practical methods available for the isolation, purification and examination of various pectic materials, gums and mucilages.

It will be obvious from the brief description of the contents that the articles cover a wide field, and their publication will serve a most useful purpose. In some places observations hitherto unpublished are recorded, but it is to be hoped that the publication of original papers in this form will be resisted by the editorial board. There is a place for the regular publication of review articles in volumes of this type, but questions relating to indexing, to mention one aspect only, would become still more complex if these "Advances" became partly reviews and partly original material.

E. L. HIRST

THE FIRST NATIONAL PHARMACOPŒIA

Pharmacopoeia Londinensis of 1618

Reproduced in facsimile, with a Historical Introduction by George Urdang. (Hollister Pharmaceutical Library, No. 2.) Pp. ix + 299. (Madison, Wis.: State Historical Society of Wisconsin; New York: Schuman's, 1944.) 12 dollars.

IT is difficult to say when the first pharmacopoeia was published. The first edition of the Chinese *Materia Medica* is said to have been prepared about 3000 B.C. by the emperor Shen Nung. The Ebers Papyrus was written about 1500 B.C. Books on *materia medica* were written by Theophrastus (380–286 B.C.), Scribonius Largus (A.D. 45), Dioscorides (c. A.D. 60), Galen (A.D. 130–200) and many others. It is sometimes said that the first real pharmacopoeia was the "Nuovo Receptario Composito", which was made official in Florence in 1498, or the book prepared by Valerius Cordus which was adopted officially by Nuremberg (1546), or that prepared by Adolph Oeco (1564) which was actually called a pharmacopoeia and was made official in Augsburg in 1613.

These books were only 'official' in small territories. The Royal College of Physicians in London was the first body to prepare a pharmacopoeia which became official throughout a whole country. The project was first discussed in 1585, and the College decided to think it over. Four years later the College discussed it again and decided to take action. A committee was appointed, and started work energetically; but though it was reinforced five years later, it did not complete its task. There was then a period of nearly twenty years during which little or nothing was done. In 1614 activity revived; a new committee was appointed which finished its work in four years and produced the first issue of the pharmacopoeia in May 1618. Apparently only two copies of this issue are known to exist, and one of these has now been reproduced in facsimile. The actual text is preceded by 80 pages of most interesting historical discussion by Dr. George Urdang, who fled from Germany in 1939 and is now director of the American Institute of the History of Pharmacy, Madison.

This first issue evidently met with much criticism from the younger fellows of the Royal College of Physicians and was replaced in December 1618 by a larger book, which became accepted as the first edition. All the blame for the deficiencies of the first issue was laid on the printer: "As a blaze flares up

from a fire and in a greedy famine deprives the stomach of its still unprepared food, so the printer snatched away from our hands this little work not yet finished off, without consulting the president, yea even during a time when the latter who most thoroughly took care of corrections and polishing was out of town because of a call". Dr. Urdang believes that the printer was merely a convenient scapegoat who took the blame for a fundamental change in the book. A detailed comparison of the two issues provides weighty evidence for this view. The first issue was a comparatively brief list of drugs and compounds in common use. The second issue was a combination of formulary and text-book with the purpose of giving general information and a survey of the entire *materia medica*. Its list of simples (crude drugs) was nearly twice as long. The names of three senior members of the College which had been attached to formulae in the first issue were eliminated. The new list of fellows of the College contains more information about the professional distinctions of junior fellows. The production of the second issue was thus probably due to the desire of these junior fellows for a more learned and comprehensive book which would bring more credit to the College in general and to themselves in particular, and would include all the drugs which they themselves prescribed. The most striking increase was in the section devoted to organotherapy. Under the heading "Animalia" there are 47 items in the first issue and 162 in the second. The additions include the flesh of vipers, swallows' nests, feathers, saliva, sweat and five kinds of urine, none of which is official to-day; but they also include liver, stomach, and honey, which are. The new issue was clearly quite a new book, and the official reasons for the suppression of the first issue do not stand up to critical examination. The first issue was more like a modern pharmacopoeia and, if it had survived, later committees would have been saved from much expurgation.

Apart from this discussion of the two issues, Dr. Urdang gives an interesting account of the historical background. Both issues were based on numerous previous formularies, of which the most directly important was the Augsburg pharmacopoeia, which was reproduced as No. 1 of the Hollister Pharmaceutical Library. The preface addressed *candido lectori* is identical in both issues and makes entertaining reading. It is much more appropriate to the first issue than the second. It makes grateful reference to the learned and active King James who had just bestowed a royal charter on the Society of Apothecaries, and who authorized the inclusion of a royal proclamation in both issues forbidding apothecaries to use any other pharmacopoeia. It emphasizes the desire of the Royal College of Physicians to include both old drugs and new: "Although we revere the wisdom of the old masters and have arrayed their preparations, so to speak, in the first line of battle, nevertheless we have not rejected or disdained the auxiliary troops of the new chemistry". The revolutionary views associated with the name of Paracelsus and his followers were thus officially recognized. The main purpose of the original committee was, however, to conduct a campaign against complicated prescriptions. This purpose was largely defeated by the publication of the second issue.

Dr. Urdang has done a great service in bringing these facts to light, and is to be congratulated on having produced a magnificent book.

J. H. GADDUM