various schools will be of value. Every institution should have an individuality. We are not all the same and it is undesirable that we should be. In addition to the usual courses given in laboratory there are often other agencies in an institution which the college of pharmacy may utilize to advantage to improve its teaching. I refer especially to those pharmacy schools which are associated with medical schools or dental clinics or have access to hospital dispensaries. Most universities now have some type of student health service and this offers opportunities for practical dispensary teaching which the pharmaceutical schools cannot afford to overlook.

The Chairman already has in hand papers describing the work that is being given in a number of schools. He requests a detailed description of what is being done in every Conference school. We may thus find out how we may better the work in our own school.

The discussion of this subject will not be of value to college men alone. It is a matter in which the boards of pharmacy and the retail druggists are vitally interested. Will you not send your contribution for this symposium at once to the Chairman of the Executive Committee? RUFUS A. LYMAN, Chairman.

UNIVERSITY OF NEBRASKA,

Lincoln, Nebraska

THE TENTH REVISION OF THE UNITED STATES PHARMACOPOEIA.* BY E. FULLERTON COOK, CHAIRMAN.

I am indebted to the officers of this representative association of pharmacists for the opportunity to present a review of the current Pharmacopoeial revision, well knowing that to speak before the New York Branch means to secure a national audience.

I also welcome the opportunity at this time to obtain the reaction when important decisions of the Committee are made public.

The Pharmacopoeia is not established to further the interest of any individual or group but to do its part to maintain the public health through the activities of the medical and pharmaceutical professions. Its standards should receive the approval of enlightened public opinion when expressed by those qualified to judge.

Therefore a public forum, where there are gathered those who are struggling against disease, is a fitting place to announce and discuss proposed scope and standards.

There are of necessity limitations to the publicity concerning committee work, since it would be manifestly unfair to predict the decision on questions which are yet under discussion but, where conclusions have been reached, the policy of the revision calls for public announcement and comment.

ORGANIZATION.

The organization of the Committee is so well known through various articles published in recent years, that little need be said of this.

The General Committee, made up of all regularly elected members, is the group by which questions of policy and general principles are discussed and decided. For the detailed, scientific study and revision of texts the Sub-committee Groups have been organized and here the specialists have full opportunity to use their training and experience that the new text may express the last scientific fact and the accepted standards and tests.

^{*} An address before the New York Branch, A. Ph. A., November meeting, 1921.

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A new feature of the Tenth Revision has been the addition of Auxiliary members to Sub-committees in an advisory capacity. The Committee of Revision and Board of Trustees approved a recommendation that Sub-committee Chairmen be permitted to nominate auxiliary members for their Sub-committees, the nominations to be subject to the approval of the General Committee and Board. It was pointed out that in this way the active help of many specialists through experimentation and comment would be secured for the revision and also new pharmacopoeial workers developed, but it has always been definitely understood and accepted by all proposed auxiliary members, that the voting power remains exclusively under the control of the regular Committee members.

More than seventy auxiliary members have been nominated and approved and many are rendering valuable assistance on Sub-committees.

The Chairmen of fifteen Sub-committees constitute the *Executive Committee*. This Committee is made directly responsible in the By-Laws for the revision, but their greatest activity is as individual Chairmen of the special groups constituting their Sub-committees.

The Executive Committee, however, is called upon to decide questions of a scientific character and aid by discussion and suggestion in the preparation of texts.

To facilitate the filing of communications in the various groups the "Circulars" of the General Committee are mimeographed on white paper, the "Letters" for the Executive Committee on yellow paper, and all Sub-committee "Bulletins" on blue paper. All paper is punched for insertion in binders, and individual binders supplied for each set. Whenever a voting sheet is issued or a communication to be returned, it is issued in duplicate and on salmon-colored paper and accompanied by a stamped, addressed return envelope.

This has proved gratifyingly effective in securing votes and other responses from the Committee, and usually more than 80 per cent of the members respond within the time limit.

Cooperation — The current revision has been receiving cooperation of the most valuable character from every affiliated interest. Medical associations and individual physicians have responded to requests to help in the settlement of the therapeutic questions, the several departments of the Government, whenever called upon, have responded promptly and the Bureau of Chemistry has organized a committee of experts within the Bureau to study and help every department of the revision. Many valuable suggestions come from the papers presented at the meetings of the AMERICAN PHARMACEUTICAL ASSOCIATION, American Drug Manufacturers' Association, Association of Official Agricultural Chemists and various State and other drug associations. Individual pharmaceutical manufacturers and colleges of pharmacy have also been aiding the revision and a special service rendered by colleges of pharmacy has been the abstracting of texts from foreign pharmacopoeias for the use of Sub-committee Chairmen.

Scope.—Early in the revision it was agreed that the decision concerning admissions and deletions for the Tenth Revision would be placed in the hands of the Sub-committee on Scope. This is a representative committee of physicians and pharmacists, and it has earnestly endeavored to advance the true value of the Pharmacopoeia by restricting admissions to remedial agents which possess undisputed therapeutic value or are pharmaceutic necessities. The labors of this Sub-committee are not yet completed and their decisions are subject to reconsideration by a special committee, but work has advanced far enough for a public announcement to be of interest. A number of titles, about 200, including chieffy galenical preparations which were left until last, have not yet been reported upon to the General Committee, but are all under discussion in the Sub-committee. ADMISSIONS.

Four hundred and seventy-five (475) articles, formerly official, have definitely been admitted to the U. S. P. X.

The list of admissions to date are as follows:

Acacia Acetanilidum Acetonum Acetphenetidinum Acidum Aceticum Acidum Aceticum Dilutum Acidum Aceticum Glaciale Acidum Benzoicum Acidum Boricum Acidum Citricum Acidum Hydriodicum Dilutum Acidum Hydrochloricum Acidum Hydrochloricum Dilutum Acidum Hypophosphorosum Acidum Nitricum Acidum Phenylcinchononinicum Acidum Phosphoricum Acidum Phosphoricum Dilutum Acidum Salicylicum Acidum Stearicum Acidum Sulphuricum Acidum Sulphuricum Aromaticum Acidum Sulphuricum Dilutum Acidum Tannicum Acidum Tartaricum Acidum Trichloraceticum Aconitina Aconitum Adeps Adeps Benzoinatus Adeps Lanae Adeps Lanae Hydrosus Aether Aethylis Chloridum Aethylmorphinae Hydrochloridum Agar Alcohol Alcohol Dehydratum Alcohol Dilutum Aloe Aloinum Alumen Alumen Exsiccatum Ammonii Benzoas Ammonii Bromidum Ammonii Carbonas

Ammonii Chloridum **Amylis Nitris** Amvlum Antimonii et Potassii Tartras Antipyrina Apomorphinae Hydrochloridum Aqua Aqua Ammoniae Aqua Ammoniae Fortior Aqua Anisi Aqua Aurantii Florum Fortior Aqua Cinnamomi Aqua Destillata Aqua Destillata Sterilisata Aqua Foeniculi Aqua Menthae Piperitae Aqua Menthae Viridis Aqua Rosae Fortior Argenti Nitras Argenti Nitras Fusus Arseni Iodidum Arseni Trioxidum Asafoetida Aspidium Atropina Atropinae Sulphas Aurantii Amari Cortex Aurantii Dulcis Cortex **Balsamum** Peruvianum Balsamum Tolutanum Belladonnae Folia Belladonnae Radix Benzaldehydum Benzinum Purificatum Benzoinum Benzosulphinidum Betaeucainae Hydrochloridum Betanaphthol Bismuthi Subcarbonas **Bismuthi Subgallas Bismuthi Subnitras** Buchu Caffeina Caffeinae Sodio-Benzoas Calcii Bromidum Calcii Carbonas Praecipitatus

Calcii Chloridum Calcii Lactas Calumba Calx Calx Chlorinata Cambogia Camphora Cannabis Capsicum Carbo Ligni Cardamomi Semen Carum Carvophyllus Cascara Sagrada Cera Alba Cera Flava Ceratum Resinae Cetaceum Chloralum Hydratum Chloroformum Chromii Trioxidum Chrysarobinum Cinchona Cinchona Rubra Cinchonidinae Sulphas Cinnamomum Saigonicum Cocaina Cocainae Hydrochloridum Coccus Codeina Codeinae Phosphas Colchici Cormus Colchici Semen Colchicina Collodium Collodium Flexile Colocynthis Copaiba Cotarninae Hydrochloridum Creosoti Carbonas Creosotum Cresol Creta Praeparata Cubeba Cupri Digitalis Elaterinum Emetinae Hydrochloridum Emplastrum Capsici Emulsum Olei Morrhuae Ergota Eriodictvon Eucalyptol Eucalyptus Extractum Belladonnae Foliorum Extractum Cascarae Sagradae

Extractum Colocynthidis **Extractum Fellis Bovis** Extractum Glycyrrhizae Purum Extractum Hyoscyami Extractum Nucis Vomicae Extractum Rhei Extractum Stramonii Fel Bovis Ferri Carbonas Saccharatus Ferri Chloridum Ferri et Ammonii Citras Ferri Phosphas Ferri Sulphas Ferri Sulphas Exsiccatus Ferrum Ferrum Reductum Fluidextractum Cascarae Sagradae Fluidextractum Cascarae Sagradae Aromaticum Fluidextractum Cinchonae Fluidextractum Ergotae Fluidextractum Glycyrrhizae Fluidextractum Hydrastis Fluidextractum Ipecacuanhae Fluidextractum Rhoi Fluidextractum Sennao Fluidextractum Singiberis Galla Gambir Gelatinum Gentiana Glucosum Glycerinum Glyceritum Acidi Tannici Glyceritum Boroglycerini Glyceritum Phenolis Glycyrrhiza Gossypium Purificatum Granatum Guaiacol Guaiacolis Carbonas Hexamethylenamina Homatropinae Hydrobromidum Hydrargyri Chloridum Corrosivum Hydrargyri Chloridum Mite Hydrargyri Iodidum Flavum Hydrargyri Iodidum Rubrum Hydrargyri Oxidum Flavum Hydrargyri Salicylas Hydrargyrum Hydrargyrum Ammoniatum Hydrargyrum cum Creta Hydrastis Hyoscyaminae Hydrobromidum Hyoscyamus Infusum Digitalis Iodoformum

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Iodum Ipecacuanha Jalapa Kino Krameria Limonis Cortex Linum Liquor Acidi Arsenosi Liquor Ammonii Acetatis Liquor Arseni et Hydrargyri Iodidi Liquor Calcis Liquor Cresolis Compositus Liquor Formaldehydi Liquor Hydrogeni Dioxidi Liquor Magnesii Citratis Liquor Plumbi Subacetatis Liquor Potassii Arsenitis Liquor Potassii Hydroxidi Liquor Sodae Chlorinatae Liquor Sodii Chloridi Physiologicus Liquor Sodii Hydroxidi Lobelia I,ycopodium Magma Magnesiae Magnesii Carbonas Magnesii Oxidum Magnesii Oxidum Ponderosum Magnesii Sulphas Manna Mentha Piperita Mentha Viridis Menthol Methylis Salicylas Methylthioninae Chloridum Mistura Cretae Morphinae Hydrochloridum Morphinae Sulphas Mucilage Acaciae Mucilago Tragacanthae Myrrha Nitrogenii Monoxidum Nux Vomica Oleoresina Aspidii Oleoresina Capsici Oleum Amygdalae Amarae Oleum Amygdalae Expressum Oleum Anisi Oleum Aurantii Oleum Cadinum Oleum Cari Oleum Caryophylli Oleum Cassiae, Oleum Chenopodii Oleum Coriandri Oleum Eucalypti Oleum Foeniculi

Oleum Gossypii Seminis Oleum Juniperi Oleum Lavandulae Oleum Limonis Oleum Lini Oleum Menthae Piperitae **Oleum Menthae Viridis** Oleum Morrhuae Oleum Myristicae Oleum Olivae Oleum Picis Liquidae Rectificatum Oleum Pini Pumilionis Oleum Ricini Oleum Rosmarini Oleum Santali Oleum Sassafras Oleum Sinapis Volatile Oleum Terebinthinae Oleum Terebinthinae Rectificatum Oleum Theobromatis Oleum Tiglii Opii Pulvis Opium **Opium Granulatum** Oxygenium Pancreatinum Paraffinum Paraformaldehydum Paraldehydum Pelletierinae Tannae Реро Pepsinum Petrolatum Petrolatum Album Petrolatum Liquidum Phenol Phenol Liquefactum Phenolphthaleinum Phenylis Salicylas Phosphorus Physostigminae Salicylas Pilocarpinae Hydrochloridum Pilocarpinae Nitras Pilulae Catharticae Compositae Pix Liquida Plumbi Acetas Plumbi Oxidum Podophyllum Potassa Sulphurata Potassii Acetas Potassii Bicarbonas Potassii Bitartras Potassii Bromidum Potassii Carbonas Potassii Chloras Potassii Citras

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Potassii Citras Effervescens Potassii et Sodii Tartras Potassii Hydroxidum Potassii Iodidum Potassii Nitras Potassii Permanganas Prunus Virginiana **Pulvis Cretae Compositus** Pulvis Effervescens Compositus Pulvis Ipecacuanhae et Opii Pyrogallol Pyroxylinum Quassia Quinina Quininae Bisulphas Quininae Dihydrochloridum Quininae et Ureae Hydrochloridum Quininae Hydrochloridum Quininae Sulphas Quininae Tannas Resina Resina Podophylli Resina Scammoniae Resorcinol Rheum Rhus Glabra Saccharum Saccharum Lactis Salicinum Santalum Rubrum Santoninum Sapo Sapo Mollis Scammoniae Radix Scilla Scopolaminae Hydrobromidum Senega Senna Serpentaria Serum Antidiphthericum Purificatum Serum Antitetanicum Serum Antitetanicum Purificatum Sevum Praeparatum Sinapis Nigra Sodii Acetas Sodii Benzoas Sodii Benzosulphinidum Sodii Bicarbonas Sodii Boras Sodii Bromidum Sodii Cacodylas Sodii Carbonas Monohydratus Sodii Chloridum Sodii Citras Sódii Hydroxidum Sodii Indigotindisulphonas

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Sodii Iodidum Sodii Nitris Sodii Phosphas Sodii Phosphas Effervescens Sodii Phosphas Exsiccatus Sodii Salicylas Sodii Sulphas Sodii Thiosulphas Spiritus Aetheris Spiritus Ammoniae Aromaticus Spiritus Anisi Spiritus Camphorae Spiritus Chloroformi Spiritus Cinnamomi Spiritus Glycerylis Nitratis Spiritus Lavandulae Spiritus Menthae Piperitae Spiritus Menthae Viridis Stramonium Strontii Salicylas Strophanthinum Strophanthus Strychninae Nitras Strychninae Sulphas Styrax Sulphonethylmethanum Sulphonmethanum Sulphur Lotum Sulphur Praecipitatum Sulphur Sublimatum Suppositoria Glycerini Syrupus Syrupus Acidi Hydriodici Svruous Aurantii Syrupus Ferri Iodidi Syrupus Ipecacuanhae Syrupus Pruni Virginianae Svrupus Rhei Syrupus Rhei Aromaticus Syrupus Sennae Syrupus Zingiberis Talcum Purificatum Terpini Hydras Terra Silicea Purificata Theobrominae Sodio-Salicylas Theophyllina Thymol Thymolis Iodidum Thyroideum Siecum Tinctura Asafoetidae Tinctura Aurantii Amari Tinctura Aurantii Dulcis Tinctura Belladonnae Foliorum Tinctura Benzoini Tinctura Benzoini Composita Tinctura Capsici

Tinctura Cardamomi Tinctura Cardamomi Composita **Tinctura** Cinchonae Tinctura Cinchonae Composita Tinctura Colchici Seminis **Tinctura** Digitalis Tinctura Ferri Chloridi Tinctura Gentianae Tinctura Hyoscyami Tinctura Iodi Tinctura Opii Tinctura Opii Deodorati Tinctura Rhei Tinctura Rhei Aromatica Tinctura Stramonii Tinctura Strophanthi Toxitabellae Hydrargyri Chloridi Tragacantha Trinitrophenol Ulmus Unguentum Unguentum Acidi Borici Unguentum Acidi Tannici Unguentum Aquae Rosae

Unguentum Belladonnae Unguentum Chrysarobini Unguentum Hydrargyri Unguentum Hydrargyri Ammoniati Unguentum Hydrargyri Dilutum Unguentum Hydrargyrl Oxidi Flavi Unguentum Iodi Unguentum Iodoformi **Unguentum Phenolis** Unguentum Picis Liquidae Unguentum Sulphuris Unguentum Zinci Oxidi Uva Ursi Valeriana Vanillinum Virus Vaccinicum Zinci Acetas Zinci Chloridum Zinci Oxidum Zinci Stearas Zinci Sulphas Zincum Zingiber

The following new articles, twenty-seven in number, have been recommended for the U. S. P. X, it being understood that several in the list may not be finally admitted because of legal or other complications:

Acetyl-Salicylic Acid	Dichloramine-T
Acetyl-Tannin (Tannigen-type)	Phenobarbital
Carbromal	Oleum Chaulmoograe
Adrenalin	Procaine Hydrochloride
Solution of Adrenalin Chloride	Protargol
Albumen Tannate	Sodium Diphosphate (NaH ₂ PO ₄)
Argyrol	Dextrose (chemically pure)
Arsphenamine	Anesthesin
Neo-arsphenamine	Dakin's Solution
Barbital	Chloramine-T
Barbital-Sodium	Sajodin or similar type
Barium Sulphate	Pyramidon
Benzyl Benzoate	Chlorinated Paraffin (for Dichloramine-T)
A 20% preparation of Benzyl Benzoate	

Referring to trade-marked or patented chemicals proposed for admission, it is gratifying to announce that the Winthrop Chemical Company, Inc., which controls several of these, have assured the Chairman that they should be pleased at their inclusion in the Pharmacopoeia, under appropriate conditions.

The conditions suggested are the use of descriptive chemical names, omitting the trade-marked titles.

For instance, "Luminal," if admitted, might be called "Phenobarbital" with the synonym "Phenylethylmanolyl-urea." The title of "Adalin" might be "Carbromal" and the synonym "Brom-diethyl-acetylcarbamide," and for "Veronal," the title "Barbital," with the synonym "Diethylbarbituric Acid." The descriptive titles "Phenobarbital," "Carbromal" and "Barbital" were all dedicated to the

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public use during the war and might properly find their place in the Pharmacopoeia.

Where this policy is followed, the owners of trade marks would use them as an indication of their special brand and thus retain valuable rights, while other manufacturers who secure licenses to make the product would likely adopt a special name but would also use the Pharmacopoeial title. This policy, where accepted by chemical firms, is much broader and more liberal than that usually taken and will no doubt be heartily approved by the medical and pharmaceutical professions.

The Chemical Foundation now controlling the licenses for a number of the manufacturing processes seized during the War, under the Enemy Trade Division of the Federal Trade Commission, has also expressed the opinion that there was no objection to the use in the Pharmacopoeia of such titles as Arsphenamine and Neoarsphenamine; also Barbital, Procaine and Cinchophen.

It will probably be desirable to include in the U. S. P. introductory notices a statement to the effect that since existing patents are involved in the manufacture of certain official products (listing these) a license from the owner of the patents is required for their manufacture.

DELETIONS.

The Sub-committee on Scope recommends that the following articles official in the U.S. P. IX be not admitted to the U.S. P. X:

Acidum Gallicum Acidum Hydrobromicum Dilutum Acidum Hydrocyanicum Dilutum Acidum Hypophosphorosum Dilutum Acidum Nitrohydrochloricum Acidum Nitrohydrochloricum Dilutum Aethylis Carbamas Alumini Hydroxidum Ammonii Iodidum Ammonii Salicylas Ammonii Valeras Amygdala Dulcis Anisum Aqua Rosae Aqua Aurantii Florum Argenti Oxidum Arnica Aspidosperma Auri et Sodii Chloridum **Bismuthi Betanaphtholas** Bismuthi et Ammonii Citras **Bismuthi Subsalicylas** Bromoformum Caffeina Citrata Caffeina Citrata Effervescens Calcii Glycerophosphas Calcii Hypophosphis Calcii Sulphidum Crudum Camphora Monobromata Cerii Oxalas Chondrus Cimicifuga **Cinchoninae** Sulphas Copaiba

Coriandrum Diacetylmorphina Diacetylmorphinae Hydrochloridum Diastasum Ferri et Quininae Citras Fluidextractum Sarsaparillae Compositum Foeniculum Frangula Guaiacum Guarana Humulus Hydrargyri Oxidum Rubrum Hydrastina Hydrastininae Hydrochloridum Lactucarium Liquor Sodii Arsenatis Lithii Bromidum Lithii Carbonas Lithii Citras Maltum Mangani Dioxidum Praecipitatum Matricaria Mezereum Morphina Moschus Oleoresina Petroselini Oleoresina Piperis **Oleoresina** Zingiberis Oleum Cubebae Oleum Pimentae Oleum Thymi Petroselinum Physostigma Pilocarpus

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Piper	Staphisagria
Potassii Hypophosphis	Strontii Bromidum
Pyrethrum	Strontii Iodidum
Quininae Salicylas	Strychnina
Sabal	Sumbul
Samguinaria	Syrupus Calcii Lactophosphatis
Sarsaparilla	Syrupus Hypophosphitum
Sassafras	Syrupus Sarsaparillae Compositus
Sinapis Alba	Taraxacum
Sodii Arsenas	Triticum
Sodii Arsenas Exsiccatus	Uranii Nitras
Sodii Glycerophosphas	Veratrina
Sodii Hypophosphis	Viburnum Prunifolium
Sodii Perboras	Xanthoxylum
Sodii Phenolsulphonas	Zinci Carbonas Praecoipitatus
Sparteinae Sulphas	Zinci Phenolsulphonas
Spigelia	Zinci Valeras

Metric Abbreviations.—The Committee of Revision adopted at its first meeting the abbreviation "cc" to replace "mil" for liquid metric measure. The Bureau of Standards would prefer the abbreviation "ml" but object, with many others, to "mil" and prefer the adopted abbreviation "cc" if the Committee will not accept "ml."

The spelling "gram" has also been adopted to replace the former "gramme" but the old abbreviation "Gm." has been retained. There has been some criticism in the Committee of the evident discrepancy in these abbreviations, the "cc" being neither capitalized nor written with a period, the "Gm." being both capitalized and followed by a period. The Bureau of Standards has adopted the letter "g," without period or capitalization as the abbreviation for "gram" but this is obviously unfit for Pharmacopoeial use since it would be constantly misunderstood to mean "grain," an amount representing less than one-fifteenth as much. The abbreviation "gm." is equally objectionable because of its possible confusion with the abbreviation "grn." for "grain," so that the abbreviation "Gm." seems alone acceptable for medical and pharmaceutical use.

PREPARATION OF MANUSCRIPT.

As the revision has progressed, a plan has developed which promises excellent results. When the Sub-committee has completed its study of an article and submitted it through the General Chairman to the consideration of the Executive Committee and the new comments received have been given the necessary study, the text is then carefully edited. This new text, proposed as the form for the U. S. P. is then placed before the General Committee in duplicate, one set to be returned within two weeks. The members of the Committee are requested to read this copy with the same degree of care heretofore given "galley proof," considering first the scientific facts presented but also form, English construction, punctuation, typographical errors or any other feature presented. It is believed that this plan will eliminate most of the corrections when texts are placed before the Committee in type and thus reduce the time and expense involved.

About fifty Organic Chemical texts have been placed before the Committee in this form and fifty more are ready. The response has been most gratifying, about forty of the members having returned proofs, many offering valuable suggestions.

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The next step will be a published abstract of the changes proposed in texts which have reached this stage of revision and only when texts have passed through this complete course can the final manuscript be made up.

DATE OF APPEARANCE FOR THE NEXT U.S. P.

For several decades there has been strong pressure brought upon the Chairman of the Committee of Revision to fix a definite date for the appearance of the new book. After the very successful conference of the Committee in Philadelphia last July, one of the pharmaceutical journals predicted the appearance of the U. S. P. X in late 1923.

Those who have had experience in Pharmacopoeial revision know that the fixing of a definite date for its appearance is a mistake. First, because, if ample time is given after the book appears before the new standards are enforced, no interest suffers by withholding even a prediction of the time for its publication, and, secondly, because no one can foresee the complications and delays which may arise where so large a Committee are working on a voluntary basis, and a failure to meet a promise would only bring criticism, embarrassment and disappointment to all.

The Chairman and Committee ask that those interested in the new revision accept the assurance that an earnest effort is being made to complete the new book as rapidly as is consistent with a thorough and creditable revision and that the proposed changes when published will of themselves be a fair indication of the progress of revision. Furthermore, it must be remembered that the printing of a book like the Pharmacopoeia, with proof reading by a large Committee, alone requires at least a year for its completion.

THE SUBSTITUTION OF CONVALLARIA FLOWERS FOR CHAMOMILE.* by arno viehoever and j. f. clevenger.

Several adulterations or substitutions of Chamomile (*Matricaria chamomilla* L.) have been reported in the literature.¹ In addition, we have recently discussed the substitution of *Santolina chamaecyparissus* L.² and also dog fennel (*Anthemis cotula* L.) for Chamomile.³ We can add another unexpected case of substitution, evidently thus far not reported. While we are inclined to believe that the substitution occurred by mistake rather than intentionally, the fact of substitution and the nature of the substitute may merit a brief note.

The material of the substitute, labeled Chamomile, contained many loose flowers (Pl. I, B) which, upon superficial observation, resembled the flower of

* Presented before the Scientific Section at the New Orleans meeting of the A. Ph. A., September 6 to 8, 1921.

¹Antonin Rolet, "Les Camomilles," Schweiz. Apoth.-Zeit., 58, No. 30, p. 373 (July 22, 1920). Walter, "Substitute for German Chamomile," The Druggists' Circular, January 1920, p. 22. Th. Sabalitschka, "Het Inzamelen Van Kamillen," Pilz-und Kräuterfreund, 1920, 259; Pharm. Weekbl., 57, No. 36, 1086, 1920.

² J. F. Clevenger and C. O. Ewing, "Santolina Chamaecyparissus L., an Adulterant of Matricaria Chamomilla L.," J. AM. PHARM. ASSOC., 8, 536, 1919.

⁸ "Service and Regulatory Announcements, Chemistry," p. 22 (1918), item 257. C. L. Alsberg, A. Viehoever, and C. O. Ewing, "Some Effects of the War upon Crude Drug Importations," J. AM. PHARM. Assoc., 6, 469, 1919. See also Ballard, "Wild Anthemis—a Possible Matricaria Adulterant," *Ibid.*, 9, 952, 1918.