

Book Notices.

Annuaire pour l'an 1903, publié par le Bureau des Longitudes : avec des notices scientifiques. In—16 de près de 850 pages avec figures. Paris: Gauthier-Villars (1 fr. 50; franco, 1 fr. 85).

The house of Gauthier-Villars issues as usual the *Annuaire des Bureau des Longitudes* for the year 1903.

This compact little volume contains the customary collection of astronomical and physical data which makes it so indispensable to the engineer and the man of science. Appended thereto are some interesting scientific notes, among which may be mentioned communications by M. R. Radase, on Shooting Stars and Comets; by M. J. Janssen, on Science and Poesy; and finally, the discourses pronounced at the obsequies of MM. Fayl and Cornu.

Analysis, Detection and Commercial Value of the Rare Metals. By J. Ohly, Ph.D. 8vo, pp. 216. Denver, Colo: Industrial Printing and Publishing Company. 1903.

The recent advances in the field of illumination and the manufacture of special steels has brought the rarer metals, such as tungsten, vanadium, molybdenum, titanium, thorium, cerium and its allies, the rarer platinum metals and others, into prominence, and a handbook giving the most reliable analytical methods for their detection and estimation should prove very useful to chemists and others who are called upon to identify these substances. The author has endeavored to cover this ground.

The Bonus System for Engineering Works. The Cassier Magazine Company, 3 West Twenty-ninth Street, New York. (Price, 10 cents.)

The publishers of the *Cassier's Magazine* have just issued in pamphlet form the article on the Bonus System which appeared in their Machine Shop number, published a few weeks ago. Of the various methods of encouraging increased production among workmen, especially in engineering works, no system has ever produced such satisfactory results as some form of a bonus system, but a bonus system without some method of imparting the necessary information both to the employer and the employee is not likely to prove workable. This pamphlet deals not only with the system, but with the method of accomplishing what the system aims to accomplish—increased production and satisfied workmen.

Experiments with Vacuum Tubes. By Sir David L. Salomons, Bart., M.A. (With 54 illustrations.) 12mo, pp. vii + 79. London and New York: Whittaker & Co. (Price, 2 shillings.)

The author presents in this booklet some new methods which he has devised for the study of the phenomena caused by the electric discharge in so-called vacuum tubes. He has observed that many of those phenomena are