

## Section on Scientific Papers

Papers Presented at the Sixty-First Annual Convention

### MINUTES OF THE SCIENTIFIC SECTION.\*

FIRST SESSION—TUESDAY AFTERNOON, AUGUST 19, 1913.

The first session of the Section on Scientific Papers was called to order by Chairman F. R. Eldred, of Indianapolis, at 3:45 p. m., in Room "A" of the Masonic Grand Lodge, with F. P. Stroup, of Philadelphia, Secretary, and W. L. Scoville, of Detroit, Second Vice-Chairman, present.

Mr. Scoville was asked to preside while the Chairman's Address was being read. (See September JOURNAL, p. 1109.)

The Address of the Chairman was discussed by Messrs. Lowe, Raubenheimer, Stewart, Scoville, Gordon and Vanderkleed, and, on motion of Mr. Mayo, duly seconded, referred for publication.

Mr. Eldred resumed the Chair, and stated that the next order of business was the appointment of a Nominating Committee, to nominate officers for the ensuing year. The officers to be named were a Chairman, First Vice-Chairman, Second Vice-Chairman and Secretary, and it was the duty of the Nominating Committee to bring in at this session two names for each of these offices, these nominations to be balloted upon at the last session of the Scientific Section. He thereupon appointed the following as a Nominating Committee: Messrs. Linwood A. Brown, of Lexington, Ky.; Otto Raubenheimer, of Brooklyn, and E. L. Maines, of Brooklyn.

The Chair said the Section was now ready to proceed with the reading of papers, and he would suggest that, as there was a considerable number of papers to be disposed of in a rather limited time, the formality of moving that papers be received and referred be dispensed with, and that it be understood that, without objection, the papers read would take the usual course. He thereupon called on Charles E. Caspari, of St. Louis, to read a paper on "The Determination of Santonin in Santonica."

Prof. Caspari explained before reading his paper that he had found out, since coming to Nashville, that a paper on the same order had recently been published in the *Druggists' Circular*; but as he had not seen that paper, and did not claim originality for this paper, he thought he was authorized to read it.

Prof. Caspari's paper was discussed by Messrs. Lowe, Raubenheimer, Asher, Engelhardt, the author and by Chairman Eldred, and referred for publication.

The next paper read was one by Hermann Engelhardt, on "The Estimation of Phosphorous in Tablets, Pills, etc."

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\*The discussions referred to in the minutes will appear in connection with the various papers as they are printed.

Before reading his paper Mr. Engelhardt explained that it was in the nature of a preliminary report on the subject.

The paper was briefly discussed by Messrs. Vanderkleed, Engelhardt and Chairman Eldred, and referred for publication.

The Chair stated that the next three papers on the program (Nos. 4, 5 and 6) were contributed by Chas. H. Lawall, of Philadelphia, who was not present, and they would be passed for the present; but after all the papers whose authors were present at the Section session had been read, these omitted papers would then be taken up.

The next paper on the program, one by E. A. Ruddiman, of Nashville, on "The Examination of Proprietary Medicines," was likewise passed for the time being, because of the absence of the author.

A paper on "Some New Methods for the Analysis of Certain Drug Preparations" was read by the author, Linwood A. Brown, of Lexington, Ky.

The paper just read was discussed by Messrs. Asher, Brown and Gordon, and referred for publication.

The next three papers on the program were passed, because of the absence of the writers, and a paper on "Some Notes on the LaWall Assay Process" was read by H. W. Jones.

The Chair invited discussion upon the paper just read, but none was offered.

At this point, the Chairman made a series of announcements as to Section meetings and social features.

The reading of papers was resumed, and H. A. B. Dunning, of Baltimore, read a paper on "Detection and Estimation of Minute Quantities of Methyl Alcohol in the Presence of Ethyl Alcohol, and Formaldehyde in the Presence of Hexamethylenamine."

This paper was briefly discussed by Otto Raubenheimer and the writer, and referred for publication.

A score or more of papers was passed for the time being, on account of the absence of the authors, while one or two of those present asked to have the reading of their papers postponed, for the reason that they had not expected them to be reached at this session.

A paper by E. G. Eberhardt and Frank R. Eldred on "Bibliography of the Deterioration of Drugs and Pharmaceutical Products" was read by title.

The Chair then called upon Wilbur L. Scoville, of Detroit, to present his paper on "Tincture of Cantharides." Before reading his paper, Mr. Scoville explained that it was in the nature of a "continued story;" that this was the third installment, and the conclusion was somewhere in the future, he did not know how far.

This paper was discussed by Messrs. Raubenheimer, Gordon, Scoville and Kebler, and referred for publication.

The Chair stated that it was now 5 o'clock in the evening, and he believed that, with the progress the Section had made, it would be able to finish its program at the next session, and as so many of the members had gone, he thought it would perhaps be best to have the report of the Nominating Committee at this time.

Thereupon, Chairman Brown made the following report for the Nominating Committee:

REPORT OF THE NOMINATING COMMITTEE.

*Chairman*, Freeman P. Stroup, E. A. Ruddiman.

*First Vice Chairman*, Hermann Engelhardt, Azor Thurston.

*Second Vice Chairman*, Charles E. Caspari, J. F. Woolsey.

*Secretary*, Wilbur L. Scoville, H. A. B. Dunning.

Signed: L. A. BROWN, OTTO RAUBENHEIMER, E. L. MAINES, Committee.

The Chair stated that this report would be acted upon at the last session.

In answer to an inquiry by Mr. Kebler, as to whether a report from the Committee on Drug Market had been received by this Section, the Chair replied that it had not. Mr. Kebler stated that he had a copy of this report, but he had not been advised by the Chairman of the Committee to turn it over to the Section.

Mr. Army stated that the report of the Committee on Drug Market, as well as that of the Committee on Weights and Measures, had been referred from the general session to this Section, and he thought if Mr. Kebler had copies of either or both it would be proper for him to file them with the Section. Mr. Kebler responded that while Chairman Patch, of the Committee on Drug Market, had sent him a copy of his report, he did not say it was in finished condition, and he understood that the gentleman was having the report printed, and expected to have copies for distribution here. If these copies did not arrive by tomorrow, he said, he would be willing to submit the report in the shape he had it, but would prefer that the report in its authorized, finished form should be presented.

With this explanation, the Chair stated that consideration of the report of the Committee on Drug Market would be postponed until tomorrow.

Thereupon, upon motion made and seconded, the Section stood adjourned.

SECOND SESSION, WEDNESDAY, AUGUST 20, 1913, 8:30 P. M.

The second session of the Scientific Section was opened by Chairman Eldred, Vice Chairman Scoville acting as Secretary.

Papers were presented as follows:

"Bethabara," by Otto Raubenheimer, which was read in full by the author. Mr. Vanderkleed asked whether the extract had any special advantage as an indicator, and Mr. Raubenheimer replied that it was extremely sensitive to ammonia.

"Are Tablets of Uniform Composition," by L. F. Kebler. Read in abstract by the author.

Secretary Stroup relieved Mr. Scoville as acting Secretary.

"How Much Should Compressed Tablets Vary in Weight?" by C. H. Briggs. Read in full by W. L. Scoville.

Mr. Vanderkleed asked whether Kebler's 449 samples meant so many packages, or just individual tablets? Kebler replied "449 kinds—10 to 50 tablets being used at a time."

C. E. Caspari asked whether Kebler's investigations went into the deterioration of nitroglycerin tablets? Kebler replied that there seemed to be some loss

in process of manufacture, but little thereafter. Prof. Caspari reported that in a series of investigations carried over some months, he had noted a gradual loss of strength. Messrs. Engelhardt and Caspari both referred to change in color which nitroglycerin tablets undergo on keeping.

Others taking part in the discussion were Messrs. Raubenheimer, Brown, Abbott, Clark, Caspari, Murray, Vanderkleed, Eldred and Fantus.

"The Effect of Geographical Source on the Volatile Oil in Hops," by Frank Rabak. Read in abstract by W. W. Stockberger.

"*Cunila mariana*, a substitute for *Spigelia*," by W. W. Stockberger. Read in abstract by the author.

"The Field for Drug Plant Breeding," by W. W. Stockberger. Read in abstract by the author.

John Uri Lloyd gave his experience and observations with regard to tobacco and a number of other plants with reference to the influence locality has on quality.

The Secretary called attention to the difficulties met in complying with the requirements of Section VI of the by-laws, and suggested that the Section be revised to read as follows:

#### Section VI.

##### MEETINGS.

Article I. At least three sessions of the Section shall be held at each annual meeting of the Association. Additional sessions may be held at any time during the meeting when the officers of the Section may see fit, and by consent of the Council; provided, however, that these sessions be so arranged that they conflict as little as possible with the sessions of other Sections, and that no session be held simultaneously with the final session of the Association.

Upon motion, the suggestion was accepted and the matter laid on the table to be acted upon at the next meeting of the Section.

The Section then adjourned until 3 p. m. Thursday.

F. P. STROUP, Secretary.

#### THIRD SESSION—THURSDAY AFTERNOON, AUGUST 21, 1913.

The Section was called to order by Chairman Eldred at 3:30 p. m. in Room "A" of the Grand Lodge.

The minutes of the first session, held Tuesday afternoon, and the second session, held Wednesday evening, were read by Secretary Stroup, and the Chair stated that if there were no corrections to the minutes, they would stand approved as read, and it was so ordered.

The Chair announced that the election of officers for the ensuing year was now in order, and appointed Mr. Richtmann, of Florida, and Mr. Murray, of New Jersey, as tellers to take the vote by ballot.

Mr. Stroup asked the privilege of withdrawing his name from nomination for Chairman in favor of Doctor Ruddiman, as his plans for the ensuing year were such that, even if elected, he could not do the position justice. He said he fully appreciated the compliment of having his name in nomination, but felt constrained to withdraw it. This request was refused, on motion of Mr. Wilbert, seconded by Mr. Vanderkleed, and Mr. Stroup said that he could only make the request that another member had made on a former similar occasion, that the members refuse to vote for him when the ballot was taken.

The tellers appointed proceeded to take the ballot upon the nominations as made, and reported that the following had received a majority of the votes cast for the respective offices named, and the Chair declared these gentlemen duly elected:

Chairman, Edsel A. Ruddiman, of Nashville.

First Vice-Chairman, Hermann Engelhardt, of Baltimore.

Second Vice-Chairman, Charles E. Caspari, of St. Louis.

Secretary, Wilbur L. Scoville, of Detroit.

W. L. Scoville moved to amend Article II, Section IX, of the by-laws, referring to titles and abstracts of papers, by adding thereto, "and all papers must be in the possession of the Chairman at least one week before the meeting of the Section."

Mr. Vanderkleed stated that, while he favored Mr. Scoville's motion, he would like to ask if it were possible to present a proposed change in the by-laws and act upon it at the same session. Mr. Scoville responded that it was not. Mr. Vanderkleed then seconded the motion as made.

Thereupon Mr. Wilbert moved to suspend the by-laws, in order that this motion might be put to a vote.

Chairman Eldred spoke in opposition to the motion just made, and thought it would be a step backward, instead of forward. As far as he knew, there had been no complaint of embarrassment caused by the by-laws as they stood. Such a good showing in the way of papers had been made this year that he thought the Section could afford to require hereafter that the papers be in the hands of the Chairman thirty days before the meeting, and this would be quite an advantage, since it would enable the officers of the Section to really see what papers should be accepted and read, and would give them time to make an intelligent arrangement of the program. As the matter was now, the Chairman had no way of doing this except by reference to title, and experience had shown that titles were not always a good index to the character of the papers themselves. He did not think the Section officers should be embarrassed by having this additional restriction.

There were calls of "Question!", and the Chair ruled that the proposed amendment would have to go over to next year's meeting for action.

The Chair then stated that there was another amendment presented to the by-laws at last night's session, which could be voted upon at this session. The Secretary thereupon read Articles I and II of Section VI of the by-laws, and then read the proposed amendment to Article I, providing for at least three sessions of the Scientific Section at each annual meeting as presented at the preceding session.

Mr. Vanderkleed, seconded by Mr. Scoville, moved the adoption of the proposed amendment, and that same be referred to the Council for approval, and this motion prevailed.

The Chair stated that the Section was now ready to proceed with the reading of papers, and explained that it would be necessary to deviate somewhat from the regular order, in order to accommodate members who had to appear before other Sections. He called upon Prof. C. E. Vanderkleed, of Philadelphia,

to present a series of papers contributed by himself and his associates, and invited the gentleman to present them in any order he saw fit.

Prof. Vanderkleed then presented the following papers, in the order given.

"An Improved Form of Kymograph," by Paul S. Pittenger.

"Variation in Susceptibility of the Guinea Pig, Continuation of a Previous Study," by Chas. E. Vanderkleed and Paul S. Pittenger.

"A Pharmacodynamic Study of the Pituitary Gland, with Tests of a New Product," by Fritz Heidlberg, Paul S. Pittenger and Chas. E. Vanderkleed.

"A New Uterus-Contracting Method of Testing Ergot, with Comparison with the Blood Pressure Method," by Paul S. Pittenger and Chas. E. Vanderkleed.

"Metal Colloids, Their Increasing Importance as Remedial Agents," by Chas. E. Vanderkleed and Paul S. Pittenger.

After Prof. Vanderkleed had answered at some length an inquiry by Mr. Gordon as to his method of preparing and clearing the colloids treated in his paper upon that subject, the series of papers was received, and ordered to take the usual course.

The Chair explained that a paper by William Mansfield, of New York, upon the subject "Plant Hairs of the U. S. P. and N. F. Drugs" had been withdrawn by the author, because he had not been able to complete it, and that it would be read later before one of the Branches.

Prof. Mansfield was thereupon called on to read his paper upon "Papain of Commerce," which he proceeded to do.

This paper on papain was discussed at length by Messrs. Gordon, Mansfield, Lloyd, Murray, Puckner, Engelhardt, Wilbert and Chairman Eldred, and Mr. Murray asked the author quite a number of questions about the subject-matter of his paper, to which Mr. Mansfield responded. The paper was then received and referred to take the usual course.

Doctor H. H. Rusby, of New York, offered the following resolution:

*Resolved*, That the American Pharmaceutical Association request the United States Department of Agriculture and the United States National Museum to cooperate in securing and caring for a collection of authenticated useful plants for the purpose of providing accurate and positive decisions of the many questions that are constantly arising concerning the identity and quality of such products.

Speaking to his resolution, Dr. Rusby said that, at present, asafoetida was a bone of contention between the importers and the United States Government. Nobody knew what asafoetida really was, and there was no end of trouble about it. The same was true of other drugs. If such a collection as that proposed could be established in a national museum then any one could consult these specimens and know just what they contained. He thought every drug should be represented by an authenticated specimen at Washington. He quoted from Dr. J. U. Lloyd in support of this view, and asked the passage of the resolution.

Dr. Lloyd approved the resolution just read, and expressed the opinion that the pharmacists of the country should endeavor to have collected at Washington authenticated specimens of drugs, roots and plants. One use of such a collection would be that the writers of papers could then speak with authority on many things they could not at present, and possibly be able to accompany their papers with a sample of the authenticated article. Resort to such a collection would be a final and conclusive means of settling any question that might arise upon

reports made of the examination of plants, as to their properties and qualities. He believed Dr. Rusby's resolution was a wise one, and that the United States Government was the proper authority to take this matter in hand.

The Chair said this resolution would go to the Committee on Resolutions of the House of Delegates, for further action.

The next paper read was one by John Uri Lloyd, of Cincinnati, on "Coca; Its History and Uses by the Indians of the Colombian Andes."

The Chair said he was sure this very interesting paper of Doctor Lloyd's would be published in the Journal, so that all could read it. The paper was then received and referred for publication.

The next paper read was one by M. I. Wilbert, of Washington, D. C., on "The Proposed List of Useful Remedies."

After a brief discussion of the paper by Prof. Mansfield and the author, it was ordered to take the usual course.

The Chair stated that this was the last of the papers whose authors were present, but there were two very interesting papers on the program whose authors were not present, one by Charles H. Lawall, on "A New Form of Separatory Funnel for Preventing the Formation of Emulsions in Shaking Out with Immiscible Solvents," and he would ask the Secretary to read this paper. This Secretary Stroup proceeded to do, and in connection therewith illustrated the working of the apparatus accompanying same.

Chairman Eldred described the successful working of this apparatus sent him by Mr. LaWall in his own laboratory, after which the paper was ordered to take the usual course.

The Chair stated that the second paper to which he had referred, whose author was not present, was a paper by H. M. Gordin, and his associate, Jay Kaplan, "Note on the Comparative Adsorption of Different Substances by Lloyd's Reagent, Animal Charcoal and Aluminum Hydroxide. Complete Adsorption of Alkaloids." He said he would ask Doctor Lloyd to present this paper, which he proceeded to do.

Mr. Gordon moved a vote of thanks to Doctor Lloyd for his kindness in presenting this paper and giving the valuable information he had in such an understandable way, and this motion was seconded by Mr. Murray. Doctor Lloyd suggested waiting a year, and stated that two years ago he would have felt safer to talk on this subject than now. This suggestion did not meet with the favor of the members, however, and the vote of thanks was heartily accorded.

Chairman Eldred then read a paper by George D. Beal, on "The Preparation of Pure Dextrose and Sucrose Caramels."

The Chair stated that the rest of the papers on the program, the authors not being present, would be read by title and referred for publication. The following is a list of the papers so read by title and referred:

"Methods of Estimating Oil of Peppermint in Spirit of Peppermint," by Charles H. LaWall and Leroy Forman; "Methods of Examination of Extract of Vanilla," by Charles H. LaWall and Leroy Forman; "The Examination of Proprietary Medicines," by E. A. Ruddiman; "The Phosphoric Anhydride Content of Syrup of Hypophosphites," by W. D. McAbee; "Observations Upon the Assay of Pepsin," by H. T. Graber; "Linseed Oil," by Azor Thurston; "Notes

on the Analysis of Essential Oils," by Francis D. Dodge; "An Examination of the Volatile Oil of *Monarda Citriodora*," by Edward Kremers and Nellie Wakeman; "The Crystalline Glucoside from *Gaultheria Procumbens*," by Edward Kremers and C. W. Talbot; "Oregon Balsam," by L. E. Sayre; "Gelseminine—Further Report of Progress in the Purification of this Alkaloid," by L. E. Sayre; "Individual Variation in Belladonna Plants as a Basis for Improvement by Selection," by A. F. Sievers; "The Influence of Soil Composition on Medicinal Plants," by F. A. Miller; "The Comparative Activity of Various Species and Varieties of *Digitalis*," by F. A. Miller and W. F. Baker; "The Commercial Possibilities in Growing Medicinal Plants," by F. A. Miller; "Reactions of Plant Substances with Certain Reagents," by Henry Kraemer; "The Relation of Pharmacognosy to the Practice of Pharmacy," by Heber W. Youngken; "The Pharmacognosy Museum," by E. N. Gathercoal; "Deterioration of *Digitalis* Tinctures and Fluidextracts," by C. C. Haskell; "The Relative Activity of Various Galenical Preparations of Ergot," by C. C. Haskell; "The Rate of Deterioration of Ouabain Solutions," by C. C. Haskell and W. A. Doeppers; "The Influence of Curing and Storage Upon the Activity of *Digitalis* Leaf," by C. C. Haskell and F. A. Miller; "Autogenous Vaccines," by Jacob Diner; "Biological Products; Their Use and Abuse," by Severance Burrage; "Acidity of Hydrogen Dioxide Solution," by B. L. Murray; "Hypophosphorous Acid," by E. E. Wyckoff; "The Making of Tablets by the Retail Pharmacist," by Bernard Fantus; "Consideration of some Newer Remedies," by C. S. Woods; "Suggestions Regarding the Work of the Scientific Section of the A. Ph. A.," by F. E. Stewart; "Some Chinese and Japanese Pills, Tablets and Powders Imported Into the United States," by Albert Schneider.

The Chair stated that the report of the Committee on Drug Market was properly a matter for consideration now, but suggested that as there were copies ready for distribution among the members, and the report was quite long and of a character well known to the members, it was unnecessary to read it. He thought it might be read by title and referred for publication. Mr. Woolsey, duly seconded, so moved, and the motion prevailed.

Mr. Murray called attention to the fact that this report of the Committee on Drug Market bore date August, 1913, whereas it showed in a note at the close of the report that it contained information taken from the Government reports covering the years 1908, 1909, 1911 and 1912.

Chairman Eldred stated that the status of this Committee was discussed extensively at the Denver meeting last year, and it was expected that some action would be taken on it at this meeting, either by way of changing the name of the Committee, or doing away with it altogether. He thought perhaps the thing most favored was to change the name of the Committee, as the character of the report was not a report on Drug Market at all, but a report on adulteration.

Prof. William Mansfield, of New York, said he thought the publication of a report of this kind would have rather a bad effect on the physicians of the country, and on laymen in general, because it simply gave the number of samples taken which were found to be adulterated. For the report to be of real value, he thought the whole number of samples examined should be stated, as well as the number found adulterated. In this way, some idea of the relative adul-



teration of drugs could be had, and it could be seen how pure drugs were, or how impure. He thought the report in this form was rather misleading, and was not a report on Drug Market at all, but simply a report on isolated cases of adulteration.

Fredrick T. Gordon, of Philadelphia, thereupon moved that this report be received and referred to the Council for consideration, with the recommendation that the title of the Committee on Drug Market be changed to Committee on Drug Adulteration, and that this Committee be instructed in future reports to give not only the number of adulterated samples, but also the total number of samples examined.

This motion had a second in Prof. Mansfield, and was put to a vote and carried.

The Chair stated that there was another Committee Report which had been referred to this Section by the General Session, namely; the Report of the Committee on Weights and Measures. He asked what should be done with this report.

Mr. Wilbert said he supposed it was the usual report of progress, and the Chair said he thought it was. Thereupon, Mr. Wilbert, seconded by Mr. Mansfield, moved that the report be received and referred for publication, and it was so ordered.

Prof. Mansfield said that before the present Chairman yielded his office to his successor, he wished to move a vote of thanks to Mr. Eldred for the very efficient manner in which he had conducted the several sessions of the Scientific Section, and for the many excellent papers he had secured to be presented before it.

This motion was seconded by Mr. Murray and Mr. Engelhardt, and a vote upon it being put by Secretary Stroup, it was carried unanimously.

The ceremony of installation of the officers-elect was dispensed with, as the hour was late, and Chairman Eldred announced that a motion to adjourn was in order.

Thereupon, Mr. Engelhardt, seconded by Mr. Woolsey, so moved, and the Section stood adjourned until the Annual Meeting of 1914.

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### THE SILENCE OF MORAL PROGRESS.

The fact of moral progress is sometimes doubted, for several reasons. The workings of moral evil are as a rule violent and noisy; the operations of the beneficent forces are silent and slow. The whirlwind that uproots the tree startles the senses and kindles the imagination of the ignorant onlooker, while the quiet, patient, beautiful interworking of the natural forces that built the tree, he neither admires nor notices. Most people have some knowledge of the evils of their own time but few of them have any knowledge of the evils of past times. It is inevitable that they should reckon the wrongs of which they know as more important than those of which they do not know.—*Washington Gladden.*