

fore us. Mr. Andrews's book on "Electrical Control" is a descriptive treatise on switch-gear. It possesses the same disadvantages as "Modern Electric Practice"; one cannot learn electrical practice from a book; there is only one school—the practical school—in which one can learn the principles and details of construction of apparatus in one-tenth of the time and ten times as thoroughly as by means of written descriptions. Practical men are apt to complain that text-books are valueless, as they are written by theorists; we have read a great many text-books of late written by practical men, and have come to the conclusion that it is only the theorist who should write them. He can describe the underlying principles which persist when the fashion of their application alters; the practical man describes the methods of his practice which even as he writes become antiquated.

We have reserved to the last the two volumes which head our list. Messrs. Poincaré and Vreeland's book deserves a place in any electrical library on account of its remarkably simple and lucid explanation of Maxwell's theory and of the work of Hertz, Lodge, and others which led to the development of Hertzian telegraphy. This is from the pen of M. Poincaré, translated by Mr. Vreeland, and forms the first part of the book. The second part, written by Mr. Vreeland, deals with the problems presented by the practice of wireless telegraphy, and the writer, by wisely confining himself to principles rather than details, has succeeded in writing a worthy sequel to M. Poincaré's work.

Mr. Russell's book is the first volume of a mathematical treatise on alternating currents. Alternating current machinery is growing so steadily in importance, and the mathematical theory in connection with it is so complex, that there is plenty of room for a thorough and comprehensive work of this kind. The present volume deals with the general theorems, and the second will be devoted to the more specific theory of alternating current machines and the transmission of power. MAURICE SOLOMON.

#### OUR BOOK SHELF.

*Vegetationsbilder.* Edited by Dr. G. Karsten and H. Schenck. Second series. Parts i.—viii. (Jena: Gustav Fischer, 1904.)

THE first series of the "Vegetationsbilder" met with well-merited success, and a second series has been appearing at intervals during the past year. Of the contributors to the first series, Drs. G. Karsten and E. Stahl have again supplied material, the former taking up a never-failing source of interest in the mangrove vegetation, whilst Dr. Stahl, in a double part, deals with the xerophytes and conifers of Mexico; amongst the latter the primeval *Taxodium* trees growing in the park of Chapultepec and the sombre cypresses on the road to the sacred mount of Amecameca bear the impress of historic antiquity. Another number, consisting of parts v. to vii., is devoted to the representation of mid-European forest trees, in accordance with an expressed desire for subjects taken from native sources. The photographs taken by Dr. L. Klein include typical specimens of conifers and beeches in the Schwarzwald and Switzerland, and others showing the changes wrought by browsing animals and devastating winds; many of them are excellent, notably a scene of wind-blown pines which have been entirely cleared of

branches except to leeward, but similar subjects are accessible to most botanists, and for this reason they do not possess the interest attaching to photographs from less accessible countries. The names of several new contributors are announced, among them Mr. E. Ule, whose character sketches of epiphytes in the Amazon region of Peru appear in the first part of this series. Of the Cactaceæ, which are widely spread through South America, a number of genera include epiphytic species, and in this region *Cereus* is predominant. *Cereus megalanthus*, a species which might be called a climbing epiphyte, is shown perched on a *Ficus* tree. Another curious condition is that of a flourishing bromeliad, *Streptocalyx angustifolius*, where, according to the writer, the exuberance of vegetation is so directly traceable to ants that he compares the phenomenon with the fungus gardens described a few years ago by Dr. A. Moeller. The last part of the series contains photographs taken in the Italian colony of Eritrea by Dr. Schweinfurth. *Hyphaene thebaica*, the doum palm, familiar on account of its branching habit, the sycamore fig, and an arboreal *Euphorbia* are among the characteristic specimens chosen to illustrate different regions in the country.

*Author and Printer. An Attempt to Codify the best Typographical Practices of the Present Day.* By F. Howard Collins. Pp. xv+408. (London: Henry Frowde, 1905.) Price 5s. net.

THE want of uniformity of spelling, capitalisation, punctuation, and use of italic type causes continual trouble to all who are responsible for the editorial supervision of scientific literature in any form. Some authors are more German than the Germans in their use of capitals, while others underline their manuscripts as freely as ladies do their correspondence. It is frequently difficult to decide questions of orthography, and to reduce individual practice to the consistent style, which is desirable in the columns of a periodical, but is not always maintained. Mr. Collins has prepared his book to help in this end, as a standard guide for "Authors, Editors, Printers, Correctors of the Press, Compositors, and Typists."

The volume contains more than twenty thousand separate entries of words arranged alphabetically. Included among these are abbreviations, disputed spellings, foreign words and phrases, divisions of words, and various rules and explanations which should prove of service to authors and editors. The proofs of the work have been read by many writers and others who can give authoritative opinions as to what is correct or customary, so that the book does not contain merely Mr. Collins's decisions, but a consensus of opinion edited by him.

*Highways and Byways in Derbyshire.* By J. B. Firth. With illustrations by Nelly Erichsen. (London: Macmillan and Co., Ltd.) Price 6s.

WITH this book as a guide, a tourist could spend many pleasant weeks in Derbyshire, and he would learn that every part of the county has literary and historical associations of great interest. But while the human side is so well represented, little notice is taken of nature, except from the æsthetic point of view. "Of natural history and geology," says the author, "there is frankly nothing in this book, of science nothing, of sport nothing."

Notwithstanding this confession of what we may be permitted to describe as sins of omission, notes and descriptions of places in which scientific readers are particularly interested occur here and there. For instance, a short account is given of the stone circle of Arborlow, the Stonehenge of the Midlands. The monument consists of a circular enclosure in which are a number of blocks of limestone, all lying flat on