

A Treatise on Photographic Optics. By R. S. Cole, M.A., etc. Illustrated. New York : D. Van Nostrand Co. 1899. Price, \$2.50.

This volume should prove a useful contribution to an important branch of applied optics, in which the literature is by no means as voluminous or satisfactory as it should be considering the universal extension of the practice of the art to which it relates.

The treatment of the subject is necessarily mathematical, but the author has endeavored to make his treatment as intelligible as possible by worked numerical examples. The chapter headings embrace the following subjects, viz.: Light, elementary theory of lenses; aberration, correction of aberration and the design of lenses; lens testing, exposure, stops and shutters; enlargement, reduction, depth of focus and halation. W.

Portland Cement, its manufacture and use. By Charles D. Jameson, M. Am. Soc. C. E., etc. New York : D. Van Nostrand Co. 1898. Price, \$1.50.

This volume treats of the making, testing and using of Portland cement, and is described in the preface to be the outgrowth of a short course of lectures delivered by the author to the students of engineering in the University of Iowa.

The several chapters treat of the selection of the raw materials, their preliminary treatment, the leading types of kilns used, reduction of the clinker to powder, etc., the requirements for testing as set forth in the various standard specifications, the methods to be followed in testing and the different forms of mechanical devices employed in making the tests, the comparative value of different cements, the uses of Portland cement as a material for construction, the proper methods of manipulating it, and estimates of quantities and cost.

The volume is well illustrated and the subject is treated concisely and clearly. W.

American Newspaper Annual. (Nineteenth edition.) Philadelphia : N. W. Ayer & Son. 1899. Price, \$5.

The great experience of the publishers of this annual enables them to add to the value of each succeeding volume by the introduction of new data of use to business men and others for whom the work is designed. The present edition forms an imposing volume of several thousand pages, and it is safe to say that, in point of accuracy, comprehensiveness and excellence of classification, it is all that could be reasonably desired. W.

International Railway Commission. Vol. I, Part 1. A condensed report of the transactions of the Commission and of the surveys and explorations of its engineers in Central and South America, 1891-1898. Washington. 1898.

This volume gives a general summary of the work of the Intercontinental Railway Commission, constituted for the purpose of realizing the Intercontinental Railway to connect the northern and southern portions of the American Continent. It contains an historical sketch of this ambitious project, together with a *résumé* of the legislation adopted by the Congress of the