

the localities fished, as well as the physical conditions of the sea during the operations. The economic aspect of the research is not neglected.

(3) This is the first instalment of the results of an extensive survey of the Irish fishing-grounds, which is now being carried on by Mr. Holt and his colleagues. It is well known to those engaged in actual fishery administration that mere statistics of the quantities of fish landed at the ports afford, in themselves, information of very little value for a rational regulation of the industry. Fishery authorities competent to their work must obviously obtain at first hand a knowledge of the natural conditions of the sea areas under their control, and this has been the object of the Irish survey. The observations recorded are those of fishing operations carried on by the cruiser *Helga* at such times as her attention was not being directed to the detection of predatory trawlers; they include lists of the fishes present on the fishing-grounds visited, with the numbers taken per haul, and the individual measurements of those caught. It is quite impossible to summarise the results here stated, but one may say with confidence that the report is a contribution of essential value for a real understanding of the natural conditions of the British fisheries. J. J.

#### OUR BOOK SHELF.

*Science in Modern Life.* Prepared under the editorship of J. R. Ainsworth Davis. Vol. vi., Engineering. By J. W. French. Pp. vi+225. (London: The Gresham Publishing Co., 1910.) Price 6s. net.

THE first half of this book is devoted to the various systems of power production, and the other half to the application of such power to the manifold needs of mankind; there is also a short account of the properties of, and the modern methods of manufacturing on a large scale, the chief materials used in constructional work.

In a book of this nature, which is evidently intended to give non-technical readers an intelligent idea of the remarkable work done by the engineer in providing for the varied daily needs of communities living under the complex conditions of civilised life, it is a pity that space should have been given to descriptions of machines and methods which are obsolete, and are only interesting from the historical point of view. In dealing with high-speed engines, there are two illustrations and some amount of letterpress devoted to the Willans and Robinson central valve engine, which is no longer made, though, of course, such engines are still to be found in generating stations and factories where they were installed some years ago, and where they will remain until unfit for further service; it is, however, an obsolete type. In discussing water-tube boilers Mr. French states that "of these types the most extensively adopted in the navies of the world is the Belleville water-tube boiler." This is incorrect; no recent British warship has been fitted with this steam generator, which did not prove altogether satisfactory.

That the section which deals with the applications of power is well up to date is shown by the chapter dealing with aerial navigation and hydroplanes. The latest types of machines are described and discussed. The cable-way illustrated on p. 127 was used in connection with the building of the new low-level lighthouse at Beachy Head, and not, as stated, for the Eddystone Lighthouse.

There are a dozen excellent plates, and about 600

other illustrations, which will greatly increase the utility of the book to those readers who are not familiar with such technical matters. T. H. B.

*Vegetationsbilder.* Edited by Prof. Dr. G. Karsten and Prof. Dr. H. Schenck. Eighth series. Part 1. Trockensteppen der Kalahari. F. Seiner. Part 2. Von den Juan Fernandez Inseln. Carl Skottberg. Part 3. Die schwäbische Alp. Otto Feucht. Part 4. Aus Bosnien und der Herzegovina. L. Adamovič. Parts 5-6. Die Flora von Irland. Prof. T. Johnson. With six plates in each part. (Jena: Gustav Fischer, 1910.) Price 4 marks each part.

THE eighth series has progressed rapidly, as six parts have been published within the year. For the first time the British Islands is represented, namely, in the double part dealing with the flora of Ireland, arranged by Prof. Johnson. It would be difficult to improve on the subjects chosen, which include *Arbutus unedo*, one of the original forest trees, *Erica mackaui*, *Erica mediterranea*, *Daboecia polifolia*, *Euphorbia hibernica*, *Eriocaulon articulatum*, and *Eryngium maritimum*. All the photographs are excellent, and the number takes rank among the best. European countries are also represented in the pictures of the plant associations of Bosnia and Herzegovina, contributed by Prof. L. Adamovič, and those illustrating the Swabian Alps, provided by Mr. O. Feucht. Naturally the magnificent spruce, *Picea omorika*, endemic to Bosnia, is selected by Prof. Adamovič for illustration, and another subject is *Pinus leucodermis*; other photographs portray associations on the chalk, serpentine, and screes. The slopes and cliffs of the Swabian Jura are rich in calcicolous plants, of which *Saxifraga aizoon* and *Saxifraga decipiens* are two of the most prominent; the illustrations of *Lasèrptium Siler* and of Juniper trees about eight feet high also attract attention. The part devoted to the Kalahari desert contains photographs of the well-known trees *Copaifera mopane*, *Copaifera coleosperma*, *Kigelia pinnata*, and *Acacia haematoxylon*, in their natural habitats; a remarkable large shrub, *Sesothamnus Seineri*, discovered by the author, presents striking xerophytic characters. Dr. C. Skottberg illustrates a number of endemic plants. *Boehmeria excelsa*, a tree growing to a height of eighteen feet, *Juania australis*, a pinnate-leaved palm, *Gunnera palmata*, and a strong root-climbing fern, *Arthropteris altescendens*, are confined to the island of Masatierra; scenes from the island of Masafuera show forest of *Myrceugenia Schultzzi* and the tree fern, *Dicksonia berteronana*.

*Light Visible and Invisible.* By Silvanus P. Thompson, F.R.S. Second edition, enlarged. Pp. xiii+382. (London: Macmillan and Co., Ltd., 1910.) Price 6s. net.

THE first edition of Prof. Thompson's popular book was reviewed at length in NATURE of March 31, 1898 (vol. lvii., p. 506). To the new edition have been added chapters on radium and the manufacture of light, the latter being the lecture given to a popular audience at the meeting of the British Association at York in 1906. We have little doubt that with these additions the volume will continue to be read widely.

*A Home-work Atlas of Maps in Black and White.* Edited by Prof. L. W. Lyde. Pp. 15. (London: A. and C. Black, 1910.) Price 1s.

THESE simple maps, showing in a striking way the essential facts of the geography of each of the continents, should prove of real use in schools to give pupils guidance as to how, when answering questions, long verbal descriptions may be saved by judicious diagrams.