

and never had any real facility in writing English. The editor is, therefore, to be congratulated on the very satisfactory manner in which he has performed the difficult task of preparing this book for the press. Great care has evidently been taken in reading the proof-sheets, as we have only noticed one or two unimportant misprints.

OUR BOOK SHELF.

British Birds: being Coloured Illustrations of all the Species of Passerine Birds resident in the British Isles, with some Notes in reference to their Plumage. By Claude W. Wyatt. 4to. Pp. iv. 25. (London: William Wesley and Son, 1894.)

THE author is a well-known ornithologist, who has made two expeditions, of which the results have been published—one to the Peninsula of Sinai, and the other to the Magdalena Valley in Colombia—and these proved that he was not only a good collector, but also a keen field-naturalist. He then travelled extensively, and visited many parts of the globe, observing the habits of birds, and making sketches of every kind of scenery. The latter became a great feature in the plates of the "Monograph of the Swallows (*Hirundinidæ*)," which he brought out in conjunction with Dr. Bowdler Sharpe, who contributed the letterpress of the work, while Mr. Wyatt drew all the plates.

The present volume is the first of two which the author proposes to publish, the one before us dealing merely with the resident Passeres of the British Islands, while the second is to contain figures of all the migratory Passeres, the Picarian birds, the birds of prey, and the pigeons; but the game birds, waders, and swimming birds will be, presumably, treated of at a future period. Fifty species are illustrated by Mr. Wyatt in his first volume, and occupy twenty-five plates. As with his pictures of the swallows, the author makes a great feature of his accessories, and some of the landscapes are very pretty, and are evidently drawn from nature. The attitudes of the birds are life-like, and some of them are exceptionally good, the crows alone striking us as failing in massiveness of bill. The letterpress is of the simplest, and would have been all the better for more complete references to standard works, as many of those given are incorrectly quoted. It is, however, more as an artist than as a writer that Mr. Wyatt shines, and he is to be congratulated on having produced a very handsome volume, with beautifully coloured pictures of some of our most familiar favourites. As regards quality of paper, printing, colouring, and binding, there is nothing left to be desired.

Standard Methods in Physics and Electricity Criticised, and a Test for Electric Meters Proposed. By H. A. Naber. (Published by the Author, 1894.)

FROM the title and table of contents of this work, one would expect to find a treatise on experimental physics. This expectation is, however, rudely dispelled when one commences to examine the letterpress. After a very brief description of the form of gas voltameter which the author has devised (see NATURE, July 12, 1894), more than a hundred pages are devoted to what presumably the author considers an exhaustive examination of the different uses to which this voltameter may be put. The fact that his voltameter has a considerable resistance, causes the author considerable trouble, but he consoles himself with the reflection that a Cardew or other voltmeter generally has a resistance of from 100 to 900 ohms. The difficulties encountered in measuring a quantity of

electricity by copper or silver deposition are dwelt upon, and a new objection is raised, namely, that since the deposits have to be weighed, variations in gravity will affect the results! At another part of the book the ordinary balance is considered devoid of sufficient accuracy, since the arms have generally different lengths, and Nicholson's hydrometer is recommended as a substitute when great accuracy is desired. In a chapter on sound, the author strongly recommends bicycle-wheels as a motive power. Apparently the cycle-wheels are to set themselves in motion, since the idea of driving any piece of machinery "by hand" is derided, and the great waste which takes place when water and other motors are used, is dwelt upon as a reason for their abandonment. One has met with the library steps which can be converted into half a dozen other articles of furniture; but these old friends sink into complete insignificance when compared with this gas voltameter and the numerous uses claimed for it, such as blowing soap-bubbles full of oxygen and hydrogen, which on being exploded can be used as fog-horns; supplying oxygen to aeronauts, or to explorers in coal-pits after an explosion; and preparing chlorine. It can also, we are told, be used as a barometer, pycnometer, ice calorimeter, dylatometer, thermostat, hygrometer, anemometer, level, or for exhausting incandescent lamp bulbs. The above are a few of the uses claimed, and are extracted from what the author describes as not an "exhaustive list"!

W. W.

Electrical Engineering, for Electric Light Artisans and Students. By W. Slingo and A. Brooker. Pp. 740. New and revised edition. (London: Longmans, Green, and Co., 1895.)

AN admirable work, covering the whole field of electric lighting. Though designed to include those branches of the subject prescribed in the syllabus issued by the City and Guilds Technical Institute, its scope is such as "to make it embrace the requirements, not only of those actually employed in the electric lighting industry, but also of those who, while having little or no electrical knowledge, have under their supervision various kinds of electrical machinery." The book is not merely a descriptive catalogue of electrical machinery, like some that we know, but a clearly-written, and amply-illustrated, volume which has proved of great service to engineers during the past five years, and, in its revised form, is sure to hold its own in the future.

Lens-Work for Amateurs. By Henry Orford. Pp. 231. (London: Whittaker and Co., 1895.)

A LENS is defined in this volume as "a portion of a refracting medium . . . bounded by two spherical surfaces which have a common axis." In the following paragraph, lenses with one of their surfaces plane, are described; wherefore we would ask Mr. Orford, why he did not include these in his definition? This, however, is but a detail. As a whole, the book is a trustworthy guide to the manufacture of lenses, suitable alike for the amateur and the young workman. It is profusely, though rather coarsely, illustrated by diagrams, and the instructions are simple and practical.

Manual of Practical Morbid Anatomy. By H. D. Rolleston, M.A., M.D., F.R.C.P., and A. A. Kanthack, M.D., F.R.C.P. Pp. 240. (Cambridge: University Press, 1894.)

A PRACTICAL handbook for the post-mortem room, showing how to carry out a systematic examination of a body, and indicating what morbid changes should be looked for.