

Absolute Measurements in Electricity and Magnetism. By ANDREW GRAY. 2d ed. London and New York, Macmillan. 16°. \$1.25.

THE first edition of this work was published in 1884. It consisted mainly of papers which had previously been contributed to the columns of *Nature* by Professor Gray, together with such alterations and additions as he deemed advisable to make in order to render the book more generally useful. While it made no pretensions to being a complete or exhaustive treatise on the subject, it gave, as far as its limits admitted, a clear account of the present system of absolute units of electrical and magnetic measurements, as well as of some methods and instruments by which the system may be applied in theory and in practice.

Something over a year ago the first volume of a more comprehensive treatise on the subject, by the same author and publishers, made its appearance, which, together with the second volume now in preparation, it was intended would supersede the original small work, then out of print. But Professor Gray found that a demand still existed for the original work, or for one similar to it; and the present edition, amplified and brought down to date, is the result. In it are incorporated a few parts of the larger work, which add much to its value.

Among the many additions to the present work may be mentioned a fuller account of the determination of the horizontal component of the earth's magnetic field; a description of Sir William Thomson's standard electrical instruments; a more complete treatment of the graduation of instruments; an extension of the theory of alternating machines, including Dr. Hopkinson's theory of the working of alternators in series and in parallel, and additional information regarding the measurements of activity, etc., in the circuits of alternators; and a chapter on the theory of dimensions of physical quantities. In the last-named chapter the author takes the view that the dimensions of the electric and magnetic inductive capacities should be left undetermined, and regarded as so related as to render the dimensions of every physical quantity the same in the electro-static as in the electro-magnetic system of units.

A Handbook of Florida. Part I. Atlantic Coast. By C. L. NORTON. New York, Longmans. 16°. 50 cents.

WE are so accustomed in this country to the most trashy kind of guide-books, that it is positively refreshing to find in this first part of what is to be a guide-book of the whole of Florida a book containing the very information a traveller needs, told in plain, straightforward English. Why the majority of American guide-books are so worthless is not so plain, unless it is that there is, or has been, but little demand for any, not to say the best. But it is certain that the plan of setting the ordinary reportorial talent at work in "writing up" our places of interest does not result in any very intelligible descriptions. Mr. Norton's book is a model, and can be commended to those interested, and to those likely to inflict guide-books of another stripe upon the travelling community.

The whole work is not published as yet, but the other parts are promised to be ready soon.

AMONG THE PUBLISHERS.

AT this time, when the works of Jean François Millet are being much discussed, readers will be interested in the announcement of two articles upon Millet, his companions and friends. The May *Scribner* will contain the first of these articles upon the artist's life at Barbizon. The author, Mr. T. H. Bartlett, who has been long a resident of Barbizon and an admirer and student of Millet's work, has incorporated many unpublished letters of Millet, and has furnished a great wealth of new material for illustrating the articles abundantly.

—The following extract is taken from a letter written from Cairo, Egypt, recently received from Mr. Henry M. Stanley, about his forthcoming book: "I believe the work will be in two volumes, from 450 to 500 pages each. God knows there is matter enough, but I would wish to deal very lightly with the

whole from Zanzibar to Yambuya, that the book might be of as high interest as the main theme. . . . I have six note-books filled with matter extremely interesting. Three long chapters are already written. I have a number of most interesting photographs of scenery, sketches of incidents, scenery, etc., and maps will be a prominent feature. I hope it will be ready in May."

—The ninth part of the current series of Edwards's "Butterflies of North America" (Boston, Houghton, Mifflin, & Co.) is fully up to the average standard. The first plate is given up to species of *Argynnis*, the females of two Western species being for the first time figured; while the early stages of our common Eastern *A. aphrodite* are admirably illustrated, every stage of the caterpillar having a colored figure. Only the earliest stage is given by Scudder. Edwards makes the interesting statement that protection is sought at pupation by constructing a tent,—a feature not before observed in this genus. The second plate illustrates the Southern *Satyrus pegala*, but only the butterfly; and the third, *Erebia Epipsodea* of the Rocky Mountains. Heretofore our knowledge of the transformations of any species of this genus, abundant in parts of Europe, has been most meagre, but here we are treated to a plate full of exquisite details, leaving nothing to be desired; and this when the insect had to be obtained from points thousands of miles away, and sent five hundred miles again to the artist. We are equally amazed at the enterprise and the success of the author. The chrysalis was found to pupate in an inclined position, head upward, in a clump of grass whose blades were fastened by a few threads, forming a rude kind of cocoon. The spines of the cremaster are without hooks. Illustrations of the transformations of other satyrids are promised in the present volume; and Mr. Edwards hopes to show that this group should be placed at the bottom, and not at the top, of the butterflies,—not an easy task when he has to ignore the fundamental structure of the final stage. This excellent iconography, which has appeared at intervals ever since 1868, surpasses in the excellence of its illustrations any heretofore attempted or now publishing; and it is strange indeed that the entomologists of Europe have not been spurred by its excellence to some sort of rivalry in illustrating the histories of their native species. They have nothing which can in any way approach it, and yet the cost of work of this class is far cheaper in Europe than with us. Mr. Edwards's enterprise should be well sustained.

—According to a circular lately issued by the Geological Survey of Arkansas, we learn that an act of the Legislature directs that the reports of the State Geological Survey, with the exception of certain specified copies, shall be sold by the secretary of state at the cost of printing and binding. The reports thus far issued, and their prices, are as follows: "Annual Report for 1888, Vol. I., Geology of Western Central Arkansas," by mail, one dollar; "Vol. II. South-west Arkansas," one dollar; "Vol. III. Coal," seventy-five cents. They may be had by addressing Hon. B. B. Chism, secretary of state, Little Rock, Ark. Reports are being prepared, and will be issued as soon as possible, on the following topics: 1. Kaolins, clays, and clay shales; 2. Complete report on the coal of the State; 3. Manganese; 4. Marbles and limestones; 5. Novaculites; 6. Crystalline rocks; 7. Washington County; 8. Crowley's Ridge; 9. Miscellaneous reports.

—Mention has been made from time to time of the topographical map of Massachusetts, the plan of joint work by the State and the United States Geological Survey, the Greylock map issued by the Appalachian Mountain Club, and the general map of the State of recent date, all having been described in our columns. There is now to be added a "map of the country about Boston," again issued by the Appalachian Club, a very welcome addition to our local cartographic material. It is printed from the stones that will be used in the final issue of the map for the State, the scale being 1:62,500, with brown contours every twenty feet. We are glad to note that it comes from the lithographic establishment of George S. Harris & Sons of Philadelphia; and from this it may be inferred that the number of houses capable of doing this sort of work in our country is increasing, and that the