## Scientific American

NOVEMBER 1, 1902.



## NEW BOOKS, ETC.

SUBMARINE WARFARE, PAST, PRESENT AND FUTURE. By Herbert C. Fyfe. With an Introduction by Admiral the Hon. Sir Edmund Robert Fremantle, G.C.B., C.M.G., and a Chapter on The Probable Future of Submarine Boat Construction, by Sir Edward J. Reed, M.P. London: Grant Richards. New York: D. P. Dutton. 1902. Pp. xxviii, 332. 8vo.

In view of the great attention that has een given to the subject of submarine warfare during the last fifty years, and more particu-larly in the last decade, it is surprising that there has been such a dearth of popular literature dealing with this subject. The want, however, has been admirably supplied by the present work. The only book devoted to the subject is one published by a lieutenant of the Danish navy, some fifteen years ago, but as the modern submarine has been developed since that date, the pages of Mr. Fyfe's work will have all the interest that attaches to a thor-oughly novel treatise. The text of this work is clearly written and the subject is fully illustrated with halftone engravings and line cuts, showing the submarine torpedo boat both ashore and afloat. The frontispiece is a fine engraving showing the Russian battleship "Retvisan" and the United States submarine boat "Holland" in drydock at the same time. There are chapters of the book devoted to a description of the modern British and United States submarine, which is practically the same thing as saying that they are devoted to the description of the "Holland" boat, as this type is being used with practically little variation by both navies. Excellent chapters are those entitled "The Morality of Submarine Warfare," and "The Submarine in Action," the latter dealing with the actual experience as gained with these craft. Due credit is given to the efforts of early inventors, and a whole chapter is given to the submarine during America's civil war. "he work can be cordially recommended to those who wish to be in touch with the latest developments of this type of war craft.

- WIND VELOCITY AND FLUCTUATIONS OF WATER LEVEL ON LAKE ERIE. Pre-pared under the direction of Willis L. Moore, Chief of U. S. Weather Bureau. By Alfred J. Henry, Pro-fessor of Meteorology. Washington: Government Printing Office. 1902.
- METEOROLOGICAL OBSERVATIONS MADE AT THE PERTH OBSERVATORY AND OTHER PLACES IN WESTERN AUSTRALIA DUR-ING THE YEAR 1900. Under the direction of W. Ernest Cooke, M.A., F.R.A.S., Government Astronomer. Perth. 1901. Pp. 121.
- THE EASTERN OBLIQUE ARC OF THE UNITED STATES AND OSCULATING SPHEROID. By Charles A. Shott, U. S. Coast and Geodetic Survey. Special Publica-tion No. 7. Washington: Government Printing Office. 1902. Pp. 393.
- NOTES ON FORTIFICATION WITH A SYNOPTI-CAL CHART. By Major B. R. Ward, R.E. New York: E. P. Dutton & Co. London: John Murray. 1902. 8vo. Pp. 50. Price \$2.
- ANNALS OF THE ASTRONOMICAL OBSERVA-TORY OF HARVARD COLLEGE. Edward C. Pickering, Director. Vol. XXXVIII. A Discussion of Variable Stars in the Cluster  $\omega$  Centauri. By Solon I. Bailey, Associate Professor of Astronomy. Cambridge, Mass.: Published by the Observatory. 1902. Quarto. Pp. 252.
- STUDIES IN HETEROGENESIS. By H. Charlton Bastian. Part II. London and Edinburgh: Williams & Norgate. Large 8vo. Pp. 147, xvii. Price \$1.50.
- SUBJECT LIST OF WORKS ON DOMESTIC ECONOMY, FOODS AND BEVERAGES. Including the culture of cacao, coffee, barley, hops, sugar, tea and the grape. In the Library of the Patent Office, London. 1902. Pp. 136.
- ELEMENTARY COAL MINING. By George L. Kerr, M.E., M. Inst.M.E. London: Charles Griffin & Co., Ltd. Phila-delphia: J. B. Lippincott Company.





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