Dr. George M. Karns, who was formerly a member of the chemical faculty at the University of Illinois. All experimental findings of the work will be made available for general use through the scientific journals.

A recent appropriation from the Iodine Educational Bureau has enabled the fellowship to expand its activities by arranging for the study at the Pennsylvania State College of the nutritional functions and value of iodine in the feeding of live-stock. This comprehensive project, begun on September 26, 1929, under the direction of Professor E. B. Forbes, of the Institute of Animal Nutrition, will include studies on cattle, sheep and swine. Such information is much needed, because most of the work on the part played by iodine in metabolism, especially with reference to the thyroid, has been confined to man. Dr. Karns and his associates at Mellon Institute are cooperating in this research, chiefly by preparing standardized feeds.

The institute, acting for the iodine fellowship, has also made arrangements for another investigation under the supervision of Dean Charles H. LaWall, of the Philadelphia College of Pharmacy and Science. A scholarship, which will be held by Mr. L. F. Tice during the college year 1929–30, has been established at that institution for the purpose of making a broad study of vehicles and solvents for iodine with the view of evolving a more satisfactory preparation for medical use than the tincture now employed. A number of new organic chemicals will be studied according to a definite program which has been worked out.

Mellon Institute is also considering, with the advisory aid of a number of pharmacologists, the founding of a medical research scholarship for the purpose of aiding in the solution of questions regarding the utility of iodine in internal medicine. A foundation of this type would, of course, be made in some institution possessing special facilities for such research.

The results of all work, both of the iodine fellowship at Mellon Institute and of the scholarships founded at other institutions, will be made available to the public through scientific periodicals. This procedure is in harmony with the Iodine Educational Bureau's general policy of releasing the findings of all investigations made under its auspices.

LAWRENCE W. BASS

MELLON INSTITUTE OF
INDUSTRIAL RESEARCH

WHAT IS THE BEST SYSTEM OF PRESENTING BIBLIOGRAPHIES?

IN the issue of SCIENCE for August 30, 1929, Dr. J. L. St. John very appropriately calls attention to the desirability of a more uniform system of presenting bibliographies in the various scientific journals. With reference to the name-number and name-date systems of citing literature, however, he says "It would seem that the advantages of the name-date system justify its use in practically all cases" and "A number associated with the author's name has no value except in helping locate the reference in the bibliography." In view of these statements it seems desirable to call attention to the other side of the question. As there are journals, editors and writers who prefer the name-number system there must be good reasons for using it.

A working corollary of the name-number or numerical system is that the list of literature citations is arranged alphabetically. This arrangement, however, is only an additional advantage of the system and can be disregarded if it is preferred that the numbers be assigned to references in the order in which the references appear in the text or in chronological order or in the order of importance or in any other order determined upon. Aside from the convenience attaching to the use of numbers in the list of references, the major advantage is derived from their use in the text.

To give one of many examples of this advantage, I quote from a comparatively recent publication: "This is fully covered in the literature (2, 8, 14, 17, 18, 20, 22, 25, 29, 32, 41, 59, 60, 61, 64, 66, 68, 83, 85)." If these citations had been given according to the name-date system the following would have been the printed result: "This is fully covered in the literature (Anonymous [1903]; Atlantic City Academy of Medicine [1902]; Banks [1927]; Broadbent [1895]; Brooks [1916]; Bulstrode [the date of publication was 1904, but the report covered in this instance was for 1902–03]; Bundesen [1925]; Chantemesse [1896]; Conn [1895]; Eade [1895]; Harris [1925]; Lankester [1885]; Lumsden, Hasseltine, Leake and Veldee [1925, but the report was for the year 1924–25]; Marvel [1903]; Mosny [1899]; Newsholme [1903]; Pease [1911]; Stiles [1912]; Thresh and Wood [1902])."

In addition to the increased volume of text and expense of publication there is the greater liability of citation errors when so many names and dates are included. Not infrequently an author gives group citations many times in his paper. The page references are sometimes included in the group citations, and there may also be several citations of the same year or of different years from the same author. In the latter case it is necessary to differentiate between the citations of the same year from one author by the addition of the letters a, b, c, etc., thus further complicating the situation. Another objection to the name-date system occurs in connection with the cita-

tions of the proceedings of some society whose meetings are held one year but whose publication is not accomplished until the following year. Furthermore, some bound volumes of periodicals cover publications of two years, or the last half of one year and the first half of the succeeding one. Accuracy and clearness become serious problems in the textual citing of such references according to the name-date system. In comparison with that system the numerical system has the advantage of being concise, accurate, definite and less expensive, and the numbers are easily inserted, inconspicuous, and their use in a small space does not distract the reader's attention from the subject-matter of the text. These advantages become especially evident in a paper containing many references to the same citation. Finally, the use of the numerical system permits the inclusion in the text of whatever names and dates are required.

An objection that is sometimes raised against the numerical system is that after a manuscript has been prepared, particularly when it reaches the galley-proof stage, the author finds another reference which he very much desires to add. If the name of the author of the new reference happens to begin with W or Y there may not be much difficulty in making the insertion, but if it unfortunately begins with A or B there may be trouble, especially if the list is long. An easy solution for this difficulty is to designate the new reference by a numbered letter. Thus if the previous citation in the alphabetical list is number 3, the inserted one may become 3a without any serious disturbance. If the list is not arranged alphabetically, and of course that arrangement is not a positive necessity when numbers are used, the insertion of new references could easily be made at the end of the list and numbers assigned accordingly.

M. C. MERRILL

DIVISION OF PUBLICATIONS,
OFFICE OF INFORMATION,
U. S. DEPARTMENT OF AGRICULTURE

SCIENTIFIC BOOKS

The Platinum Deposits and Mines of South Africa. By DR. PERCY A. WAGNER. Oliver and Boyd, Edinburgh. 38 full-page plates, 3 maps, 37 text illustrations. 326 pp. Price 21s.

WHILE this volume discusses primarily the deposits of the Transvaal, it also includes those of the Cape Province and southern Rhodesia, which are closely related geologically with those of the Transvaal. The South African deposits have been much in the limelight since their discovery about four years ago, and this detailed exposition of the local situation by one so thoroughly versed in it will be welcomed by all interested in the subject. The story as related by Dr. Wagner is a marked tribute to Dr. Hans Merensky for the ability he displayed in opening up the new field, for he not only discovered both the dunite deposits and the Merensky Horizon in the Lydenburg district, as well as the more important locations in the Potgietersrust area, but also succeeded in locating the Merensky Horizon in the Rustenburg district after others had abandoned all hope of finding it.

It is with keenest regret that I have learned of the death of Dr. Percy A. Wagner, who was stricken with typhoid fever and died on November 11, 1929. He was one of the most talented men who has ever visited the great southern part of South Africa, and had just entered into a contract for five years to do mineral surveying, after having been director of the survey and doing much original work.

Dr. Wagner first discusses the sources of supply, the properties and uses, and the range of prices of the platinum metals. Several years ago some of the gold mines of the Rand developed methods of saving the small amounts of osmiridium that occur in these ores, and soon brought the union into the position of leading producer of this rare combination of metals. A few years later, the platinum deposits were discovered, and since the beginning of the industry in 1925 South Africa has reached third place as a producer of platinum group metals, being exceeded only by Russia and Colombia. For a number of years Canada has been producing a gradually increasing amount of the platinum metals as a by-product in the treatment of nickel ores, but yielded third place to South Africa in 1927.

Before the discoveries in South Africa, the occurrence of platinum was considered to be standardized as an alluvial product. While some was obtained as a by-product in the treatment of the ores metals, particularly nickel and copper, none was regularly obtained from ore mined *in situ* for the sake of its platinum content. As found in nature, the metal was seldom in the pure state, but usually occurred as an alloy of platinum with other metals of the platinum group and with iron; sometimes these were accompanied by gold, copper, nickel or cobalt. With the exception of these native alloys, only two minerals of the platinum metals were known: sperrylite, the arsenide of platinum, and laurite, the sulphide of ruthenium and osmium, and both of these were very rare. The former was found in the Canadian nickel ores and the latter in the platinum-bearing gravels of Borneo. In South Africa, then, for the first time, ores were found *in situ* in which platinum was found