

it thus covers the portions of electricity and magnetism which, under the new regulations, are selected for examination in Part I. of the Mathematical Tripos, and we have no doubt it will be found useful for that examination. The book is very well arranged, and the explanations are generally clear and concise. Among some minor points which, we think, might with advantage be altered in subsequent editions are the following. When discussing the rapidly alternating currents produced by discharging a Leyden jar, the author says: "We do not know, for instance, whether we are right in supposing the currents to be the same throughout the conducting wire." This seems an unnecessary affectation of ignorance, for we do know that such a supposition is certainly wrong. The method of determining " v " by repeatedly charging and discharging a condenser placed on one arm of a Wheatstone's bridge is not given, though several other less accurate methods are described. This is the more singular as the method itself is given in another part of the book as one for determining the capacity of a condenser, but no hint is given of its most important application. The method of measuring the self-induction of a coil, which is ascribed to Lord Rayleigh, is really due to Maxwell, and, though not in the treatise on "Electricity and Magnetism," is given in the paper on the "Dynamical Theory of the Electro-magnetic Field."

Le Sommeil et le Système Nerveux: Physiologie de la Veille et du Sommeil. Par S. Serguéeff. (Paris: Felix Alcan, 1890.)

IT is difficult to understand why a writer upon the higher branches or outlying districts of neurology should assume that his readers are totally ignorant of the rudiments of that science, and should occupy nine-tenths of his book with a description of the anatomy and physiology of the nervous system. If, indeed, for the purpose of throwing new light upon his subject, he presented his facts in a new form, or taught them from a novel point of view, or arranged them so as to bring out some new principle, then there might be an excuse for restating the facts; but even then a brief summary would be enough for the purpose, there would be no need for the rediscussion of settled theories and the re-quotation of trite authorities. Scarcely ever do we find a writer on neurology who is content to assume that his readers are acquainted with the alphabet of his subject, or who will refrain from inflicting upon them the wearisome account of cells and fibres, of corona and cortex, illustrated by the familiar engravings that have done duty in so many previous books. The vicious habit is common enough and bad enough, but very rarely is it carried to such an extent as in the book before us, in which only about three hundred out of the seventeen hundred pages of which it is composed are devoted to the subject of which it is said to treat; the great bulk of the book being occupied by anatomical and physiological descriptions which are not in this case even relieved by illustration. So far is this system of padding carried, that the author has even inserted, in his book on waking and sleeping, descriptions of the minute structure of the retina, of the internal ear and the organ of Corti. When we have at last waded through his pages of preliminary matter, we do not find that he presents any fresh theory of sleep that is worth considering, or that he has any new facts to bring under our notice. It is a shame that a student should be trapped by an enticing title into spending his time in reading such stuff.

Elementary Science Lessons. By W. Hewitt, B.Sc. (London: Longmans, Green, and Co., 1891.)

THE thirty-six object-lessons contained in the present volume form the third part of a scheme of lessons drawn up by the author at the request of the Liverpool School Board. They are designed for children of Standard III., and are in continuation of others given in previously pub-

lished volumes suitable for Standards I. and II. The author's long experience in teaching science to children in elementary schools gives him the ability which is necessary properly to draw up such a course as the one before us. For the most part the facts and principles dealt with relate to the classification of bodies into solids, liquids, and gases, and with the changes from one of these states to another. The experiments described may be performed with the simplest of apparatus, and the inferences to be drawn from them must be manifest to all children for whom the work is intended. Whenever possible, the principles considered in the lessons are applied to explain physiographical phenomena, thus aiding the development of that intelligent observation which is the soul of science. The arrangement of the matter is generally good, and elementary school teachers will find in the work exactly what they require for their pupils.

Solutions of the Examples in Charles Smith's "Elementary Algebra." By A. G. Cracknell. (London: Macmillan and Co., 1891.)

MR. SMITH'S small "Algebra" has deservedly obtained high favour in our schools for its lucidity. The work before us aims at presenting the solutions, not always necessarily in the shortest way, but rightly so as to "follow naturally from the formulæ and theorems with which the student is acquainted at that stage." It has Mr. Smith's *imprimatur*, for he has revised the sheets; and from our own examination of it we can commend it to teachers and students.

LETTERS TO THE EDITOR.

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The Anatomy of Heloderma.

THE number of NATURE for July 30, which I have only just seen, contains (p. 295) a criticism of a statement of mine, to which I have to answer. It is stated in my paper on the osteology of *Heloderma* that there are eight or nine premaxillary teeth in *H. horridum*, and only six in *H. suspectum*, because such is the number in the specimens examined by me. As Dr. Shufeldt has, on re-examination, found eight teeth in a specimen of the latter species, I admit that the distinction, as a specific character, does not hold good. It is just because my figures are *not* diagrammatic that they represent fewer teeth than are mentioned in the text; to anyone familiar with the dentition of lizards and snakes, it is clear enough that some of the teeth have been lost, and they were therefore not represented in the figures, which are faithful representations (in outline) of the objects from which they are drawn. I am much surprised at Dr. Shufeldt's statement, that he "cannot conceive of any lizard normally having but nine teeth in its premaxillary bone; it should at least be an even number." I could refer him to no end of examples of premaxillary teeth normally in odd number among lizards with single premaxillary; perhaps the best known is afforded by the family *Amphisbænidae*. I must again correct Dr. Shufeldt on a matter of fact: my figure of *H. horridum* shows seven teeth, not six, as he states in his letter; and that of *H. suspectum* five, not four. G. A. BOULENGER.

British Museum (Nat. Hist.), August 28.

A Straight Hand.

ALTHOUGH my writing master, who was an Englishman, taught me slanting letters which old habit still clings to, I approve highly what you say against it (NATURE, August 6, p. 325). Allow me to add some remarks on another side of that question. For many years past I have had in succession several amanuenses, and my first care has always been to require a straight hand without any distinction between up and down