lator apparently endeavoring to produce in a small book the information to which one often finds a book approximately twice the size devoted.

The calculations that are submitted may not be found of value unless a thorough study of the mathematics connected with each is made, and engineers in general might be disposed to consider the book as unbalanced both with regard to illustrations and mathematical computations. It is a subject nevertheless which demands a thorough treatment in the matter of design, and those who are interested in the construction of mechanical contrivances for the lifting and handling of all kinds of industrial machinery and apparatus will find the volume one remarkably concise and carefully translated.

Autogenous Welding, Oxy-Hydrogen and Oxy-Acetylene.— By R. Granjon and P. Rosenberg, translated from the French by D. Richardson, A.M.I.M.E., Lecturer on the subject at the Northern Polytechnic; published by Chas. Griffin and Co., Limited, Strand, London; 234 pp. + 12 pp. advt.; 257 illustrations; 6 ins. x 9 ins.; price, \$1.25.

"Autogenous welding is certainly the one process of construction and repairs that requires, from top to bottom of its application most reflection, intelligence and conscientiousness."-Author's preface. This handbook on the use of oxyhydrogen and oxy-acetylene blow pipes contains a great deal of practical information for the welder upon the scientific use of his apparatus and the most approved methods of operation. It presents a reliable, though simple, technique in the art of autogenous welding and is notable for the omission of intricate scientific considerations relevant only to a more advanced study of the subject. The fundamental principles serving as the base for all applications of the science are well brought out. The authors do not claim that it is in any way perfect or final as the science itself is only in its infancy. A very valuable feature of the book is its concluding chapter which deals with the cutting of iron and steel with the blow pipe and an oxygen jet.

The book will be warmly welcomed by engineers and manufacturers interested in the process, there being no other work on the subject in the English language at present.

PUBLICATIONS RECEIVED.

Cement Cypsum and Lime.—The 1914 directory of manufacturers. A 214-page leather-bound pocket directory, published by the Cement Era, Chicago, Ill.

Cas Analysis.—Errors due to assuming that the molecular volumes of all gases are alike. Issued by the United States Bureau of Mines, Washington. 16 pages.

Report of the Department of Public Works.—A 1913 report of the Minister of Public Works, Ottawa, including reports of Deputy Minister, Chief Engineer, Chief Architect, Accountant, etc.

Metal-Mine Accidents.—A booklet of statistics compiled by A. H. Fay for the United States Bureau of Mines, covering accidents of this nature which occurred in the United States during 1912.

Magnetite Occurrences Along the Ontario Central Railway.—By E. Lindeman, M.E., issued by Mines Branch, Department of Mines, Ottawa. 24 pages; illustrated by 9 photographs and 20 maps.

Clay and Shale Deposits of the Western Provinces.— Report by Heinrich Ries and Joseph Keele, : Geological Survey, Department of Mines, Ottawa. Memoir No. 25, 108 pages fully illustrated.

Geology of the Coast and Islands Between the Strait of Georgia and Queen Charlotte Sound, B.C.—By J. Austen Bancroft, issued by the Geological Survey as Memoir No. 23, Department of Mines, Ottawa. 150 pages; illustrated; additional maps.

Montreal Water Works.—By F. Clifford Smith. A 54page illustrated booklet containing a historical description of the development of the Montreal water works system from the year 1800 to 1912.

Railway Statistics.—A report for year ending June 30th, 1913, of A. W. Campbell, Deputy Minister Department of Railways and Canals, Ottawa, compiled from returns furnished by the various railway companies of Canada.

Basins of Nelson and Churchill Rivers.—Memoir No. 30, Geological Survey, Department of Mines, Canada. Geological report by Wm. McInnes on the area west of Hudson Bay, embracing part of the Province of Saskatchewan and part of the Northwest territories.

Minutes of Proceedings of the 33rd annual convention of the American Waterworks Association, held at Minneapolis, Minn., June 23rd, 27th, 1913; 210 pp., 6 ins. x 9 ins.

Transcontinental Railway.—The 9th annual (1913) report of the National Transcontinental Commissioners setting forth the receipts and expenditures in connection with the eastern division and containing the reports of the Chief Engineer and District Engineers.

Variations in Results of Sieving with Standard Cement Sieves.—Technologic paper No. 9, of the United States Bureau of Standards, outlining the variations in determinations of fineness of cement that are liable to occur when the standard routine method of sieving is used.

Metallurgical Coke.—By A. W. Belden, United States Bureau of Mines. Containing statistics of coke production in the United States, development of methods, preparation of coal or coking, fiscal properties and chemical composition of coke, by-products, etc. 148 pages illustrated.

Topographical Surveys Branch.—Annual report of the Surveyor-General of Dominion lands for the year ending March 31st, 1912, containing reports of surveyors, maps, profiles and illustrations. The report contains, as appendix No. 51, an article descriptive of the copying camera of the Surveyor-General's office.

Austin Brook Iron Bearing Dictric'. New Brunswick.— A 16-page bulletin compiled by Einer Lindeman, M.E., for the Mines Branch, Department of Mines, Ottawa, covering the work done in, and the general characteristics of the ironbearing district of Austin Brook, New Brunswick. Illustrated by charts and photographs, supplemented by maps.

Tests of Permissible Explosives.—By C. Hall and S. P. Howell, United States Bureau of Mines. A 310-page book with illustrations and tables describing apparatus and methods for physical tests of explosives and results. It contains a classification also of permissible explosives, their rates of defonation and useful suggestions in selecting explosives.

Coal Washing in Illinois.—Bulletin No. 69, Engineering Experiment Station, University of Illinois. A 108-page booklet by F. C. Lincoln, Assistant Professor of Mining Engineering, describing the purification of coal by mechanical treatment with water; containing sections devoted to history of coal washing, impurities in coal, crushing and sizing, methods of washing, arrangement and results.

Electrolysis in Concrete.—Technoligic Paper No. 18, United States Bureau of Standards, Washington. A 140-page treatise by E. B. Rosa, B. McCollum and O. S. Peters; containing investigations relating to the nature and cause of the phenomena resulting from the passage of electric currents through concrete; possibilities of trouble from electrolysis in concrete structures under practical conditions; protective measures, and conclusions.

Report of Transit Commissioners, City of Philadelphia. —A comprehensive report, dated July, 1913. Volume 1, of 267 pages, recommends a rapid transit system giving general