the late Herman Engelhardt started with 250 Gm. of chemically pure aconitine. He hydrolyzed it to benzoylaconine and part of that to aconine. Some of these materials from his original work were obtained for toxicity tests."

"Standards for Tincture Digitalis with Special Reference to U. S. P. X and B. P. 1932 Standards," by L. W. Rowe, was presented by the author.

ABSTRACT OF DISCUSSION.

James C. Munch expressed faith in ouabain as the digitalis standard. His experience with the leaf had been unfortunate. He reported that the Canadian government laboratory was collaborating with the A. PH. A. committee in tests of tincture digitalis but their results were somewhat higher than his.

E. V. Lynn asked whether anyone else had found undefatted digitalis more active than the defatted leaf and if so what is the explanation?

The author explained that assay results on tinctures from undefatted leaves were more definite and only tended to be higher. Inability to find activity in extracted fats made an explanation of such results more difficult.

Upsher Smith spoke at some length of work done by Dr. Van Dyke of Chicago University which entirely confirmed the results reported in this paper. He referred to the defatting of digitalis as an unnecessary procedure which was not now favored by either the pharmaceutical or the medical profession. Dr. Smith then said that his interest had been aroused in Apocynum by Dr. Burn of England and he had planted about an acre of it. The roots go very deep and also spread rapidly. He submitted a sample of the root to Dr. Burn who reported that 29 mg. was equivalent to 1 International Unit, making it about $3^1/_2$ times as active as digitalis, yet the clinical dose is about 15 grains as compared to $1^1/_2$ grains for digitalis. He closed with a plea for the adoption of the International Standard Leaf for digitalis to replace the present U. S. P. ouabain.

James C. Munch took up the defense of ouabain, stating that Dr. Burn had never made a U. S. P. test of digitalis. Granting that there are certain pharmacodynamic differences between ouabain and digitalis, the same differences exist between apocynum and digitalis. Some electrocardiographic work he had done indicated that apocynum was about twice as potent as digitalis on the human. One objection to digitalis leaf as a standard is that it must be extracted before its use, whereas ouabain can be used as such.

"Assay for the Vitamin B. Complex in the Presence of Interfering Substances," Lloyd K. Riggs, B. J. G. Chiego, L. W. Sampson and Annabel Beaty.—The paper was presented in abstract by Robert W. Rodman.

George D. Beal presented four papers:

"A New Identity Test for Phenobarbital," by George D. Beal and Chester R. Szalkowski; "Notes on the Water of Crystallization of Quinine Sulphate," by George D. Beal and Chester R. Szalkowski; "An Iodimetric Assay for Organic Nitrites," by George D. Beal and Chester R. Szalkowski; "A Test for Gelatin in Agar," by George D. Beal and Chester R. Szalkowski. These were discussed by C. Jelleff Carr, George L. Webster and the author.

The following papers were read by title:

"The Standardization of Digitalis," by A. John Schwarz.

"A Study of the Acrylic Amides and Ureides as Hypnotics," by W. A. Lott and W. G. Christiansen.

"The Preparation and Germicidal Properties of Some Alkyl Derivatives of Hydroxy Diphenyls," by S. E. Harris and W. G. Christiansen.

"Piperazine Derivatives as Local Anesthetics," by W. Braker and W. G. Christiansen.

"Cod Liver Oil: Stability of Vitamin A Content under Conditions of Commercial Distribution," by George E. Éwe.

"Medicinal Cod Liver Oil—Observations on Color and Viscosity," by George E. Éwe.

"The Effect of Ethylene Glycol on the Serum Calcium of the Rabbit," by James M. Dille.

The authors of the paper on "The Arsenic Content of Chondrus," by Charles H. LaWall and Joseph W. E. Harrison were not present.

The following paper was read by the author, "Pancreatin and Its Assay," by F. E. Willson.

The Second Session of the Scientific Section was then adjourned after Chairman Husa announced the meeting for 8:00 o'clock.

JOINT SESSION SCIENTIFIC SECTION AND SECTION ON PRACTICAL PHARMACY AND DISPENSING.

The Joint Session of the Scientific Section and the Section on Practical Pharmacy and Dispensing was called to order by Chairman W. J. Husa, August 31st at 8:00 P.M. Marvin J. Andrews presided as co-chairman.

Chairman Husa stated that twenty minutes would be allowed for the U. S. P. report, fifteen minutes on the N. F. and ten minutes on other Committee reports. There would be brief discussion. He stated further that after these reports were concluded there were two papers to be presented which were of interest to the Joint Session.

The report on the United States Pharmacopœia was called for.

In his preliminary remarks Chairman E. F. Cook stated that it has been a traditional privilege for the Chairman of the Revision Committee to report to this body annually. Sympathetic understanding and whole-hearted coöperation of the A. PH. A. is important. The Chairman read his report, in abstract:

THE UNITED STATES PHARMACOPŒIA.

BY E. FULLERTON COOK, CHAIRMAN OF THE U. S. P. XI, COMMITTEE OF REVISION.

THE PROGRESS OF THE REVISION.

The Eleventh Revision is progressing normally and the interest and energy of most of the members of the Committee of Revision are such that the best traditions of the U. S. P. are being fully maintained.

In this day of change and economic pressure it speaks well for the underlying principles of the Pharmacopœial organization that the Revision has proceeded without reduction in activity or modification of program.

THE SCOPE OF THE U. S. P. XI.

Since announcing the proposed additions and "deletions" at this meeting a year ago many communications have been received from physicians and pharmacists, some approving and others opposing the recommendations. These have all been placed in full before the General Committee of Revision and referred to the Sub-Committee on Scope.

For the information of those who may be especially interested in this problem, all of these comments have been assembled under the official titles and pasted in a scrap book and this will be on display at the Pharmacopœial Exhibit throughout the week. The results of the "Prescription Ingredient Survey," prepared under the direction of Professor Gathercoal, has also been of value in reaching final decisions.

As the objective toward which to strive, the General Chairman recently sent the following statement to the members of the Sub-Committee on Scope and repeated it to the entire Committee at the Conference held last June:

> "The *Scope* of the U. S. P., from the viewpoint of 'therapeutic usefulness,' does, however, become one of the most important factors in the U. S. P. Revision, and it is this grave responsibility which the Sub-Committee on Scope assumes. De-

pendent upon the decisions on Scope largely rests the success of the Revision. It is assumed that there are before the members of the Sub-Committee the vast array of known therapeutic agents resulting from centuries of emperic medicine and the more recent scientific studies into the clinical and pharmacologic value of drugs. From these thousands of drugs, chemicals and preparations, this group is asked to select 'drugs and medicines of therapeutic usefulness or pharmaceutic necessity, sufficiently used in medical practice within the United States or its possessions.'

"Our new Pharmacopœia should therefore include those therapeutic agents which the consensus of medical opinion of to-day accepts as of the greatest value and should represent a wide field of application so that, theoretically there should be no justification for any physician to step outside the list of U. S. P. XI basic drugs for any treatment of disease which he may be called upon to render. Furthermore, the Pharmacopœial Scope should be such that *every medical school would naturally and properly use the Pharmacopœia as the basis of its teaching,* so far as treatment is concerned, so that the physicians of the country would think primarily of official titles and medicines when prescribing. Its completeness as to scope and efficiency should also be such that in hospital practice few other than official drugs should be employed."

A most earnest and conscientious effort has been made to reach this ideal and when the final list is published it will be accompanied by an explanation, prepared by the members of the Scope Sub-Committee, that all may know the reasons for the more important decisions.

INTERIM REVISION.

At the last four decennial U. S. P. Conventions, authority has been granted for the issuance of "Supplements" to the Pharmacopœia. The 1930 Convention approved the following:

> "It is recommended that the Committee of Revision be authorized to prepare supplements to the Pharmacopœia, or lists of admissions or changes at any time they may deem such action desirable."

Under the authorization of the 1900 Convention, several supplements were issued immediately following the passage of the Food and Drugs Act—in 1906. Another "Supplement" was prepared to meet conditions arising from the World War, but the unexpected ending of the War made its issuance unnecessary.

The rapid development of the knowledge of vitamins, affecting Cod Liver Oil Standards, and the extensive studies here and abroad, dealing with the drug, Ergot, have made changes in these texts desirable. The Ergot revision has already been released and the Cod Liver Oil Text is assured within a few weeks.

A third "Interim Revision Announcement" will also be issued within a few months covering a number of minor changes which have long been recognized as desirable, and were in line for change in the U. S. P. XI, but, as an aid to the enforcement of standards under the Food and Drugs Act, will be announced now without waiting for the appearance of the new Pharmacopœia.

THE NEW COD LIVER OIL STANDARDS.

Entirely unforseen conditions made it necessary for extensive developments in Pharmacopœia activities in the field of vitamins. The need for standards for Vitamins A and D, the establishment of International standards for these and other vitamins and the necessity for the U. S. P. meeting this situation, have been responsible for the setting up of a U. S. P. "Vitamin Advisory Board," the organization of a group of laboratories to assist in the development of satisfactory vitamin assay methods and the determination of the Vitamins A and D potency of a special "Reference Cod Liver Oil." This will be distributed in the United States as the official standard of comparison in assaying new Vitamin A or Vitamin D-containing products, both medicines and foods.

In this program, the Pharmacopœia is working closely with the Food and Drug Administration and Dr. Nelson, Director of the Government Vitamin Laboratory, is a member of the new U. S. P. Vitamin Board.

We are undertaking a new and difficult program in attempting to coördinate the bio-assay

results of seventeen vitamin laboratories, all using the new U. S. P. assay method for Vitamins A and D, but the willingness of the vitamin experts of the United States to assist has been a remarkable tribute to the authority and acceptability of the Pharmacopœia and to the liberality of participating groups. Unfortunately, the cost of a vitamin assay is large, and without such extensive help from established laboratories this program would be impossible. The Board of Trustees is meeting the cost in two laboratories, but all other check tests have been offered without expense to the U. S. P.

A SUGGESTED DEVELOPMENT IN THE "INTERIM REVISION" OF THE PHARMACOPŒIA.

It seems to be generally conceded that for the Pharmacopœia to fully meet the increased demands placed upon it, there should be the revision of texts whenever the need for a change is demonstrated, through newly developed scientific facts. Also it is recognized that, without waiting for the decennial period, some newly developed therapeutic agents should find their place in the official standard. Ephedrine and its salts and some of their solutions, also Liver Extract, are illustrations.

The objection to "Interim Revisions" has been chiefly the difficulty of giving the change the needed publicity and permanent form. To meet this situation it is now proposed that, as changes are made after the appearance of the U. S. P. XI, they be announced in the medical and pharmaceutical press to become official on January 1st of the following year. Then, on the first of each year, a printed supplement to the U. S. P. XI shall be issued, uniform in size with the original volume, with each succeeding "supplement" carrying an index covering all preceding "Supplements." To increase the practicability of this plan it is suggested that a spring binder be supplied for these "Supplements," the size and appearance being uniform with the original volume. Perhaps at the end of five years the original U. S. P. XI could be reprinted with all supplements included. Another feature will be the inclusion in the back of the U. S. P. XI of a page of coupons. The owner of a book will thus be given the opportunity of filling out the coupon for any of the subsequent annual supplements and obtaining it from the publishers at a nominal price to cover the cost.

If properly carried out this plan will keep the Pharmacopœial text and contents in accord with changing and developing medical science and render it more valuable and useful. This general plan has received the approval of both the members of the U. S. P. Committee of Revision and Board of Trustees.

THE PHARMACOPŒIA WILL ESTABLISH AN OFFICIAL METHOD FOR PREPARING PERCENTAGE SOLUTIONS.

The correct method for preparing a percentage solution for medicinal use has long been in dispute. Some authorities have always insisted upon using the "Weight-weight" (w/w) method as the only correct procedure. Others have argued with equal insistence that the "Weight-volume" (w/v) method was the only practical plan. The new British Pharmacopœia has led the way to make the practice in drug stores uniform by prescribing an official method as follows:

"*Percentage Solutions.*

"In defining standards, the expression 'per cent' is used according to circumstances with one of three different meanings. In order that the meaning to be attached to the expression in each instance may be clear, the following notation, which has long been in use by pharmacists, has been adopted.

"*Per cent w/w, percentage, weight in weight*, expresses the number of grammes of active substance in 100 grammes of product.

"*Per cent w/v, percentage, weight in volume*, expresses the number of grammes of active substance in 100 millilitres of product.

"*Per cent v/v, percentage, volume in volume*, expresses the number of millilitres of active substance in 100 millilitres of product.

"The strengths of solutions of solids in liquids are expressed as percentage weight in volume, of liquids in liquids as percentage volume in volume, and of gases in liquids as percentage weight in weight.

. . . . . .

"In the dispensing of prescriptions, when the expression 'per cent' is used

without qualification, it is to be interpreted to mean, for solutions of solids in liquids, per cent weight in volume, for solutions of liquids in liquids, per cent volume in volume, for solutions of gases in liquids, per cent weight in weight. Thus, a '10 per cent' or a '1 in 10' solution is prepared by dissolving 10 grammes of a solid, or 10 millilitres of a liquid, in sufficient of the solvent to make 100 millilitres. A solution of the same strength may be prepared on the Imperial System, and on the Apothecaries' System, by dissolving 44 grains (more precisely 43.847 grains) of a solid, or 48 minims of a liquid, in sufficient of the solvent to make 1 fluidounce (480 minims) of solution."

Our own Committee of Revision, after discussion, voted at the recent Conference to introduce a similar paragraph in the new Pharmacopœia.

THE REVISION OF THE FOOD AND DRUGS ACT IN ITS RELATION TO THE U. S. P.

No one can now predict the final form in which the rewritten Federal Food and Drugs Act may be passed by Congress or when that may occur, but it is of the utmost importance to the work of our Committee and to the future of the United States Pharmacopœia that it should retain essentially the status proposed in the first draft offered to Congress by the Secretary of Agriculture, and introduced into both the Senate and the House.

The added recognition of Pharmacopœia standards, covering as it does the U. S. P. and N. F. definitions, descriptions, formulas, tests, assays and the packaging and labeling specifications, places greatly increased responsibility upon the decisions of the U. S. P. Revision Committee.

The "variation clause" is retained to meet the legitimate need for modifications in official products, such as the demand for a "Half-Strength or Double-Strength Ointment of Mercuric Oxide," "Half-Strength Tincture of Iodine," etc., and to allow the sale of products of technical grade and also to permit the sale of established preparations differing in flavor, color or strength from the official. However, the new requirement will compel a labeling which clearly indicates wherein the unofficial product differs in strength, quality and purity from the specifications of the Pharmacopœia or National Formulary. This has not been a part of the law heretofore.

The feature which authorizes the Secretary to prescribe additional tests or assay methods to determine whether or not the official standards are being complied with, should it be found necessary, is entirely new. This, however, greatly strengthens the position of the Pharmacopœia, for no vital objective or responsibility of our Committee is disturbed and the enforcement of the necessary standards, which our Committee have established, is helped. The first duty of the Committee of Revision is to decide the scope of the new Pharmacopœia, that it may represent the therapeutic agents of the day believed to be worthy of recognition. This duty remains exclusively in our hands.

The second responsibility of our Committee is to establish the quality and purity of these medicinal products to insure their being efficient, uniform and safe. This still remains as our exclusive job.

A third important feature of revision is the establishment of tests and assay methods whereby it can be proven that the products offered for sale and used in dispensing, when official titles or synonyms are written, meet the standard specified.

All who believe in our Pharmacopœia will desire to maintain these standards and if added tests can help in doing so, we must welcome that assistance. At this point, however, comes in the program of "Interim Revision," as an essential feature, for it is expected that the Revision Committee hereafter will quickly recognize the need for modifying obsolete standards, tests or assays and by making the revised texts official by "Interim Revision" the necessity for any such Secretarial action, except in extreme emergency, will be avoided.

The existence of such authority will also stimulate the Committee of Revision in its work and insure a close coöperation between the Committee and the enforcement officials.

EXTENDING PHARMACOPŒIAL INFORMATION.

The new booklet, on the Use of Pharmacopœial Substances by prescribing physicians, prepared for distribution at the American Medical Association Convention this year, is also offered to AMERICAN PHARMACEUTICAL ASSOCIATION members at the U. S. P. Exhibit in this Hotel. This booklet, through requests from the Deans, has also been placed in the hands of this year's medical graduates, 4624 in number, and in 54 Colleges of Medicine throughout the United States.

A Pharmacopœial Exhibit has also been placed at the World's Fair in Chicago and we have also again had opportunity to present the Pharmacopœia in the Scientific Section of the American Medical Association Annual Exhibition, the School of Pharmacy of the University of Wisconsin assuming responsibility for it. There have also been numerous inquiries from hospitals for help in the installation of a program for restricting the hospital dispensing to U. S. P. and N. F. medicinals. In a number of cities and states, active programs are being conducted by National or Local Pharmaceutical Associations, while the Philadelphia County Medical Association has asked for a monthly exhibit of official products, with suitable literature, for their Headquarters Building.

Apparently there has never before been so much interest in U. S. P. products, from professional sources.

When the new Pharmacopœia appears this program should be greatly extended but only along the most ethical and professional lines. It is hoped that the suggestion to issue monthly articles on the therapeutic application of official medicinals, for publication in the medical journals and later reprinting in booklet form, may be carried out. The younger physician, particularly, would welcome specific suggestions for prescription combination or methods of using these standard and established products.

THE PHARMACOPŒIAL SECTION OF THE PAN-AMERICAN MEDICAL ASSOCIATION.

The U. S. P. Committee of Revision was very fortunate in having Professor T. J. Bradley voluntarily represent the Committee at the meeting held in Dallas, Texas, March 21st to 25th. It may be a surprise to many to learn that there were over one thousand physicians at this meeting. There seems to be an unusual opportunity for Pan-American medical standards to be coordinated through this movement and American Pharmacy should plan to participate in the next meeting to be held in two years.

THE INTERNATIONAL STANDARD FOR THE ŒSTRUS-PRODUCING HORMONE.

While the Pharmacopœia has not yet recognized or admitted a representative of the œstrus-producing hormone now available commercially from a number of pharmaceutical laboratories, the Board of Trustees, at its recent meeting, authorized the distribution of the "International Standard" for this product through the office of the Chairman of the Committee of Revision. This action is in harmony with the broadening service which our Pharmacopœial organization is rendering to the medical and pharmaceutical professions in this country; the distribution of the International Standards for Vitamins A, D and B_1 having previously been approved. Already, many of the Vitamin Standards have been distributed in this country.

In the published announcements with respect to vitamin standards, the Vitamin Laboratory of the Bureau of Chemistry and Soils of the Department of Agriculture and the Board of Trustees of the U. S. Pharmacopœia have both been named as distributing centers. In the case of this new International Standard, just issued by the Permanent Commission on Biological Standards of the Health Organization of the League of Nations, through Sir Henry Dale of the National Institute for Medical Research in London, neither the National Institute of Health nor the Food and Drug Administration at Washington, has been in a position to undertake its distribution and they have recommended that the Pharmacopœia assume this added service.

These standards have not yet been received from London, but, as soon as they are available, there will be an announcement sent to those who are now carrying out researches in this field and also those who are manufacturing commercial products.

This service of the Health Section of the League of Nations should materially assist in establishing a degree of uniformity in the potency of the products of this character now available since they, no doubt, will be evaluated upon the basis of these new International Units.

BROADENING U. S. P. ACTIVITY.

This brief review will provide an insight into the rapidly expanding service of the Pharmacopœia and its capacity for meeting new and changing conditions. The Board of Trustees and Committee of Revision have met every situation as it has arisen with energy and efficiency.

The report of the Committee on the N. F. was called for. It was presented by E. N. Gathercoal. He stated that he had prepared a mimeographed copy of the report which was presented. Chairman Cook referred to the relationship which existed between these standards.

THE DEVELOPMENT OF N. F. VI.

BY E. N. GATHERCOAL, CHAIRMAN OF THE NATIONAL FORMULARY COMMITTEE.

In this short address there are four ideas culminating in a conclusion that will be presented for your attention, *i. e.:*

First. As you all know, the U. S. Pharmacopœia was originally prepared exclusively by physicians and for physicians and it is still maintained that the physician should be the most interested of any group in the U. S. P. The National Formulary originally was intended to be exclusively a pharmacist's handbook, but the pharmacists who have it in charge have been gradually recognizing that the National Formulary must enlist the interest of the physician if it is to prosper and to grow in influence. This means that the National Formulary has, in part at least, changed its *objective* and approaches, in this respect, the U. S. Pharmacopœia. In the progress of the present revision steps have been taken by the N. F. Committee with the thought definitely in mind of making N. F. VI of more interest to the physician.

Second. An extensive effort has been made to determine which items of medicine are really being used in prescriptions and are being sold in drug stores, with the thought in mind of omitting from N. F. VI those items which are not much used and of including those items (non-U. S. P.) which are being used as medicines. Furthermore, the National Formulary Committee took a definite step, at the suggestion of E. Fullerton Cook, to admit into N. F. VI those simple drugs and chemicals that are not U. S. P. and that are not used in any preparation in N. F. VI, but that do have a wide use in medicine.

We all know that the U. S. Pharmacopœia has always stood on a firm therapeutic foundation. As the scientific knowledge, regarding the usefulness of drugs has increased, it has been combined with clinical knowledge and every item proposed for admission to the U. S. Pharmacopœia has been critically examined in the light of this combined knowledge. The National Formulary hitherto has consistently denied any therapeutic examination to the items given admission to it. However, in this revision, such examination, indirectly at least, is being applied in the fact that we are requiring these items to show prescription usage. Certainly there is no better criterion as to the therapeutic value of a medicine than the extent to which the physicians of our land prescribe it. Here again in the *scope* of the National Formulary we are definitely approaching the same scope as that of the U. S. Pharmacopœia.

Third. Since the passage of the National Pure Food and Drugs Act in 1906, the U. S. Pharmacopœia has taken on in each revision more and more the character of a legal standard. Every word is critically examined to see that it properly meets the legal conditions. Consultation with the national enforcement officials has been frequent and these officials have watched the course of the revision and have pointed out improvements from their point of view. The present National Formulary Committee has been giving very careful consideration to the legal character of the book and is in close touch with the authorities in Washington who have in charge the enforcement of the pure food and drugs law. In this revision, these officials now receive copies of the complete N. F. Bulletin and Sub-Committee Letters. Apparently these are read as carefully and critically as the *U. S. P. Circulars* and *Sub-Committee Bulletins*. Certainly we are receiving splendid suggestions from these officials in connection with the N. F. Revision and particularly from the enforcement point of view. In its *legal* character, therefore, N. F. VI will closely approach U. S. P. XI.

Fourth. It is well known to you that in the construction of the monograph and in the general makeup of the book, N. F. V followed very closely U. S. P. X. This is being continued with N. F. VI. It is seriously proposed that in N. F. VI we do away with "Parts I, II and III" and follow the U. S. P. in a strictly alphabetical arrangement of all monographs. If this be done, N. F. VI will even more closely resemble U. S. P. XI in *style* of *monograph* and *book*.

CONCLUSION.

What then are we doing? Why is the National Formulary becoming more and more like the U. S. Pharmacopœia? What is the object in making the two books so much alike in objective, in scope, in legal character, in the type of monograph and in general makeup? There has been no predetermined effort to do this. We find that every time a question bearing on this point is decided by the Committee, the decision brings the two books closer together. However, all of

these movements seem to be for the best interests of the N. F. The aim constantly in view is to make the book more useful and more popular to both physician and pharmacist. The interests of pharmacists are being maintained and improved rather than being depreciated or lost and the interests of physicians are being increased. The new book will be of great practical value to the pharmacist, and certainly physicians should be interested in standards for all of the items they prescribe.

There remains one final thought. Shall we quietly and simply place the National Formulary in the position of a secondary pharmacopœia and be content therewith? Shall we endeavor to establish a definite and self-evident distinction between the two books and maintain the impression that they are very distinct entities not related to each other? Such a distinction has been suggested of late, in that the U. S. Pharmacopœia should become a book standardizing only chemicals and vegetables or animal drugs, while the National Formulary should have no simples, but should standardize only preparations of these simples. Prof. E. Fullerton Cook has very ably answered these questions in a communication addressed to the National Formulary Committee and printed in the N. F. Bulletin. He says in part: "When Dr. Charles Rice actively promoted the National Formulary he was Chairman of the 1880 Committee of Revision of the United States Pharmacopoeia and it was definitely planned and established as a supplementary book to the Pharmacopœia. In fact, this was the only excuse for its existence. . . . The National Formulary has always frankly taken the place of a secondary book and it has not been particularly discredited because of this, as it occupies a very important position and has legal authority equal to the Pharmacopœia. . . . The definite policy at the present time for including in the Pharmacopœia only those items which are therapeutically acceptable to the physicians elected by the United States Pharmacopœial Convention, and to include in the National Formulary other items extensively used by physicians but not found in the U. S. P., is sound and generally acceptable."

The two books should continue along the same lines that they are now following, for there are splendid fields for each of them. The U. S. Pharmacopœia should be the highest therapeutic authority in the land. It should not only present the best remedy out of a group of remedies, but it should present a suitable remedy, where possible, for every pathogenic condition where a medicine is needed. So far as possible, the National Formulary should provide standards for all non-U. S. P. remedies used by physicians.

There is a great difference in medical practice between a list of remedies of highest therapeutic standing and a list of remedies widely used by physicians. This statement casts no reflection upon the ability of the medical profession. It is characteristic of the human race that some lead and others follow. Certainly this is true in the medical profession where also differences of opinion constantly exist regarding the therapeutic value of medicines. Neither is there any unfavorable reflection cast upon the National Formulary by this statement. The U. S. Pharmacopœia is much the older book and throughout its existence has been without a rival as the leader of therapeutic thought in this country. All of the violins in an orchestra cannot be *first* violins. It is certainly very much more honorable and may indicate a very much higher standing in musical ability to be second violin in a high-class orchestra than a *first* violin in a third- or fourth-rate orchestra.

PHARMACEUTICAL RECIPE BOOK.

The report on the Recipe Book was presented by Chairman J. Leon Lascoff as part of the "Symposium on Practicing Professional Pharmacy." (See page 1196.)

The report of the Committee on Non-Official Standards was presented by Chairman John C. Krantz, Jr.

REPORT OF THE COMMITTEE ON UNOFFICIAL STANDARDS.

BY JOHN C. KRANTZ, JR., CHAIRMAN.

ORGANIZATION.

Since the presentation of the 1932 report, the personnel of the Committee on Unofficial Standards of this ASSOCIATION has remained practically unchanged. The Committee is divided into two sections, a chemical section under the chairmanship of Dr. Hugo H. Schaefer, and a