

is no doubt that the visitors will learn new things, too, as well as the person being visited. If two men have a nickel each and they exchange nickels, each still has only a nickel; but, if two men each have an idea and they exchange ideas, then both men have two ideas.

City, state and national conventions have men as speakers who have fine ideas about pharmacy. This visitation plan would bring men with ideas to individual cases. We wonder if a scheme such as this would help brighten up a few of the cases we have seen, and add one more to the many benefits derived from pharmaceutical association membership.

THE HISTORY OF THE UNITED STATES DISPENSATORY.*

BY HORATIO C. WOOD, JR., M.D.

It is hard for us to-day to picture the conditions in the world of physic one hundred years ago. There was no legal standard, nor even accepted agreement, for the preparation of medicines; each apothecary made his tinctures according to the formula of his choice. Tincture of opium obtained from one store might be a very different thing from that of a neighboring pharmacy. A movement to correct this unfortunate confusion was started in 1820, when the first edition of the United States Pharmacopœia was published. This book having no legal authority, its usefulness depended entirely upon the unanimity with which its standards were accepted. It was not received, however, with any sign of exuberant popularity and the movement would probably have died with this first edition, had it not been for a Philadelphia physician, Thomas T. Hewson. Largely through his agitation a second convention was called in 1830, which he attended as a delegate of the Philadelphia College of Physicians, the other two representatives of this institution being George B. Wood and Franklin Bache.

Unfortunately dissatisfaction among the delegates from New England led to the issuance of a similar book of standards a few months after the appearance of the revised edition of the United States Pharmacopœia. It was obvious that unless some very active measures were adopted the hope of a nationally recognized standard for the materia medica was doomed to an indefinite deferment. In view of the weakness of the Federal Government of that period, any legislative support was a political impossibility.

Impressed by the importance of uniformity in drugs and recognizing that it could come only through the voluntary compliance of the two professions, Dr. Wood conceived the idea of writing a Treatise on Materia Medica, to be based on the new Pharmacopœia, for the avowed purpose of popularizing it.

We must remember that the pharmacopœias of that day did not contain any tests for identity or purity; there was no description of the crude drugs recognized, merely a list giving the botanical name of the plant and the part employed. Thus, under the title of *Belladonna*, the U. S. Pharmacopœia said, "The leaves of the *Atropa belladonna*," not another word. Remember also that many pharmacists—and even some physicians—were still collecting their own herbs. It was of vital importance that they should be able to recognize the plants when they saw them

* Section on Historical Pharmacy, Baltimore meeting, 1930.

growing and to be able to make some judgment of the quality of the drug from its appearance.

Dr. George B. Wood,¹ then a young man of 35 and holding the Chair of *Materia Medica* at the Philadelphia College of Pharmacy, invited Dr. Franklin Bache (then Professor of Chemistry at Franklin Institute) and Mr. Daniel B. Smith, who was Professor of Pharmacy at the Philadelphia College of Pharmacy, to a conference on October 28, 1830, with the idea of collaborating in the book he had in mind. They agreed to divide the work into three subjects; Dr. Bache was to be responsible for the mineral drugs, Dr. Wood the vegetable drugs and Mr. Smith the pharmaceutical manipulations. Before the work had been fairly started Mr. Smith felt himself unable to perform his share and Dr. Wood took over the pharmacy as well at the vegetable *materia medica*. What a comment on the qualifications of our forbears that a man who a few years later became professor of medicine in the largest medical school in the United States should feel himself competent to write a treatise on pharmacy!

Franklin Bache, the great grandson of Benjamin Franklin, born in Philadelphia in 1792, was a pupil of the famous Benjamin Rush, Surgeon General to Washington's Army, and had himself served in the War of 1812 and received his medical degree from the University of Pennsylvania, in 1814, while still in the national service. He became professor of chemistry in Franklin Institute in 1826, in the Philadelphia College of Pharmacy in 1831, and in Jefferson Medical School in 1841, holding the latter chair until his death.

The Dispensary of the United States of America, the result of the labors of Doctors Wood and Bache, made its first appearance in 1833. The book was an immediate success, as Dr. Wood himself wrote—"Greatly beyond our expectations," and a year had scarcely elapsed before a second edition was necessitated. For thirty years these two physicians and pharmacists (for while neither had ever practiced pharmacy, we must concede that they were at least scientifically qualified members of that profession) continued collaborating and published 11 editions, of which a total of 79,000 copies were sold. This sale was a colossal figure when we remember that at no time during that period were there 30,000 physicians in the United States.

After Dr. Bache's death in 1864, Dr. Wood continued the work alone with some assistance from his friends, William Procter and Robert Bridges. In the year 1876 Dr. Wood, then a feeble old man of 79, who still felt a profound confidence in his own abilities, started the revision of the 14th edition. But neither past greatness of accomplishment, nor pride, nor will can supply the failing vitality of age. He struggled manfully and obstinately with his task until the pen fell from his trembling fingers, and then he humbled himself to the extent of asking his nephew, and successor in the Chair of *Materia Medica* at the University of Pennsylvania, Horatio C. Wood, to finish the task he had started. After the death of George B. Wood in 1879, his nephew decided to continue the work and invited Joseph P. Remington, at that time a well-known apothecary of Philadelphia, and Samuel P. Sadtler, professor of Chemistry at the Philadelphia College of Pharmacy, to share with him the editorial responsibility of the 15th edition. During the 24 years which this partnership endured, the fame of the book, already well known around the world,

¹ Biography of Geo. B. Wood to be contributed by Dr. Arno Viehoyer.

increased until the book has become almost a byword as the ultimate authority in all questions concerning drugs. Not only is it known in the United States as the "Pharmacists' Bible" but it is turned to with confidence in England, in France, in Germany, in Japan, in South Africa and, in fact, wherever there is a scientific medicine.

In 1907 Dr. H. C. Wood, who had been in precarious health for two or three years, started on the revision of the 19th edition, but, like his uncle, was forced to relinquish his task when it was about half completed, and his son, Horatio C. Wood, Jr., was called in as medical editor. Fortunately conditions were somewhat different than at the time of George B. Wood's breakdown, for Remington and Sadtler were both still vigorous men with long experience in dispensatory work. This new combination of editors, however, was not fated to last many years. When the time came for the revision of the 20th edition, Professor Remington was Chairman of the Revision Committee of the United States Pharmacopœia, and with extraordinary conscientiousness insisted on sacrificing his material interests in favor of what he deemed his duty to his profession. Although the Pharmacopœia meant little to him financially, while the Dispensatory meant much, he refused to do anything toward the revision of the latter until he had finished his task as editor of the Pharmacopœia. As soon, however, as this duty was accomplished he started on the labor of the Dispensatory with a concentration of energy far beyond the ability of his system—exhausted largely by the last three years of devotion to the Pharmacopœia—to endure. He struggled valiantly against failing strength; even after he had taken to his bed in what proved to be his last illness, he continued to read proof from his bed. He did not live to see the fruit of his labor, dying while the book was going through the press.

Professor Sadtler was also in such poor health that he was unable to properly perform his duties as chemical editor and much of the chemistry in the 20th edition was written by Dr. Charles H. LaWall.

Leaders may die, but their cause still goes on. So from generation to generation has been handed down the task of revising the United States Dispensatory. In the ninety-seven years of its existence never has there been an edition but what there was someone trained by previous experience to carry on the work. After the passing of Remington and Sadtler, Professor LaWall and myself, with the assistance of Professor H. W. Youngken, published the twenty-first edition in 1926.

Human knowledge has expanded so much that it is no longer possible for any one mind to compass an entire field of even a single science. The day has gone when a man can be at once an authority on clinical medicine, on chemistry and on botany. Any history of the Dispensatory would be lacking that did not make reference to the men who have had from time to time tasks of more or less importance in connection with its revision. Men like Robert Bridges, William Procter, H. H. Rusby, Albert Lyons, Henry Kraemer, John T. Anderson and Ivor Griffith have been called to its service.

It may be of interest to note something of the growth of such a pharmacologic classic during one hundred years of life. The first edition of the United States Dispensatory covered 1073 single column pages, 4 x 7½ inches; perhaps we can better measure its size in that unit, so beloved of the cross-word puzzler, known as the "Em." The first edition contained about 1,982,000 ems. The 12th edition, the

last one written by George B. Wood, covered 1800 pages and contained 4,488,000 ems. The maximum size was reached in 1918 with 1928 pages and 6,793,000 ems, more than three times as large as the first. The book had become so large as to be unwieldy to handle, and by vigorous pruning of excessive verbiage and omission of some material of more interest to the antiquarian than the scientist, the present editors succeeded in reducing the size of the 21st edition by about 100 pages.

Another interesting historical coincidence connected with the Dispensatory is the succession of publishers which has gone down in almost as straight a line as that of the editors. The first publisher was the firm of Grigg and Elliott; which firm was bought out in 1850 by J. B. Lippincott and Grambo. This firm was re-organized, in 1865, under the name of J. B. Lippincott and Company. For 80 years a member of the Lippincott family has been president of this company, the present one being Joseph W. Lippincott.

Perhaps some of my readers might be interested in knowing a little of the labor connected with the revision of a work of this character. It is interesting to note that during the first fifty years of its existence fifteen editions of the Dispensatory were published; during the second 47 years only six editions have been issued. This does not betoken any laziness on the part of the editors, but means that the work of revision has become so much greater that it is practically impossible to complete it in less than six or seven years. Almost as soon as one edition is off the press, begins the collecting of data for the next. When we consider that the book treats of ancient drugs which have been used in medicine for thousands of years and have historical importance, of newly discovered synthetics produced in the laboratories of Europe or America, of rare vegetables from Patagonia to Greenland; that it must take cognizance of changes in commercial conditions resulting from not only such great cataclysms as the World War, but local tribal differences in Africa or the South Sea Islands; it is obvious that a staff of 100 experts could not be personally familiar with all that is contained between the covers. Textbooks by acknowledged leaders in the various departments of pharmacy and medicine, while freely consulted, cannot have the newest information. The chief reliance must be placed upon the periodical literature. Journals on botany, chemistry, pharmacology, medicine and all the allied sciences published in France, Germany, Italy, England and America must be abstracted and classified. Even while the manuscript is being prepared the newer literature is being continually consulted. Not infrequently it happens that some new discovery made during the preparation of the manuscript necessitates the complete revision of a monograph which was thought to be finished.

The present editors feel a sense of pride in being links in the historical chain of such a classic. Who will take up the task when the days of our labors are ended we know not, but we believe that the work will, as in the past, still go on though the workers may fall by the wayside.

Oregon Ergot, by Ernest T. Stuhr.

The existence of ergot in Oregon is reported. Soil, conditions of growth, climatological statistics of the area, seasonal growth and time of maturity are all given. Preliminary tests

carried out by the official cock's comb method indicated characteristic activity. Undoubtedly ergot would thrive in this section of the country if the proper precautions were heeded.