tive food and drugs laws to be adopted by each country. And, finally, the Third Pan-American Medical Congress held at Mexico City in July 1931 agreed to designate a board to take charge, after obtaining the sanction of their respective governments and the Revision Committee of the Pharmacopœia of the United States, of editing a Pan-American Pharmacopœia. This proposition was made by Dr. Demetrio Lopez, as president of the Mexican Medical Academy.

If the scheme for a universal or else international pharmacopœia has been sustained and commended by recognized authorities, all the more logical the existence of a Pan-American Pharmacopœia. The agreements and objects of all conferences dealing with the unification of the formulas for active medicaments, and taking into consideration the pharmacopœias of advanced countries, these might be used for the plan of editing a Pan-American Pharmacopœia.

It must be noted that the Spanish Pharmacopœia has never been officially adopted by any of the nations within the American Continent, as might be expected for historical reasons. This experience proves that the Spanish Pharmacopœia was considered inadequate at the time the Spanish-speaking countries adopted either the French or the United States Pharmacopœia.

With the advent of the eighth edition of the Spanish Pharmacopœia and the rise of the Spanish Republic it might be expected that Spain might try to reconquer Spanish America as regards intellectual tradition, in the pharmacopœial sphere.

SAN LAZARO 331,
HABANA, CUBA.

PAN-AMERICAN PHARMACOPŒIAL UNIFORMITY.

BY E. FULLERTON COOK, PH.M.*

The establishment of a Section on Pharmacopœias as a regular function of this ASSOCIATION opens a new line of interest and service in Pan-American coöperation which is most gratifying. The idea of a Pan-American Pharmacopœia and in fact the effort to develop an "International Pharmacopœia" is not new, but every earlier effort failed because such an idea is not in conformity with the spirit of strong nationalism which exists in every country. We may well benefit from the experience of the international groups who made their first progress by agreeing upon a policy which did not interfere with the continuance of their own national Pharmacopœia but, in principle, obtained practically all of the benefits of an "International Pharmacopœia."

I am suggesting, therefore, that this Section agree upon a series of principles, expressed by appropriate resolutions, which should interest the health departments of all of the Republics associated in the Pan-American Union and stimulate activity toward a uniformity in the standards for the more important medicines used by all.

The plan proposed would embody the following general principles:

In recognition of the fact that a number of the Republics associated in the Pan-American Union have already established their own national Pharmacopœias, through the professional cooperation of physicians and pharmacists in their own country, and that others plan to do so as soon as conditions permit, and, since such a policy is desirable in that it enables each country to best provide for its own special needs, and also stimulates interest and development in many associated sciences, it is therefore recommended:

1. That an effort be made to reach a Pan-American agreement upon the standards of strength and purity for the more important therapeutic agents and aids employed by physicians in these associated countries.
2. That a "Committee on Pharmacopœial Uniformity" be created, the authorities in each Republic being invited to name a representative on the Committee.
3. That the aid of the offices and facilities of the Pan-American Health Union at Washington be enlisted for the purpose of obtaining contacts with the various Health Departments of the Republics in the Union and that the aid of their journal be requested as a means of publicity and information.

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* Chairman of the Committee of Revision of the Pharmacopœia of the United States. Read at the meeting of the Pan-American Medical Association, Pharmacopœial Section, held at Dallas, Texas, March 21–25, 1933.

4. That this Committee on Pharmacopœial Information, through the aid of its members, assemble lists of about 400 of the most frequently prescribed medicinal substances in each country, arranged in the order of frequency of use, and, from these compilations, the Committee determine those substances which are almost universally used.
5. Having obtained this list of therapeutic substances, employed in the treatment of disease, by practically all countries, a united effort should be made to agree upon the adoption of suitable titles and synonyms acceptable to all, upon uniform strengths and percentages of purity and even upon tests and assays.

If such agreements can be reached the essential advantages of a Pan-American Pharmacopœia will have been attained. Each country, as it revises or establishes its own Pharmacopœia, will have these agreed-upon standards for inclusion, if they so elect, and thus bring about a uniformity which is greatly needed on this Continent as we develop close social and business relationships.

It is hoped that out of this year's meeting there may be planted a seed of coöperation, through the erection of a Pan-American Committee of the type suggested which may grow lustily and report substantial progress at the next meeting of this Pharmacopœial Section.

PRESCRIPTION TOLERANCES.*

In most states of the Union there is some law-enforcement body with supervision over the quality of drugs, preparations and prescriptions furnished by pharmacists. The protection of public health is the prime object of such supervision but it is also of great advantage to the pharmacists. This latter fact is probably not sufficiently appreciated. The protection it affords to the standing of professional pharmacy is obvious, but the commercial aspect should not be overlooked. If there were no control of the quality of drugs the doors would be wide open to harmful competition. Prices could be lowered at the expense of quality, the public would suffer, and the rank and file of conscientious pharmacists would be at a great disadvantage.

Fortunately, this control work is in most instances in the hands of Boards of Pharmacy or other groups sufficiently familiar with prescription practice to know what degree of accuracy can be reasonably expected in compounding. There are, however, occasional instances which result in much discredit to the pharmaceutical profession because of the lack of such knowledge. Prescriptions compounded most carefully will upon chemical analysis be found to vary slightly in the quantities of ingredients from those prescribed. Such variations are due to various factors, many of them beyond the control of the compounder, and when not given proper consideration by law-enforcement bodies, injustices may follow. This is particularly true when the results are given to the lay press without explanation. In many instances, the percentage deviation is never mentioned but simply recorded as "deficient," "sub-standard" or "super-standard."

The AMERICAN PHARMACEUTICAL ASSOCIATION at its last meeting voted the appointment of a Committee on Prescription Tolerances to make a study of what constitutes reasonable deviations in prescription ingredients and to establish reasonable tolerances. Tolerances are permitted in many official and unofficial preparations and they would seem equally necessary in prescriptions which in emergency cases are usually made extemporaneously and frequently hurriedly. The members appointed by President Philip are Chairman, Hugo H. Schaefer, Phar.D., Ph.D., Professor of Analytical Chemistry of Columbia University, College of Pharmacy; Samuel L. Hilton, Ph.M., Phar.D., Retail Pharmacist and Treasurer of the Pharmacopœial Convention, and Robert L. Swain, Phar.D., LL.B., Deputy State Food and Drug Commissioner of Maryland and Secretary of the Board of Pharmacy. This Committee proposes to first make a general survey of tolerances now allowed by the various pharmaceutical law-enforcement bodies and secondly to study the factors which cause deviations in prescription quantities.

To accomplish the first of these objects, the coöperation of state boards of pharmacy, state association secretaries, law-enforcement officials, and others interested will be sought in order to determine the views and practices now in vogue. A study of such data should go far in deter-

* Bulletin No. 12, AMERICAN PHARMACEUTICAL ASSOCIATION, May 12th.

mining proper prescription tolerances. The second phase of the work, that of studying and analyzing the various causes of deviations and determining reasonable degrees of such deviations, is a difficult problem, since each type of prescription—liquids, powders, pills, capsules, ointments, etc.—will require a separate study. In the case of liquids some of the factors to be considered are:

a. Moisture and allowable impurities in chemicals.
b. Unavoidable inaccuracies in weighing and measuring.
c. Unavoidable losses due to a portion of the ingredients remaining in or adhering to utensils.
d. Decomposition and deterioration.

In the case of ointments, the same factors are present but to different degrees. With powders, pills and capsules there will be additional variations in the weights of the individual units of the prescription. In these studies, the coöperation of pharmaceutical organizations will be sought in obtaining samples, etc.

The Committee is receiving the coöperation of the Food and Drug Administration, U. S. Department of Agriculture, and Dr. W. G. Campbell, Chief of this Bureau, has expressed great interest in the work and objects of this Committee. It is hoped that the extensive study of prescription compounding will lead to satisfactory conclusions and will result in tolerances acceptable to all law-enforcement bodies and at the same time not be burdensome to the pharmacists nor unfair to the public.

NATIONAL CONFERENCE ON PHARMACEUTICAL RESEARCH.

To the Chairmen and Committeemen of the National Conference on Pharmaceutical Research: The calendar and the increasing warmth of the weather indicate that the time has arrived for the annual call to the committees of the National Conference on Pharmaceutical Research to prepare for the annual sessions of the Conference which will occur this year at Madison, Wisconsin, on Saturday, August 26th.

If it is not too inconvenient will you please hunt up your desk copy of the Proceedings of the N. C. P. R., 1931–1932, and note on page two the general heading indicating that the ten committees are *to review the research achievements in the profession of Pharmacy for the year September 1, 1932 to August 31, 1933.*

Secretary Krantz has recently assured me that with the prospective general inflation in all activities in our nation, he believes this year to be propitious for the enlargement of our annual publication by a considerable number of pages and an addition to the title indicating that it contains "The Annual Review of Pharmaceutical Research."

Therefore, I am making a direct appeal to each of you to meet this new issue squarely and to provide the best possible material for this first volume of "The Annual Review of Pharmaceutical Research."

In the 1932 Proceedings the Committee Reports begin on page 18 and continue to page 47, a total of 30 pages. If we were to double this section with no increase in the other sections, it would increase the total pages to 98, and thus make the publication a book. I feel confident that we can financially afford to do this and that we should present an American publication giving a comprehensive and very readable report on the annual progress in Pharmacy.

We do not want a book of abstracts nor one of dry statistics; but we do want ten short chapters reflecting the combined knowledge and judgment of each of the ten Committees standing back of their respective chairmen; we want to recognize when we have read these ten reports that our attention has been called to the striking discoveries and the leading events in each of these ten fields of pharmacy; we want to feel refreshed and somewhat entertained and especially to be strongly inspired regarding the present and the future progress of pharmacy; and we want to make known, not only to the younger scientific men in pharmacy and throughout the pharmaceutical field, but also to the scientific world in general, the fact that there are annual research achievements in pharmacy.

The chairmen, of course, must take the lead in preparing the Committee Report, but every

committeeman should help his chairman by offering suggestions for the report and by reading it critically after it has been prepared by the chairman.

Trusting that each Committee will engage promptly in the preparation of this report and looking forward to an especially good meeting at Madison, Wisconsin, this year, I remain

E. N. GATHERCOAL, *Chairman.*

May 13, 1933.

MOUNDS IN WISCONSIN.

(This article and that in the April JOURNAL should be credited to the author—Charles E. Brown, Chief of the State Historical Museum.)

Systematic archeological research and investigation in Wisconsin were begun by Dr. Increase A. Lapham at Milwaukee in 1836, assisted financially by the American Antiquarian Society of Worcester, Massachusetts. He extended his surveys to other parts of the state. In 1855 the Smithsonian Institution at Washington, published his classic, finely illustrated report, "The Antiquities of Wisconsin." In 1836 he found at Waukesha and described the first effigy or animal-shaped, a figure representing the turtle.

Since the year 1901 the Wisconsin Archeological Society has been engaged in locating, mapping and exploring the Indian mounds, enclosures, village sites, cemeteries, planting grounds, mines and quarries, shrines, trails and other features of the state. Of mounds and other earthworks the Society has located 12,000 specimens, a far larger number than probably existed in any other state east of the Mississippi River. Six thousand are reported as found in Ohio.

These Wisconsin mounds are largely conical, oval, linear and effigy mounds. Some flat-topped, platform and cairn mounds have been also located. Also a number of enclosures of circular, semi-circular, oval, square, octagonal and oval and other forms. Large groups of conical, linear and effigy mounds formerly existed or still exist at Milwaukee, Racine, Burlington, Waukesha, Oconomowoc, Pewaukee, Delevan, Beloit, Janesville, Lake Kodhkonong, Ft. Atkinson, Lake Mills, Madison, Baraboo, Devil's Lake, Prairie du Chien, La Crosse, Trempealeau, Kilbourn Packwaukee, Green Lake, Waupaca, New Lisbon, Menasha, Green Bay, Lake Chetek, Rice Lake and in other places in the state. Many of these have been destroyed by the growth of cities and from other causes. Others have been preserved to the public in county, city and state parks and in other public properties and are visited by hundreds of thousands of citizens and tourists every year.

Particularly notable among the mounds and other earthworks of Wisconsin are the great earthwork enclosure at Aztalan, near Lake Mills, the site of a prehistoric stockage-protected settlement of Indians of the Cahokia or Middle Mississippi valley culture, the intaglio effigy mound in River Park at Fort Atkinson, the mound group on the campus of Beloit College, the huge bird effigy mounds on the State Hospital grounds at Mendota, the bird effigy in Devil's Lake State Park, and the great Man Mound in Man Mound Park at Baraboo.

The modes of burial in Wisconsin mounds are of a number of distinct kinds: 1. Full length burials, the skeletons lying on their backs; 2. Flexed or folded burials, the arms being bent, and the legs drawn up or beneath the body; 3. Burials made in a seated or crouching position; 4. Bone burials or reburials, the bones of the dead being removed from temporary burial places and placed on the ground in bundles or small heaps; 5. Mass burials, the bones of a number or large number of individuals being thrown together or placed in a large heap. Cremation was also practiced by the prehistoric Indian inhabitants of Wisconsin, the bodies or bones being partly or wholly incinerated and a mound constructed over them. Burial pits or stone or wooden vaults to contain the bones of the dead were constructed. Interred with the remains of the dead in some mounds are the beads and ornaments, pipes, weapons, pottery vessels and other objects for their use in their journey to the spirit world. Many bodies were no doubt wrapped in bark, cloth or skins when buried.

NEW JERSEY ASSOCIATION.

The sixty-third annual meeting of the New Jersey Pharmaceutical Association will be held at Asbury Park, June 14th–16th.

Among the speakers at the banquet will be President-Elect Robert L. Swain, of the AMERICAN PHARMACEUTICAL ASSOCIATION.