

Contributed and Selected

A LAST PLEA FOR A USEFUL PHARMACOPŒIA.*

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Shall we have the United States Pharmacopœia up to date and of scientific and therapeutic value, or shall it be a book of ancient drug lore intermixed with drugs of real value?

It is now nearly three years since the Pharmacopœial Convention of 1910, and what has been accomplished? Many of the drugs which have been approved have already been announced, and, as it has wisely been determined that a subject of such wide, almost universal, interest as the United States Pharmacopœia should not be made a secret affair—in other words, that its decisions should be public, what follows is not a breach of confidence. The subject, in every detail, is one of public interest, and, therefore should be of public knowledge.

In this age of exposure of "patent-medicine" frauds, and the age of education as to the danger of some drugs, the uselessness of others, and the limitations of all, the people have a right to expect that the next Pharmacopœia will be a book that can be relied on as a standard of purity and of chemical and pharmaceutical perfection in all its drugs and preparations. They have a right to expect that this book will represent the drugs found by medical experts to be of the best therapeutic value at this date, namely, 1913 A. D.

Can there be any other guide for the acceptance of a drug or preparation for officialization in an up-to-date book of this age than that:

1. The drug must have therapeutic value.
2. The drug must be pure.
3. The preparations must be the best.

What, then, determines the best drug? Investigations in the laboratory and clinical experience—and almost every drug that is known to have clinical value shows laboratory activity. If a drug has no activities, or only dangerous activities when used on animals in the laboratory, it is not a drug that should be dignified by recognition in a 1913 book of standard valuable drugs.

Selection of Drugs for the Pharmacopœia.—At the convention in 1910 it was stated that the selection of drugs was peculiarly the duty of physicians, while the selection or determination as to which were the best preparations, and how they should be made, was the duty of the pharmacist. How has this been lived up to?

In the first place, fifty members of the Pharmacopœial Convention were elected a Committee on Revision. Of these fifty, only six are practicing physicians;

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i. e., only six members of this Committee on Revision are qualified to judge at the bedside of the value of the action of a drug, although several members are medical laboratory men and are well qualified to decide on the activities of drugs.

Next, through the stimulation of various agencies, many of the medical societies of the country appointed special committees who prepared lists of drugs they considered valuable, and of drugs they considered should be omitted from the next Pharmacopœia. These lists, in due time, reached the office of the Chairman of the Committee on Revision, Professor Remington, and he, at great office trouble and considerable expense, circularized these lists to the Committee of Fifty.

To show how helpful these lists of drugs were, I will quote the opinion of one member of the Revision Committee, not a physician, concerning them, which was circulated to all of the members of the committee. This circularized opinion (*italics mine*) is as follows:

"The Revision Committee may wisely forget about nine-tenths of the well-meant advice which has come to it thankful for the interest shown by an increasing number of physicians."

How many other members of the Committee on Revision agreed with this opinion I am not able to state, but the outcome of the present list of accepted drugs and preparations for the next Pharmacopœia shows that the Executive Committee, the committee of final decision as to what drugs shall appear in the next Pharmacopœia, did not care an iota what drugs these medical societies approved or what they disapproved. In other words, little if any notice was taken of these lists so carefully prepared by some of the medical societies of the country. Those who prepared these lists should know this fact.

The approval by the Executive Committee of drugs of no therapeutic value and their consequent officialization causes them, of necessity, to be described in text-books on materia medica and consequently to be used by physicians. A study of 117,000 prescriptions collected from different parts of the United States showed the number of times therapeutically useless drugs were ordered. The data thus obtained has been used as an excuse for officializing these drugs in the next Pharmacopœia. These will again be copied and described in materia medica books, and the next graduates in medicine will again prescribe these drugs, and the vicious cycle will persist.

A Subcommittee on Scope voted on the drugs of the last Pharmacopœia, as to whether they should be accepted for the next Pharmacopœia or whether they should be omitted. The chairman of this committee dissolved favorably to admission a large number (65) of tied votes. These lists of acceptances and deletions were then sent to the Executive Committee. The Executive Committee is the court of last appeal, and consists of the chairmen of the different subcommittees, fifteen in number. This committee has the power of approving or overruling any decision of the Subcommittee on Scope, and exercised this power liberally. It also did not hesitate to admit some preparations that had never even had the formality of a vote by the Subcommittee on Scope.

Personnel of Committees.—Now, who are these members, elected from the convention by accredited delegates from the medical societies, medical colleges, pharmaceutical societies, pharmaceutical colleges and from several departments

of the Government of the United States? For our purpose it is not now necessary to enumerate all the members of the Committee on Revision, but only those who constitute the Subcommittee on Scope, and those who constitute the Executive Committee, namely, the chairman of the fifteen subcommittees.

The Subcommittee on Scope consists of:

<i>Name.</i>	<i>Position Held.</i>
S. Solis-Cohen, M.D., Chairman.	Prof. Clin. Med., Medico-Chi. College.
Reid Hunt, M.D.	In Hygienic Laboratory, U. S. P. H. S.
Philip Marvel, M.D.	Practicing physician; Trustee A. M. A.
O. T. Osborne, M.D.	Prof. Therapeutics, Yale University.
H. H. Rusby, M.D.	Pharmacologist; Prof., N. Y. College Pharmacy.
Torald Sollmann, M.D.	Prof. Pharmacology, Western Reserve University.
H. C. Wood, Jr., M.D.	Pharmacologist; Prof. Pharmacology and Thera., Medico-Chi. College.

The Executive Committee consists of:

S. Solis-Cohen, M.D.	Prof. Clin. Med., Medico-Chi. College.
Torald Sollmann, M.D.	Prof. Pharmacology, Western Reserve University.
J. F. Anderson, M.D.	Hygienic Laboratory, U. S. P. H. S., Washington.
Henry Kraemer, Ph.D.	Prof. Botany, Philadelphia College of Pharmacy.
Charles H. LaWall, Ph.D.	Pharmacist and consulting chemist; Prof. Philadelphia College of Pharmacy.
George D. Rosengarten, Ph.D.	Chemist of Powers-Weightman-Rosengarten Co., Mfg. Chemists.
A. D. Stevens, Ph.D.	Pharmacist; Prof. Sc. Pharm., University of Michigan.
H. W. Wiley, M.D., Ph.D.	Chemist; Ex-Chief U. S. Bureau of Chemistry.
G. M. Beringer, Ph.M.	Pharmacist in retail business.
C. L. Diehl, Ph.M.	Pharmacist (retired); Emeritus Prof., Louisville College of Pharmacy.
W. C. Alpers, Sc.D.	Pharmacist in retail business.
Otto Raubenheimer, Ph.G.	Pharmacist in retail business; Editor <i>Practical Druggist</i> .
Wilhelm Bodemann, Ph.G.	Pharmacist in retail business.
A. B. Lyons, A.B., M.D.	Pharm. Chem., with Nelson, Baker & Co., Mfg. Chem.
Chas. Caspari, Jr., Phar. D.	Pharmacist; Prof. University of Maryland.; Commissioner, Maryland State Board of Health.

Of this "court of last resort" there is one physician who practices at the bedside (Dr. Solis-Cohen), one who is a medical laboratory expert on the activities of drugs (Dr. Sollmann), one who is a drug laboratory expert at the Hygienic Laboratory (Dr. Anderson), and one who is a food and drug expert (Dr. Wiley); the other eleven are interested in some branch of pharmacy. These facts in conjunction with the way some, at least, of the pharmcal members look on recommendations of the medical men will show how much in evidence was the axiom that "physicians should decide what drugs should enter the Pharmacopœia."

At this date the new Pharmacopœia will contain at least 845 drugs and preparations. About half of these are not needed. One hundred and fifty-eight drugs and preparations were recommended for omission from the last Pharmacopœia by the Subcommittee on Scope. Just half of these, namely, seventy-nine, were voted in by the executive committee over the adverse recommendation of the Subcommittee on Scope, and it should be remembered that only one member of this executive committee is a physician practicing at the bedside, and he, in the Subcommittee on Scope, in sixty-five tie-votes, had decided in favor of admitting the drug under discussion. In other words, sixty-five more drugs and preparations would have been deleted by the Subcommittee on Scope had its chairman not voted in their favor, and he still had one more vote coming to him in the Executive Committee decisions.

Useless Drugs Accepted for the Next Pharmacopœia.—It was "love's labor" absolutely "lost" to collect 117,000 prescriptions from all over this country in order to ascertain how many times a given drug or preparation was ordered. How many times a drug or preparation is ordered is no criterion as to its value. Beer is in enormous demand, but it has not yet been shown that it has any medicinal or food value. Is the nutrient value of a food determined by the frequency with which it is used? The turnip is a vegetable that is constantly bought and constantly eaten, but its food value is almost nil. The Pharmacopœia is supposed to be a book of standards for drugs, and each drug should have some valuable activity.

As previously stated, *if a physician desires to order a second-rate drug, he can always obtain it by the standard (if there was one) described in the last Pharmacopœia in which it was named.* If this were not a fact, and if it were not a recognized fact, deletions of drugs from previous pharmacopœias would not have taken place. Such deletions (omissions) have occurred and a large number of drugs which appeared in the last Pharmacopœia will not appear in the next, according to the approved deletion list of the Executive Committee.

If some drugs have been deleted on account of their lack of value, why may not all drugs which are without value be deleted? The argument of those members of the Revision Committee who desire a large Pharmacopœia is that a drug should be accepted and standardized, if some physicians desire that drug. The same argument would hold good for the very drugs that these men have deleted, and therefore this is an argument of no value for officializing drugs that are worthless.

It should constantly be borne in mind that the greater the number of drugs officialized, the greater the number of preparations that must be made, the greater amount of manufacturing that must be done by the pharmaceutical houses, and the greater the amount of buying that must be done by the retail druggist; in other words, the decision as to whether a useless drug shall enter the Pharmacopœia or not, is a commercial one. Will the medical men of the country stand for commercialism as determining whether or not a substance shall be officialized in the next Pharmacopœia, a supposed book of dependable values of useful drugs?

The following useless drugs and their preparations have been accepted at this date, April, 1913, for the Ninth Decennial Revision of the United States Pharmacopœia. It is, of course, supposable that many physicians will disagree with me in considering these drugs as of little value. Will anyone assert that any one of them is needed to cure a patient of an ailment, or to treat a condition, that may not be better treated by more active drugs?

Anthemis (Chamomile)
Arnica
Tinctura Arnicae
Berberis (Oregon Grape Root)
Fluidextractum Berberis
Calendula (Marigold)
Tinctura Calendulae
Calumba (Calumbo)
Fluidextractum Calumbae
Tinctura Calumbae

Cannabis Indica (Indian Hemp)
Extractum Cannabis Indicae
Fluidextractum Cannabis Indicae
Tinctura Cannabis Indicae
Chondrus (Irish Moss)
Cimicifuga (Black Snakeroot)
Extractum Cimicifugae
Fluidextractum Cimicifugae
Tinctura Cimicifugae
Condurango

Convallaria (Lily of the Valley)	Pareira
Fluidextractum Convallariae	Fluidextractum Pareirae
Crocus (Saffron)	Phytolacca (Poke)
Eriodictyon (Yerba Santa)	Fluidextractum Phytolaccae
Fluidextractum Eriodictyi	Pyrethrum (Pellitory)
Fluidextractum Eriodictyi Aromaticum	Tinctura Pyrethri
Frangula (Alder Buckthorn)	Quassia (Bitterwood)
Fluidextractum Frangulae	Tinctura Quassiae
Gambir (Pale Catechu)	Quillaja (Soapbark)
Tinctura Gambir Composita	Tinctura Quillajae
Gossypii Cortex (Cotton Root Bark)	Rhus Glabra (Sumach)
Fluidextractum Gossypii Corticis	Fluidextractum Rhois Glabrae
Grindelia	Sabal (Saw Palmetto)
Fluidextractum Grindeliae	Fluidextractum Sabal
Guaiaicum (Guaiaic)	Sanguinaria (Bloodroot)
Tinctura Guaiaci	Tinctura Sanguinariae
Tinctura Guaiaci Ammoniatata	Sarsaparilla
Haematoxylon	Fluidextractum Sarsaparillae
Extractum Haematoxyli	Fluidextractum Sarsaparillae Compositum
Hydrastis (Goldenseal)	Senega (Senega Snakeroot)
Fluidextractum Hydrastis	Fluidextractum Senegae
Glyceritum Hydrastis	Syrupus Senegae
Tinctura Hydrastis	Serpentaria (Virginia Snakeroot)
Kino	Fluidextractum Serpentariae
Tinctura Kino	Tinctura Serpentariae
Krameria (Rhatany)	Staphisagria (Stavesacre)
Fluidextractum Krameriae	Fluidextractum Staphisagriae
Tinctura Krameriae	Stillingia (Queen's Root)
Lactucarium	Fluidextractum Stillingiae
Syrupus Lactucarii	Sumbul
Tinctura Lactucarii	Extractum Sumbul
Leptandra (Culver's Root)	Fluidextractum Sumbul
Extractum Leptandrae	Taraxacum (Dandelion)
Fluidextractum Leptandrae	Extractum Taraxaci
Lupulinum	Fluidextractum Taraxaci
Fluidextractum Lupulini	Triticum (Couch Grass)
Oleoresina Lupulini	Fluidextractum Triticum
Matricaria (German Chamomile)	Uva Ursi (Bearberry)
Mezereum	Fluidextractum Uvae Ursi
Fluidextractum Mezerei	Xanthoxylum (Prickly Ash)
Moschus (Musk)	Fluidextractum Xanthoxyli
Tinctura Moschi	Zea (Corn Silk)
Oleoresina Petroselini (Parsley) (Apiol)	Fluidextractum Zeae
Oleum Hedeomae (Oil of Pennyroyal)	

There is no good proof that hydrastis preparations have any special action on mucous membranes when used externally. There seems to be no good excuse for giving the disagreeable hydrastis preparations internally for action on the stomach.

Cannabis indica is a drug that varies greatly in strength, and its preparations rapidly deteriorate. Its action is therefore very uncertain, and therapeutically it is doubtful if cannabis indica is of any value, unless a too large dose of a strong preparation is given.

Drugs and Preparations that are Deleterious.—The following should not be officialized:

Veratrin and oleate of veratrin are dangerous.

Linimentum belladonnae is dangerous. The amount of absorption is uncertain.

Troches of potassium chlorate should not be officialized, as saliva mixed with potassium chlorate should not be swallowed. Potassium chlorate should never be given internally, in my opinion. It can cause severe irritation and even ulceration of the stomach, and kidney irritation and inflammation.

Dilute hydrocyanic acid should not be officialized, as it has no action whatever unless the dose is large, and then its action is dangerous.

Rapidly Deteriorate.—The following are a few of the preparations which rapidly deteriorate, and hence should not be officialized:

Acidum Hydriodicum Dilutum	Aqua Rosae
Syrupus Acidi Hydriodici Dilutum	Aqua Rosae Fortior
Acidum Hypophosphorosum	Mucilago Acaciae
Acidum Nitrohydrochloricum Dilutum	Mucilago Sassafras Medullae
Aqua Aurantii Florum	Syrupus Aurantii
Aqua Aurantii Florum Fortior	Syrupus Aurantii Florum

Inferior Preparations.—If the selection of a drug or preparation were left to the layman who must take the medicine, it is presumptive that he would select the most active, other things being equal, of the drugs or preparations of the class that he needed. The same must be true of the physician writing the prescription. Hence why should we standardize and officialize preparations of a second-rate drug? The following drugs have been accepted for the new Pharmacopœia, though they are pharmacologically and therapeutically inferior to other drugs which act similarly. I realize, of course, that many physicians will find many points of difference in opinion in regard to the individual drugs and preparations, but as a class each reader will certainly decide against these drugs and preparations, if he is familiar with the pharmacology of these and better drugs. While many of these drugs have activities, they are inferior to other drugs and preparations of the same class.

Acetum Scillae (Vinegar of Squill)	Euonymus (Wahoo)
Ammonii Bromidum	Extractum Euonymi
Ammonii Iodidum	Extractum Quassiae
Ammonii Salicylas	Fluidextractum Cinchonae
Bismuthi et Ammonii Citras	Fluidextractum Digitalis
Calcii Bromidum	Fluidextractum Gentianae
Cambogia (Gamboge)	Fluidextractum Rosae
Camphora Monobromata	Glyceritum Amyli (Glycerite of Starch)
Carbo Animalis Purificatus	Glycyrrhizum Ammoniatum
(Purified Animal Charcoal)	(Ammoniated Glycyrrhizin)
Ceratum Plumbi Subacetatis	Guarana
(Goulard's Cerate)	Fluidextractum Guaranae
Cerii Oxalas (Cerium Oxalate)	Oleatum Quininae (Oleate of Quinin)
Infusum Pruni Virginianae	Oleum Picis Liquidae (Oil of Tar)
Liquor Acidi Arsenosi	Pilocarpinae Nitras
Liquor Arseni et Hydrargyri Iodidi	Quinina
Liquor Hydrargyri Nitratis	Sodii Acetas
Liquor Ferri Subsulphatis	Sodii Chloras
(Monsell's Solution)	Sodii Phosphas Exsiccatus
Liquor Zinci Chloridi (Solution of Zinc Chlorid)	Styrax
Magnesii Oxidum Ponderosum	Sulphonmethanum
(Heavy Magnesium Oxid)	Syrupus Rosae
Cinchoninae Sulphas	Zinci Acetas

Unnecessary Officialization.—The following drugs have been accepted for the Pharmacopœia in two forms, or several of the same group have been accepted, though their activities are so similar that reduplication seems unnecessary. Although not listed here, the preparations of many of the drugs are too many. Where several preparations of a drug are offered, one or more of them is superfluous. The careless redundancy of the Executive Committee is shown by the fact that it has officialized in its last approved list, March, 1913, *scopolamin hy-*

drobromid and *hyoscin hydrobromid*, though they are commercially, pharmacally and therapeutically identical. Following are a few unnecessary redundancies:

Belladonnae Radix (Belladonna Root)	Colchici Semen (Colchicum Seed)
Belladonnae Folia (Belladonna Leaves)	Cinnamomum Saigonicum
Colchici Cormus (Colchicum Root)	Cinnamomum Zeylanicum
Hyoscyamus	} These drugs are so similar to belladonna that there seems to be no reason for officializing them and their preparations.
Fluidextractum Hyoscyami	
Tinctura Hyoscyami	
Stramonium	
Tinctura Stramonii	
Unguentum Stramonii	Liquor Sodii Arsenitis (Solution of Sodium Arsenite)
Hamamelidis Cortex (Witchhazel Bark)	Viburnum Opuli (Cramp Bark)
Hamamelidis Folia (Witchhazel Leaves)	Viburnum Prunifolium (Black Haw Viburnum)
Hyoscinae Hydrobromidum	
Scopolaminae Hydrobromidum	
Liquor Potassii Arsenitis (Solution of Potassium Arsenite)	

THE DEADLY BICHLORIDE TABLET.*

FREDERIC E. NIECE, PHAR. D., NEW YORK CITY.

The rather large number of accidental poisonings by the careless taking of mercuric chloride tablets for those of some other less harmful drug is appalling, to state the least. Within the last few weeks, no less than nine to ten cases have been reported by the daily papers, in which serious consequences have resulted. The large percentage of deaths that have been recorded through the careless or ignorant handling of these tablets calls for stronger safeguards than the ordinary precautions now in force. The publicity given this form of poison, and its potent action, has created in the lay mind a new and easy source for obtaining new material for criminal purposes or self destruction.

The question therefore arises, what can be done to safeguard the innocent public against this new form of danger which seems to be increasing daily. These safeguards do not rest so much in legislative measures, which is the generally accepted plan for promoting the public safety, but more in well-devised public education as to the toxicity of such tablets, and such other efficient means as will forewarn the innocent in the event that danger is near.

Statistics show that the greater portion of deaths are accidental. For this reason safeguards should be thrown more about the tablet itself, and the package that contains it. That the "bichloride tablet" is deadly, can best be gleaned from the high percentage of fatalities incident to its absorption.

The records up to date show, that out of some 756 known cases, over 56 percent have proved fatal, while something less than 44 percent have recovered. These recoveries have resulted from immediate medical attention, and the small amount of the drug absorbed.

Much of this horror and sorrow has resulted from the heedless taking of these tablets by mistake for others of a dissimilar composition, which they closely re-

*Presented to Pennsylvania Pharmaceutical Association, June, 1913, in answer to Query No. 7. What new expedient can be devised to prevent poisoning through the mistaking of Corrosive Sublimate tablets for ordinary tablets used in medicine, numerous cases of such nature being reported from time to time?