

quantity of coke-oven tar, though constantly increasing, probably does not at present exceed 50,000 tons. It may be expected, however, that with the more general introduction of electricity for lighting purposes and the consequent diminution of the supply of gas tar, the coke-oven tar will eventually become the main source of our aromatic hydrocarbons." To this it should be added that the increasing use of 'water-gas,' in this country at least, is decreasing the supply of coal-tar, so that the time is certainly approaching when it will pay to collect the tar from the coke-ovens.

The translator expresses the hope "that this work will be found valuable not only to the technical chemist, but also to the dyer, analyst, merchant, patent agent, etc., and in fact to every one concerned with the production, handling, or use of the coal-tar colours." His hope is undoubtedly well founded. He might have added the patent lawyers, many of whom have learned to rattle off their 'ortho,' 'meta,' 'para' with a facility that would put many a modest chemist to the blush. IRA REMSEN.

Elementary Lessons in Electricity and Magnetism. SYLVANUS P. THOMPSON. New York, Macmillan & Co. 1894. Pp. 628. Price, \$1.40.

The first edition of this book appeared in 1881. It at once became immensely popular, and deservedly so, on both sides of the Atlantic. The author combined in a rare degree the three principal requisites for the preparation of a good text-book. He was himself a widely known scholar and investigator in the department of science specially treated; he was more than ordinarily accomplished in the art of exposition, and he was an experienced and successful teacher. His possession of these qualifications in undiminished magnitude is evidenced in the preparation of this new edition now offered to the public, which is the original work in plan, but entirely revised and largely re-

written, with an enlargement of scope sufficient to embrace the important additions to the science which have been made during the past fifteen years. To enable this to be done without undesirable condensation, the size of the volume has been somewhat increased. Indeed, one of the larger merits of the plan of the book is to be found in the conscientious retention of the long known and well established principles and facts of the science, to neglect which for the newer and more novel developments is a temptation to which too many authors of text-books in physical science have yielded. While retaining all essential 'fundamentals,' Professor Thompson has found place for the presentation of all of the essentials of recent discovery, and while this has been done with conciseness it has also been done with that clearness and logical appropriateness for which the writings of this author are justly celebrated. The wonderful results of the study of alternating currents and alternating current machinery are well presented in this edition, as are recent advances in both theory and experiment due to Hertz, Fitzgerald, Boltzmann, Lodge and others. At the end is an excellent series of questions, classified as to the chapters of the books to which they refer, which cannot fail to add much to the value of the book in use, especially for those who study without an instructor. In fact, as an 'all around' elementary text-book in electricity and magnetism it will be difficult to find another in the English language that is superior or even equal to this.

T. C. M.

The Birds of Eastern Pennsylvania and New Jersey, prepared under the direction of the Delaware Valley Ornithological Club. By WILMER STONE. Philadelphia, 1894. 8°, pp. vii+185.

Eastern Pennsylvania has long been a favorite field for lovers of birds. Audubon, Wilson, Nuttall, Cassin, Peale, Woodhouse, Gambel, Bonaparte, Heerman, Haldeman,