tion. Tolerably complete discussions of some of the principal trials of long-distance transmission are also included, together with some of the numerical results of these trials. The volume contains much that is interesting and useful to students of electricity, and will be of undoubted value to those who are engaged in its practical application. The American reader will look in vain for any account of the more recent and highly important improvements in motors and systems of transmission which have originated in this country. This will not be a matter of regret to any one who has secured a copy of the next book under review.

The Electric Motor and its Applications. By MARTIN and WETZLER. New York, W. J. Johnston. 4°.

MADE up largely of articles contributed by its authors from time to time to the *Electrical World*, by far the greater portion of this volume is devoted to an exposition of the results of American activity in this field. Again is found on the first page the usual cut showing Oersted's experiment, and the usual brief and unsatisfactory presentation of elementary principles, without which it seems impossible for a book on electro-technics to make its appearance. Not much can be said in favor of this well-nigh universal introduction. The reader has but to turn over a single leaf to find himself involved in the use of such terms as 'counter-electromotive force,' 'Lenz's law,' 'the law of Jacobi,' and many others, for the proper understanding of which little assistance has been rendered in the short study of 'theoretical principles.' Books of this class are written for and read by those who already know more than the elements of the subject, and their presentation might safely be omitted.

Two chapters are devoted to an account of the earlier experiments with motors in Europe and America, and in the division of space Europe gets five pages to America's sixteen. A chapter is given to the theoretical consideration of the problem of the electrical transmission of power, followed by a very short one on the electric railway and tramway in Europe, and a very long one on the electric railway and street-car lines in America. The use of storage-batteries with electric motors on street-railway lines concludes the first half of the book, the remainder of which is devoted to a consideration of the industrial applications of electric motors in Europe and America. Much the largest share of space is given to American systems and inventions, and many of the most important 'plants' now in operation are described. The work is largely historical and descriptive in its character, a scientific treatment of the subject being only attempted in a single chapter.

As a *résumé* of what has been thus far accomplished, especially in this country, in the development of one of the most promising fields of applied electricity, it will be found to be very interesting and useful. Illustrations form a prominent feature of the work, there being as many as two hundred, many of which occupy an entire page. Several of the largest and most elaborate illustrations are intrinsically of very little value, being merely 'pictures' which are in no way especially related to the real object of the work, and convey no useful information. Of such may be mentioned a full-page 'winter view' of an electric street-railway, in which the only thing suggestive of electricity is a possible lightning-rod upon a building in the background.

Electric Light Primer. By CHARLES L. LEVÉY. New York, The Author. 8°.

THIS little primer consists of thirty-five octavo pages of good, bad, and indifferent matter relating to the management of dynamos and electric lights. The 'practical man' here has full sway, and he wisely declares in his preface that "it is not supposed that these pages will be of any value to the electrician."

They would have been of much greater value to the workmen and engineer in charge of electric machinery if they had been prepared by one who really understood what he was writing about. As it is, a good deal of knowledge of the subject is required to separate the good from the bad.

The Storage of Electrical Energy. By GASTON PLANTÉ. New York, Van Nostrand. 8°.

THE work before us includes the principal researches of Planté, contributed to the French Academy, and various scientific periodicals, from 1859 to 1879. The full history of the secondary battery, as it grew in his hands, will be found in the first two or three chapters, and the construction of various forms is given with great exactness of detail. His use of the transforming rheostat for the purpose of obtaining electricity of 'high tension' is described at length, together with many practical applications of this device. The volume includes an account of Planté's experiments on the nature of the electric discharge under high tension, and also his application of these researches in the explanation of many natural phenomena.

While many electricians will be unable to agree with him in his conclusions, all will be glad to find the results of his labor in so compact and usable a form as that in which they are presented in this volume.

Electricity treated Experimentally. By LINNÆUS CUMMING, M.A. London, Rivingtons. 12°.

ALTHOUGH an excellent little book, it will be something of a disappointment to the many teachers and students who have for several years made good use of the 'Theory of Electricity,' by the same author. The disappointment will grow out of the fact that it is a less complete and comprehensive treatment of the subject than will be generally looked for. It contains the substance of a series of experimental lectures given to senior boys in Rugby School, and not much preliminary mathematical training is assumed. In a few of the discussions a knowledge of mathematical principles as developed in the author's 'Theory' is desirable, but in such cases the fundamental formulæ may be taken for granted or the articles may be omitted. Magnetism is first studied, and then a relatively large space is devoted to frictional electricity.

Book III. is devoted to voltaic electricity, and fills rather more than one-half of the entire volume. At the end of each general subject will be found an excellent list of problems and exercises; and, as the author says, the book is educational, and not technical, in its plan and character. There are doubtless many courses of study into which it will fit with extremely satisfactory results.

Facts and Fictions of Mental Healing. By C. M. BARROWS. Boston, Carter & Karrick.

THE writer of this book states that he has not himself been engaged in mental healing, but has enjoyed exceptional facilities for studying its operations, and investigating a great number and variety of alleged cures. He is convinced by the results of many careful tests, that, if the mental treatment of disease be not all that its most sanguine advocates picture it, it is a powerful therapeutic agent when skilfully used, and based on a philosophy which has done the world incalculable good. In presenting the claims of this method of treatment, he has tried to make it apparent that there is a sound physical reason why well-directed thought should help the sick as much as medicine does; that a mental cure is nothing mysterious, but a natural event, which could not but take place under favorable circumstances. He disclaims any desire to compel the reader's assent, but his aim has been to awaken thought and deepen the reader's interest by fairly stating the evidence both for and against mental healing, and let him decide for himself. There are facts that prove the possibility of such cures beyond a peradventure. There are fictions, also, which must be abandoned if mental healing is to get and retain a hold upon the popular attention. It has a philosophy that will bear the intensest light that can be thrown upon it; and the subject needs only to be presented to educated, thoughtful persons in the right way, to appeal to their intelligence and convince their reason. Under the title 'Mental Healing' the author of this book includes 'spiritual healing,' 'prayer and faith-cure,' 'metaphysical healing,' 'Christian science,' and 'mind-cure.' In an introductory survey, the wonderful reputed cures are referred to of Dr. Newton, who, in Boston, in 1859, restored the sick to health by the laying-on of hands; of Elizabeth Mix, an ignorant colored woman of Connecticut, who performed many faith-cures; of Dorothea Trudel, who, in 1861, in Switzerland, worked remarkable cures of cases given over by physicians as utterly hopeless; and of others which want of space will not permit us to quote. The objection is often made to the various forms of mental healing, that there is no positive evidence that the cures are what they are claimed to be. Most of them, it is said, are performed by persons unskilled in the science of pathology, and not qualified to judge whether the subjects of their treatment really suffer from the