

BOOK-REVIEWS.

Waterdale Researches; or, Fresh Light on Dynamic Action. By "WATERDALE." London, Chapman & Hall, 1892. 12mo. pp. vi., 293.

Cosmical Evolution: A New Theory of the Mechanism of Nature. By E. McLENNAN. Chicago, Donahue, Hennenberry, & Co., 1890. 12mo. 399 p. \$2.

In these volumes we have interesting illustrations of those methods of thought, and their results, which are characteristic of the attempts of amateurs in science to bring contributions of new thought and novel theories to the attention of scientific men. In the first-named, the anonymous author, writing under the *nom de plume* "Waterdale," presents his "discovery of a cause for gravity other than the hypothesis of attraction," and "other theorems as important." That an amateur should, especially in physical science, have the courage to propose to lead the connoisseur in the serious consideration of presumably crude notions—in these days of higher research, when even the professional expert finds himself entirely at a loss to find a way, even in following the specialist in other lines than his own, and entirely unable to propose original theories—speaks well for the confidence, if not for the discretion, of the ingenuous adventurer. We regret to say that we must coincide with the reviewer in *Nature* and the critic in *Science and Art*, who are apparently unable to find anything novel in what is right in the book, or anything right in what is novel. The idea that some other explanation of the action of forces on matter than that provisionally held, that of an inherent attractive "action at a distance," is as old as Greek philosophy, and remains, no doubt, an admitted probability among the best thinkers and most expert physicists and chemists of the time; but our author and Sir Isaac Newton are alike in the dark as to the real nature of the action noted. The proposed substitution of

another term for the well-understood and precisely-defined word *mass*, certainly affords no aid to either imagination or experience.

The author introduces his book into the United States "in the hope that there is there less clique prejudice among scientists than in England;" but we fear that, here as in Europe, the prejudice that the man who has made a life-work of the study of a subject and has acquired reputation through actual investigation and systematic research, through exact and productive measurement, is competent to act as the adviser of the laymen, and that the amateur with an unscientific imagination, unfamiliar even with the precision of scientific definition, can claim little consideration when thus out of his element, will be found unconquerable. This book is written in such vague and ill-defined language that its assertion that it presents "substantial evidence that energy pervades the ethereal fluid with which every sphere is surrounded" will hardly be taken as substantiated, however well established the fact may be; and its "law of induction" that "every substance, by exchange during pulsation of fine matter internally from one atom to another, sets up increased hydraulic force with fine matter, which force decreases inversely as the square of the distance through which the force has at any point reached" will hardly displace Newton's laws. Its author is not yet a sufficiently advanced student to be prepared to teach.

Of Mr. McLennan's book, it may at least be said that, although the author is an amateur in that lofty region of scientific philosophy into which he endeavors to find entrance, and has as yet never earned that right of prophecy which only comes to the man who becomes known as thoroughly familiar with existing human knowledge and the grandest of modern achievements, and who himself has done his part in promoting positive learning, he has certainly collated numerous facts of real interest and of possible, if not probable, importance in the relations to which he seeks to attach them. But his supposed original matter seems based upon imagination rather than ascertained fact; and we can find little

CALENDAR OF SOCIETIES.

Anthropological Society, Washington.

Dec. 20.—Symposium, Is Simplified Spelling Feasible? Discussion by F. A. March, A. R. Spofford, Wm. T. Harris, and Edwin Willits

Dec. 27.—Continuation of Symposium, Is Simplified Spelling Feasible? Discussion by Alexander Melville Bell, E. M. Gallaudet, John M. Gregory, Benj. E. Smith, Charles R. G. Scott, and W. B. Owen.

Jan. 3.—Close of the Symposium, Is Simplified Spelling Feasible as Proposed by the English and American Philological Societies? Discussion by Lester F. Ward, Wm. B. Powell, Benj. E. Smith, Charles R. G. Scott, E. T. Peters, John W. Powell, and Weston Flint. The discussion will be closed by A. R. Spofford and Wm. T. Harris.

Philosophical Society, Washington.

Jan. 7.—G. K. Gilbert, Illustrations of the Physical History of the Moon (lantern slides); T. C. Mendenhall, The Use of Planes and Knife-Edges in Pendulums.

Appalachian Mountain Club, Boston.

Jan. 11.—Warren Upham, Drumlins Near Boston.

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