

get as much out of Krause's work as he would out of one constructed more along the lines of Greenhill's Elliptic Functions is a matter of considerable doubt, but at any rate we have a neat and reasonably short exposition which admirably serves its announced purpose of orienting the reader in the corresponding part of Jahnke's tables. E. B. WILSON.

*An Introduction to Thermodynamics.* By JOHN MILLS. Boston, Ginn and Co., 1910. viii+136 pp.

The brief text on thermodynamics by Mills shows that the author has read and digested a large number and a large variety of works on the subject, and that he knows how to select from this diversity the elements he needs and combine them into a carefully coordinated sequence which shall serve to lead the pupil from his elementary work on heat through so much of thermodynamics as may be necessary for the ordinary student of engineering. The simpler notions and notations of the calculus are constantly used; a large number of numerical practical problems are worked in the text, and a set of miscellaneous exercises for the reader is furnished at the end. The style is concise, but clear, and the various physical concepts are defined with the accuracy of the physicist rather than with the frequent inaccuracy of the engineer. The titles of the chapters are: Fundamental concepts and laws, Gases, Water and its saturated vapor, Superheated steam, Flow of steam and gases. The page has that attractive appearance which generally goes with the imprint of the Athenæum Press. E. B. WILSON.

*Annuaire du Bureau des Longitudes pour l'An 1913.* Paris, Gauthier-Villars. 16mo.

THE editors of the *Annuaire* have clearly decided that it should be kept fully up to date. Several of the tables of constants are again improved, some by a recasting of the contents, others by the addition of new matter, and still others by the adoption of the latest and best values obtainable. Any one interested in its use will find these changes briefly but clearly set forth in the preface. The information is easy to find with the help of the full index. The main defect is a minor one and perhaps a matter of opinion: the edges are uncut and there are some 800 pages.

The Notices contain, besides the speeches made at the