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NEW BOOKS, ETC.

DIAMOND MINES OF SOUTH AFRICA. Some Account of Their Rise and Development. By Gardner F. Williams, M. A. New York and London. The Macmillan Company. 1902. Pp. 681. Price \$10.

Mr. Williams' position as General Manager of the De Beers Consolidated Mines, Ltd., has placed him in a position to gather the most varied and most useful information on the subject of diamond mining. Mr. Williams, however, is something more than an engineer who understands modern conditions in the fields. He is a historian as well; for he treats in a scholarly way the ancient mines of Africa as well as the modern. The chapters on the "Ancient Adamas" and "In Traditional Ophir Land" are as entertaining as many a novel. They have a distinct literary charm. Considered purely as a book, from the publishers' standpoint, we cannot help remarking that this is one of the handsomest volumes that has ever come into our hands. The silk binding, the admirably executed photogravures, and the clear printing could hardly be excelled.

POOR'S MANUAL OF RAILROADS. 1902. Thirty-fifth Annual Number. New York: H. V. & H. W. Poor. 1902. Pp. 1640.

No reference book is more frequently consulted and none more firmly relied upon by railway officials than Poor's Manual. From its pages we glean that the length of railroads completed in December 31, 1901, reaches the astounding figure of 198,787.30 miles, and that the net increase of mileage of all the railroads in the United States for the calendar year 1901 was 4,453.71 miles. The earnings were \$529,294,727. The operating expenses of this vast railway system amounted to \$1,092,154,099. The number of passengers carried was 600,485,790, and 1,084,066,451 tons of freight were moved. Much of the information contained in the comparison of railway statistics published in the special Transportation number of the SCIENTIFIC AMERICAN was gathered from Poor's Manual.

GALVANIC BATTERIES. Their Theory, Construction and Use. Comprising Primary, Single and Double Fluid Cells, Secondary and Gas Batteries. By S. R. Bottone. Whittaker & Co. 1902. 16mo. Pp. xvi, 376. Price \$1.50.

The purpose of this book is to show the suitability of the many batteries which have been brought before the public since the original discoveries of Galvani and Volta. The work contains a description of almost every known battery of any practical use, together with data as to E. M. F., internal resistance and adaptability to particular requirements. The theory of the battery is carefully treated; and formulae showing the reactions that take place in different types of cells are given.

Dr. Prof. O. Comes, Portici, Italy, sends us a chronological table for tobacco in Asia. The table gives a history of tobacco from 1492 to 1897. Its conciseness and apparent trustworthiness are its chief merits.

OPERE DI GALILEO FERRARIS. Vol. I. Ulrico Hoepli. 1902. Pp. xxiii, 492.

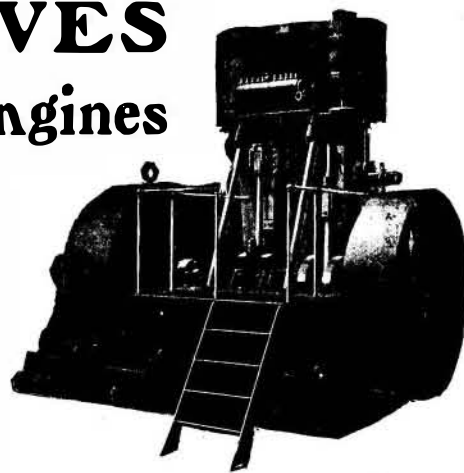
AMERICAN ANIMALS. A Popular Guide to the Mammals of North America North of Mexico. With Intimate Biographies of the More Familiar Species. By Witmer Stone and William Everett Cram. New York: Doubleday, Page & Co. 1902. 4to. Pp. xxiii, 318.

Mr. Stone has endeavored to produce a work sufficiently free from technicalities to appeal to the general reader, and at the same time to include such scientific information relating to our North American mammals as would be desired by one beginning the study. At the end of the volume will be found a key to identify unfamiliar animals. As a guide to study there has been appended a bibliography of the principal works on North American mammals. A. Radclyffe Dugmore has provided the illustrations. His brush and his camera have given us many a charming picture. We are glad to note that Mr. Carlin's admirable photographic work has also been drawn upon in illustrating the book.

LE FORZE IDRAULICHE. Dell'Italia Continentale. Ed Il Loro Impiego Milano: Ulrico Hoepli. 1902. Pp. 205.

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