

By chapters the scope of the work is as follows: Concrete Materials; Proportioning and Mixing Concrete; Forms and Centering; Steel Reinforcement; Transporting and Placing of Concrete; Finishing Concrete Surfaces; Waterproofing Concrete Work; Design of Reinforced Concrete; Reinforced Concrete Building Construction. An appendix suggests formulas for reinforced concrete construction. A carefully compiled and extensive index closes the work. A pleasing feature of the book is the well selected bibliography which concludes the more important chapters of the work.

**The Enemy's Trade and British Patents.** By Sir G. Croydon Marks, M.P. Published by the Technical Publishing Co., Limited, London, W.C. First edition, 1914. 54 pages, 5 x 7 ins. Paper binding. Price, 25c. net.

In his preface the author states that England grants about 47 per cent. of the entire patents that are issued annually, to persons resident outside the country. Austria grants 71 per cent., and Germany 33 per cent. to foreigners. The work goes on to show that England is merely suspending, and not in the slightest degree confiscating or destroying foreigners' patents, but instead making a home market for such that would possibly never have been otherwise created, and incidentally safeguarding and protecting British inventors owning patents in the enemy countries.

The work will be found of extreme interest by those interested in trade marks, patents, designs and inventions.

**New Time Savers in Hydraulics and Earthwork.** By C. E. Housden. Published by Longmans, Green & Co., London and New York. First edition, 1914. 31 pages, illustrated, 5 x 7 ins. Cloth. Price, 75c. net.

This book is virtually in two parts, the first of which presents hydraulic scales for ascertaining the dimensions of pipes, drains and sewers, taken from the author's work entitled "Water Supply and Drainage Systematized and Simplified." The dimensions to the nearest inch of pipes, of half pipes and of any design of drain or sewer in which a semi-circle or circle may be inscribed, can be ascertained from them, adopting at will any desired co-efficient.

The second part of the book is devoted to, and called, rapid earthwork calculation, and contains a number of improvements suggested to the author after the publication of his work "Practical Earthwork Tables." The author claims for these new tables that earthwork quantities can be from them ascertained more quickly and with less labor than in any other way. This part of the book, to which 24 pages are devoted, gives the tables, explains them, how they are framed and their application.

**Railway Engineers' Field Book.** By Major G. R. Hearn, R. E., and A. G. Watson, C.E. Published by E. and F. N. Spon, London and New York. First edition, 1913. 230 pages, 33 illustrations, 4 x 6½ ins. Leather binding. Price, \$5.25 net.

This is a practical manual, and, according to the authors, is written especially for railway engineers in India and the East. It has to do with directions for the conduct of a railway survey, instruction on the tacheometer with new reduction tables, tables of latitude and departure, full curve tables for every minute of arc for all angles from no degrees to 120 degrees. It also contains details for transmission curves.

The instruments used on a railway survey are all described, some of the descriptions being illustrated. Conditions entering into reconnaissance work such as traffic considerations, flow of water, roads, hill sections, rough estimates of cost, etc., are carefully considered in Chapter III. The next chapter is devoted to exploratory and preliminary survey work. A special chapter described the tacheometer and its use. Following this are chapters on Preliminary Survey of Hill Railways; Considerations on Location; Location; Curves; Transition Curves; The Taking of a Solar Observation for Time and Azimuth.

Transition curves are dealt with at considerable length and a special feature is the demonstration of the method of laying them down on existing railways where they have not been allowed for.

Although specially prepared for the followers of railway construction in India, the book will be found useful by every railway engineer.

## PUBLICATIONS RECEIVED.

**Ontario Agricultural and Experimental Union, 1913.**—Thirty-fifth annual report; 104 pp.; 6 x 9 ins.

**Metal-Mine Accidents in the United States, 1913.**—Technical paper 94, by A. H. Fay, United States Bureau of Mines. A 72-page booklet covering metal-mine accidents in the United States during 1913.

**Mineral Resources, Lardeau and Trout Lake Mining Divisions, British Columbia.**—Bulletin No. 2, British Columbia Bureau of Mines. Prepared by N. W. Emmens. 66 pp.; illustrated with maps, half-tones, and drawings.

**Permeability Tests on Gravel Concrete.**—By M. O. Withey. An illustrated reprint from the journal of the Western Society of Engineers relating to tests made at the Materials Testing Laboratory of the University of Wisconsin.

**Manitoba Water Powers.**—By D. L. McLean, S. S. Scovil and J. T. Johnston, engineers of the Water Power Branch, Department of the Interior. Published by that Department as Water Resources Paper No. 7. 214 pp.; illustrated by maps and diagrams; 6½ x 6 ins.

This report was prepared under the direction of Mr. J. B. Challies, superintendent of Dominion Water Powers, for the Manitoba Public Utilities Commission. Several articles relating to the investigated work which it covers appeared about a year ago in the reading columns of *The Canadian Engineer*. The report covers a general summary of the power situation in that province; hydrology; Winnipeg river powers, and rivers in the south-west, east and northern portions of the province, respectively.

**The Electric Furnace in Metallurgical Work.**—Bulletin No. 77, United States Bureau of Mines. Part 1 devoted to design, construction and operation. Part 2, the smelting of metals, and Part 3, the manufacture of Ferro-Alloys in the electric furnace. 216 pp.; well illustrated and indexed.

**Report, Minister of Public Works, Ontario, 1913.**—148 pp.; 6 x 9 ins., including reports of Minister, Deputy-Minister, Architect, Engineer, Superintendent of Colonization Roads and Accountant, for the year ending October 31st, 1913, Department of Public Works, Province of Ontario.

**The Observer's Hand Book for 1915.**—Edited by Prof. C. A. Chant, University of Toronto. Published by the Royal Astronomical Society, Canada. 76 pp.; 5½ x 8 ins.; bound in paper. The hand book has several important additions over previous publications, together with minor alterations and corrections.

**Concrete Pile Standards.**—By Hunley Abbott. Published by the author, 1915. 59 pp.; illustrated; 9 x 12 ins. Price,