

the dominions of the British Crown, but we have come back again to the English folk in one of their chiefest homes. These are but plain facts—plain as the sun at noonday. It is because they are so plain, that mankind, above all orators and statesmen, will not understand them. Once more, let a man's words set forth his thoughts, and let him shape his thoughts by the facts. That is all; but if this counsel of perfection be too hard, it may be better to declaim about the "Suionic race" than about the "Anglo-Saxon race." It will lead fewer people astray.

EDWARD A. FREEMAN.

ELECTRICAL NEWS.

EDINBURGH INTERNATIONAL ELECTRICAL EXHIBITION. — The executive council decided to finally close the list of applications for space on Jan. 15, when allotment was proceeded with. The French, Italian, and Austrian exhibits are expected to be specially fine, while India, China, and Japan will all be well represented in the department devoted to general industries. The railway machinery and appliances section promises well, several of the leading railway companies having agreed to exhibit; while among electrical exhibitors are Sir William Thomson, W. H. Preece, Edison, the general post-office, Edison-Swan, Laing, Wharton & Down, Anglo-American Brush, Paterson & Cooper, United Electrical Engineering, King, Brown & Co., Mavor & Coulson, Sir William Vavasour (Limited), Elmore Copper Depositing Company, Thomson-Houston Welding Company, Newell Engine Company, Robey & Co., Electric Traction Company, Ernest Scott & Co., Ronald Scott, Woodhouse & Rawson, Butler, Jobson & Co., W. T. Glover & Co., National Telephone Company, Consolidated Telephone Construction Company, Col. Gouraud, Gent & Co., Exchange Telegraph Company, Eastern Telegraph Company. The Decauville Company propose to show a narrow-gauge railway in operation, but worked by electricity in lieu of steam. The executive council have arranged with Immisch & Co. for a ten-minutes' service of electric launches on the Union Canal between Fountainbridge and the exhibition, which will afford the public a novel and interesting mode of conveyance, and will probably constitute the first example of electric navigation for general traffic. In addition to the British electrical contingent, about one hundred and fifty electrical exhibits are expected from France, where the government have officially recognized the exhibition, and considerable numbers from other foreign countries. The financial prospects of the exhibition are regarded by the finance committee as eminently satisfactory, as, owing to the much larger sums obtained for refreshment and other concessions above those received at the former Edinburgh Exhibition of 1886, it is considered that the whole cost of the buildings, grounds, and preparations will be defrayed without drawing on the admission receipts at all, whereas in 1886 no less than \$110,000 had to be made up out of admission receipts before any thing was available wherewith to meet working expenses.

FRANKFORT ELECTRO-TECHNICAL EXHIBITION. — It is proposed to hold at Frankfort-on-the-Main an international electro-technical exhibition from June 1 to Oct 31 of the present year. The exhibition will include all branches of the electrical science and industry, but as a rule only those exhibits will be admitted which show a decided improvement on those of the last special exhibitions at Munich in 1882 and Vienna in 1883. The exhibits will be divided into twelve great groups, commencing with motors for electro-technical purposes, and ending with electrical literature. Applications should be made before Jan. 15, and addressed to Mr. Leopold Sonnemann, editor of the *Frankfurter Zeitung*, Frankfort-on-the-Main.

MR. A. W. PEARSON, for many years city editor of the *Morning Bulletin*, Norwich, Conn., in addition to his regular work on the *Bulletin*, will edit the entomological department of *The Observer*, — a paper for all who love the out-door world. *The Observer* is published at Portland, Conn.

BOOK-REVIEWS.

Practical Marine Surveying. By HARRY PHELPS. New York, Wiley. 8°. \$2.50.

THE author of this work, who is an officer in the United States Navy, elucidates, in a simple and straightforward manner, all the points that usually arise in a marine survey, omitting no essential detail, and yet avoiding the confusion produced by a multiplicity of explanations such as are too often indulged in by writers who aim to be practical rather than theoretical. The instructions given in the book are practical in the true sense of the word; that is, they show the student how theories are utilized in actual practice.

This work was specially prepared for use at the Naval Academy at Annapolis, where the need of such a text-book had been felt for several years by officers engaged in teaching marine surveying. The author, having been engaged exclusively in surveying work for some six years previous to his assignment to duty at the Naval Academy, was requested by the head of the department of astronomy, navigation, and surveying, to prepare a text-book on the subject of marine surveying to take the place of the one then in use. This volume is the result, and it will without doubt prove valuable not only to students at the academy, but also to others pursuing the same line of study. The methods described and explained in the work have been used in actual practice, with few exceptions, and have been found to give satisfactory results.

The author acknowledges his indebtedness to Lieut-Commander Asa Walker, U. S. N., who specially prepared the chapter on projection; and to Wharton's "Hydrographic Surveying," whence he takes the method of platting angles by means of chords. The book contains numerous illustrations and diagrams, including two excellent photo-engravings of the sounding-machine on the United States steamer "Ranger," in the chapter on sounding with wire.

Practical Hints for the Teachers of Public Schools. By GEORGE HOWLAND. (International Education Series.) New York, Appleton. 16°.

THE several chapters of this work were originally a series of lectures delivered by the author as superintendent of schools in Chicago. They are, as their name indicates, of a purely practical character, with only incidental references to educational theories, and they have been prepared with the special object of assisting teachers in their every-day work. The chief fault of the book is its desultory character, there being little attempt at an orderly development of the thought; but it is animated by an excellent spirit, and conveys many hints and suggestions that can hardly fail to be useful to bright and progressive teachers. Mr. Howland, we are glad to note, is not so excessively fond of mere method and professional training as some enthusiasts are, but insists more on the character of the teacher and the spirit with which she pursues her work. He remarks that "methods are not for their own sake—they are but means to an end;" and, again, that "the purpose of the public school, as seen in its origin and history, is intellectual culture, and those methods only can have a strong and lasting hold on the public mind which best promote this." He has some interesting remarks on school government and discipline, as to which he leans toward leniency rather than severity. He discusses the question of moral instruction in the public schools, which has been so much talked of lately, and shows very clearly that the schools exert a powerful influence on the character and conduct of the pupils, apart from any specific moral instruction. Indeed he speaks slightly of such instruction, when given in a formal manner, and maintains that morals are best taught by the example of the teacher, the requirements of the lessons, and the social life of the school. Besides these more general topics, Mr. Howland touches on a multitude of points in teaching and school management, showing a thorough knowledge of his subject and a lively interest in it. His book is one that teachers especially will like to read.