

AN EPHEMERIS.

Connaissance des Temps. Extrait à l'usage des Écoles d'Hydrographie et des Marins du Commerce. Pour l'an 1891. (Paris: Gauthier-Villars et Fils, 1889.)

THE *Connaissance des Temps* has, within the last few years, by successive improvements, been made quite the most convenient Ephemeris for general use. The information it contains is conveniently given, and almost excessive in amount; and the result of course is that the pages of tabular matter are a good deal crowded, in order to make the annual volume of reasonable size. For travellers whether by sea or land it, like our own *Nautical Almanac*, is not, however, quite what is wanted. Much of the information it contains is of no use to them, and the size and weight of the book is excessive for their purposes. This appears to have come to the notice of the Ministry of Marine, who, in 1887, directed the publication of a pamphlet of extracts from the *Connaissance* containing the necessary information for Navigators and students for certificates as Masters, a copy of which is now before us.

In making this effort to meet the wants of a very large class of practical men the French have but followed the example of other countries. Some forty years ago the Prussian Government caused to be compiled a *Nautisches Jahrbuch*, which in its present form appears to be the best adapted of those we have seen for geographers and voyagers. It is manifestly copied, as to form, from the *Nautical Almanac*, avoiding all the matter useless to geographers, which is relegated to the well-known *Berliner Jahrbuch*; the contents are all given with an accuracy sufficient for the purposes for which it is intended: a thoroughly practical mind seems to have guided the whole arrangement, and the changes which seem desirable are but small. The American Government next published an *American Nautical Almanac*, which is practically a reprint of those parts of their larger Ephemeris which are supposed to be required at sea. It is needlessly accurate in its data, and needlessly bulky, but no doubt fulfils its object. And again, just before the French, the Austrian Government published at Trieste a Nautical Ephemeris founded on our *Nautical Almanac*, but almost identical in contents with that of the German Government before spoken of. This, it would seem, is published with the text and headings in more than one language.

The French work approaches most nearly in type to the American: it is mainly a reprint. That part which is not so is the Ephemeris of the Moon, and here convenience is sacrificed to a small gain of space. Not only are the pages crowded unduly, but the arguments (being at 12-hour intervals) are so far apart that interpolation becomes inconvenient.

Before closing we would like to point out that while all these Governments have provided an Ephemeris for their Nautical men and Travellers which is meant to be specially suited to their limited wants; England alone, which owns probably half the sea-going ships in the world, and furnishes no small proportion of the explorers, makes no special provision for them. It is not that there is no want felt: for there are several almanacs which, availing themselves of the *Nautical Almanac*, give astronomical data, together with various other matters

NO. 1075, VOL. 42]

useful to seamen. Our *Nautical Almanac* took its present form on the report of a committee of the Royal Astronomical Society, to whom reference was made by the Admiralty in 1830. No great change has been made since then, and it is beginning to be thought time that its contents should be revised: if this is done, we trust it may be considered whether the wants of navigation and geography should not be specially taken into account. If we are right in believing that the Austrian Government have founded on our *Nautical Almanac* a publication which admits of all the tabular matter, which is so difficult and expensive to put in type, being combined with a text in varying languages, it might be possible by the adoption of a suitable form, to supply the wants of other nations as well as our own. Our *Nautical Almanac* in its present form is used, we believe, extensively by those maritime peoples who adopt Greenwich as a prime meridian, and it would, we think, not be difficult to arrange with their Governments for impressions suited to each language.

OUR BOOK SHELF.

The Wimshurst Electrical Influence Machine. By W. P. Mendham. (Bristol: King, Mendham, and Co., 1890.)

THIS little book, which partakes somewhat of the nature of a trade catalogue, briefly describes and illustrates the construction and action of the Wimshurst machines made by the firm of King, Mendham, and Co., and of the accessory pieces of apparatus needed for use with these machines in performing the antiquated experiments so much in vogue with the dabbler in frictional electrical science. The study of high tension electricity is coming to the front so much just now, that it is a great pity Mr. Mendham has not utilized his opportunity better, and given to the class of readers for whom this book is intended some notion of the many instructive and easily performed experiments on the disruptive discharge, and on electrical oscillations, which we owe to Hertz, Lodge, and others. The only concessions made to modern discoveries are in the descriptions of apparatus to show the action of the electric discharge on smoke, and of the Thomson quadrant electrometer. The latter, however, had better have been left alone, for the description is too meagre to enable the action of the instrument to be appreciated, and the reader may be apt to imagine that the quadrants are intended to be connected up directly to the terminals of a Wimshurst machine. We need scarcely say this would be very hard on the instrument. H. H. H.

Pawnee Hero-Stories and Folk-Tales. By George Bird Grinnell. (New York: Forest and Stream Publishing Company, 1889.)

THE Pawnees were at one time what Mr. Grinnell calls "a great people." They roamed over a vast territory, and enjoyed considerable material prosperity. Now, their numbers are greatly reduced, and the few who remain give a very inadequate idea of the vigour of the original stock. The author of the present book knew the tribe intimately twenty years ago. He used to camp and hunt with them in Nebraska, and at night they told him hero-stories and folk-tales which had been handed on to them from their forefathers. Many of these narratives he carefully translated and wrote down at the time; and quite lately he visited his old friends for the express purpose of inducing them to extend his collection. They were eager to meet his wishes, and so he was able to bring together the stories which he has now published. He claims that they are recorded exactly as he himself