

OUR BOOK SHELF.

An Elementary Course of Physics. Edited by Rev. J. C. P. Aldous, M.A. Pp. 862 + vi. (London: Macmillan and Co., Ltd., 1898.)

IN this book an attempt is made to give a modern and practical course of natural philosophy in a compendious form, and it may be stated at once that the effort is a most successful one. It is the joint work of the editor, who is chief instructor on H.M.S. *Britannia*, Mr. W. D. Eggar, and Prof. F. R. Barrell. The editor is himself responsible for the sections dealing with mechanics, properties of matter, hydrostatics, and heat, in which the readers are provided with "a groundwork of theoretical knowledge which may enable them to understand and use the simple processes of the kinetic method, to express themselves with accuracy when necessary, and to deal with simple mechanical problems." Wave-motion, sound, and light are admirably treated by Mr. Eggar, while Prof. Barrell's contribution deals with the subjects of magnetism and electricity.

The treatment of the various subjects is most lucid and thorough, and is evidently based on an intimate acquaintance with the requirements of students. Great pains have been taken to avoid looseness of statement; and the fact that some of the sections have had the advantage of the criticisms and suggestions of Lord Kelvin, Lord Rayleigh, and others, makes it a trustworthy book of reference. Where everything is so well done it is difficult to select points for special mention, but it may be remarked that examples drawn from naval sources form a notable and valuable feature, and graphical methods of representing experimental results are largely utilised and encouraged. The generous supply of illustrations, which number nearly six hundred, and not one that fails to serve a useful purpose, enhances the value of the book, and will make it acceptable to a wider circle of readers than that comprised by students following a specified curriculum. The book is of convenient size, and is printed in very clear type; we believe it is destined to take a high place in our schools and colleges.

L'Algérie. Le Sol et les Habitants, &c. Par J. A. Battandier et L. Trabut. Pp. viii + 360. (Paris: Baillière et fils, 1898.)

THIS little volume is one of a class of books which is much better represented abroad than in this country—one, that is, in which a complete picture is given of a limited part of the earth's surface, under the varied aspects which make up its geography in the widest sense of the term. It is written on a scientific plan, the broad physical features of the country being taken as the basis of the whole description. In Algeria the authors distinguish three main zones, the Tell (or cultivable region), the Steppe, and the Sahara, holding that the plateaux, which some writers have made into a separate division, do not form a natural region, but fall within the Tell or the Steppe according to the amount of rain which falls. The determining factor, indeed, in the geography of the whole region, is the preponderance of the moist rain-bearing winds from the north-west, or of the parching desert winds from the south and south-east. Each of the zones is in turn described, special attention being given to their natural resources; and the fact that for over twenty years the authors have traversed the country in the prosecution of their botanical researches, enables them to speak with the accurate knowledge which can only be acquired at first hand. The inhabitants, the fauna and the geology of Algeria are also sketched in outline, so that we have in small compass a useful summary of all that is known of the country. The general conclusion arrived at is that Algeria is capable of supporting a large population, and that, in spite of the slow modification the climate has undergone since the dawn of history, cultivation will still be possible for many centuries to come.

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LETTERS TO THE EDITOR

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Electric Light Wires as Telephonic Circuits.

I WISH to put on record the following method of using electric lighting wires as telephonic circuits. I was requested some time ago to try to localise a fault in an electric light main, by means of a certain form of inductor used in conjunction with a telephone but not connected to the main. While using it, it occurred to me that probably the main might be used instead of a telephone wire. My first experiments were not productive of good results, as a small fraction of the Company's current passed continuously through the telephone. In October 1897, I placed $\frac{1}{2}$ microfarad condensers in my telephone circuit at each end; these stopped the current, but in no way reduced the telephonic effects. If the note given out by virtue of the rotation of the armature of the dynamo is great, it can be very greatly reduced by placing an inductively wound resistance in the circuit.

The resistance does not appear to modify the telephonic effects in any marked degree. This probably arises from the fact that the E.M.F. due to the secondary coil of the telephone transmitter is high. The experiment was successfully made over two miles of a main which was carrying the full load used in lighting the town.

F. J. JERVIS-SMITH.
Oxford, May 16.

Sub-Oceanic Terraces and River Channels off the Coast of Spain and Portugal.

WILL you allow me once more to briefly describe in advance the physical features under the Atlantic off the coast of Spain and Portugal, continuous with those opposite the coasts of the British Isles and the Bay of Biscay, already reported in your columns (NATURE, March 24 and April 21)?

The great escarpment already described as descending into deep waters from the margin of the British-Continental platform is still traceable southwards along the coast of Portugal from Cape Finisterre as far at least as the mouth of the Tagus estuary, where it appears to begin to broaden out and merge into a generally rapid slope—or probably a succession of terraces. The breadth of the platform along this coast averages only 30 to 40 miles from the shore, and its margin very nearly follows the 200-fathom contour; but here the descent to the 1000-fathom contour is steep, though seldom precipitous, and is varied by numerous bays and headlands. Owing to the insufficiency of the soundings, especially off Vigo Bay, the definition of the cañons, or old river channels, is scarcely as clear as in the region further north. Still, I have been able to determine several with a great degree of certainty, such as those formerly continuous with the rivers Padron, Lima, Douro, and Tagus. There are also a few which cannot apparently be followed to their sources in the present land, such as one of special depth and precipitancy in lat. 40° 31' N., distant about 40 miles off the coast of Portugal at Barra Nova. The continuation of these features to the Straits of Gibraltar and into the Mediterranean remains for future investigation.

20 Arundel Gardens, W., May 16. EDWARD HULL.

Bacteria on an Ancient Bronze Implement.

MR. NICHOLSON probably refers to what is known to archaeologists as "bronze cancruid."

In the last number of the *Journal* of the Royal Society of Antiquaries of Ireland, March 31, this subject is referred to under the name of "Ulcerative Disease of Bronze or 'Bronze Cancruid,'" by Dr. William Frazer.

As many readers of NATURE interested in bacteria may not be able to conveniently refer to this journal, the following points brought forward by the author will be read with interest. He says, "all objects of antiquity fabricated from metallic copper, and its important alloy made by adding tin in certain proportions, are liable to be attacked by this destructive