

carrying out the construction. But to quote again from the preface: "It seems plain that no designer of concrete structures can be a really good designer without having a profound knowledge of methods of construction and of detailed costs." It is this knowledge which the book aims to give.

A large proportion of the matter contained in the book has already appeared in the previous works of the authors and in the technical journals, and to one familiar with concrete literature there are only a few sections that are really new. The old material has, however, been put into a form that increases its value for reference, and makes comparison more simple between several jobs of the same type. The book is well illustrated with outline drawings, but the half-tones, of which there are several, are not very good.

The great value of the book lies in the fact that it contains in a convenient volume information on all forms of concrete work that, when it has been in print at all, has hitherto been scattered through dozens of numbers of various journals and difficult to find for reference. The analysis of costs is clear and complete, with all unit prices given, so that the costs may be applied to work at any time and place. The methods described cover the work of some of the best-known and most successful contractors, as well as work on which the contractor was inexperienced and lost money. In cases of the latter kind the reasons for failure are pointed out, and serve to emphasize some points often neglected.

The scope of the work embraces practically all forms of concrete construction common in American practice and a few that are not common. English and European practice is hardly touched upon. If printed cost data are ever of value to the man who has not seen the work, the data given here are valuable, for they are very complete and thorough. In conclusion, it may be said that the work will be useful for every designer and constructor in concrete, particularly when work of a nature unfamiliar to him is put in his hands.

J. M. O.

The King's Highway.—By Reginald Ryves, A.M. Inst. C.E. The St. Bride's Press, Limited, 24 Bride Lane, Fleet Street, London, E.C. Size 9 x 12 pp. 100, diagrams 34. Price \$1.25.

This publication, which deals with the nature, purpose and development of roads and road systems, is well written, well illustrated, and contains much valuable information for the highway engineer.

The author, who is now engaged in the Public Works Department of the Madras Presidency, was formerly on the staff of the "Surveyor and Municipal and County Engineer," in which journal the series of articles, now issued in book form, originally appeared. Since its appearance in serial form the text has been expanded and thoroughly revised, and the numerous diagrams and illustrations which are given adequately elucidate the matter.

The diagrams and illustrations are much superior to those frequently found in such works. They make clear at once the value and practicability of each scheme illustrated.

Besides a table of contents there is a carefully prepared index.

The first three chapters are taken up with introduction, foreign road systems, and foreign practice.

Chapter IV. discusses Road Administration in the United Kingdom, and in Chapter V. the report of a Commission appointed in 1903 to enquire into the Administration of English and Welsh Highways is the subject of many suggestions.

Chapter VI. deals with highway law. The remaining chapters take up the engineering features of highway building.

Chapter VIII. deals with the question of proper width. The author dislikes the idea of a standard width, claiming that the width of road should be adapted to the requirements. Chapter IX. refers to the selection of materials, the effect of water, weathering, self-restoration and route-making principals.

In Chapter X., in discussing road lamps and carriage lamps, many good suggestions are made. For calculating

the illuminating power of lamps on road surfaces the following formula is given; The illuminating power in candle-power is $\frac{h \times \text{candle-power}}{l^2}$ when h is the height of the lamp

and l its slant distance from spot under consideration.

Special Roads is the subject of Chapter XI. In Chapter XII. to maintenance and repair six pages are devoted. The effect of different rollers, danger and damage of rolling, cost of maintenance and effect of watering are discussed.

Chapters XIII. and XIV. are devoted to road stone and their testing. A table giving the co-efficient of wear, resistance and cementation value of sixteen different road materials is of value.

The remaining chapters treat in a general way of wheels, dust prevention, bridges, and the effect of the elements on the highway.

PUBLICATIONS RECEIVED.

Some Canadian Industrial Problems.—Papers read before the Canadian Section of the Society of Chemical Industry. The Carswell Co., Toronto. Size 6 x 9, pp. 70.

Report of Bureau of Mines, Ontario, 1907.—Part II. of Vol. XVI., containing the third edition of Prof. W. G. Miller's report on "The Cobalt-Nickel Arsenides and Silver Deposits of Temiskaming, a list of the mining companies incorporated 1904-8, and a translation by Geo. R. Mickle, the "Early History of the Cobalt Industry in Saxony." Thos. W. Gibson, Deputy Minister of Mines, Toronto, Ont.

Municipal Bulletin No. 2.—A report by the Bureau of Industries of Ontario, giving the population, assessed values, exemptions, taxations, debenture debts and sinking funds of the various Ontario municipalities of Ontario. Issued by the Department of Agriculture.

Ontario Land Surveyors.—The Annual Report for 1907 and the Proceedings of the sixteenth annual meeting, held in Toronto, February, 1908. Contains reports of standing committees and ten papers, also biographical sketches. Killaly Gamble, secretary, Temple Building, Toronto, Ont. Size 6 x 9, pp. 200.

Telephones.—Report of Mr. Francis Dagger, employed as Provincial Telephone Expert, with respect to the development of the telephone service in the Province of Saskatchewan. Regina: Department of Railways, Regina, Sask., 1908; pp. 44.

Maintenance-of-Way.—Proceedings of the ninth annual Convention of the American Railway Engineering and Maintenance of Way Association held at Chicago, March, 1908. Vol. IX. Size 6 x 9, pp. 915. Illustrated. W. D. Pence, Madison, Wis., editor; E. H. Fritch, Chicago, Ill., secretary.

CATALOGUES.

Suspension Furnaces.—A handsome book, published by the Continental Iron Works, Brooklyn, New York, well illustrated, and containing fifteen complete drawings, showing design and construction of the Morrison Suspension Furnace. It also contains a form of specification for internal furnace boilers. Size 9 x 12 cloth, pp. 70.

Boring Mills.—The Niles-Bement-Pond Co., 111 Broadway, New York, illustrate what fifty years' experience in the building of boring mills may do. The catalogue gives specifications and principal dimensions of their various machines. Size 9 x 12. Illustrated.

Surveying Instruments.—W. F. Stanley & Co., 286 High Holborn, London, W.C., send a fully illustrated catalogue of surveying instruments, drawing instruments, meteorological instruments, barometers, telescopes, etc. Size 6 x 9, pp. 200.

Steam Shovels.—The Browning Standard Revolving Steam Shovels are well described and their parts and workings well illustrated in a booklet issued by the Browning Manufacturing Co., Mansfield, Ohio. These shovels can work in any part of the circle. Size 6 x 9, pp. 12.