borne by a spring clip. On compressing its projecting ends the clip no longer presses against the rod, but may be moved from side to side or revolved upon its axis. The electrodes are made of potter's clay, skilfully fired, and are unglazed except where they are grasped by the spring clip. They have the shape of a boot. By turning the leg of the boot in the clip the foot may be brought as near the foot of the neighboring electrode as may be desired. On placing the boot in normal saline solution the porous clay rapidly absorbs the indifferent liquid. The hollow leg of the boot is then half filled with saturated solution of zinc sulphate and

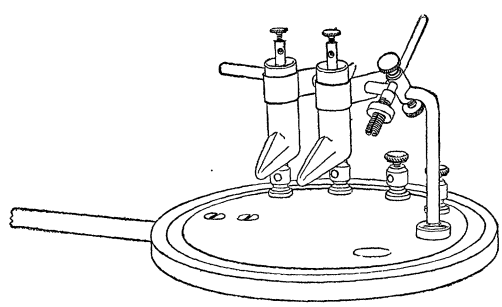

Fig. 4. The moist chamber, with spring clips and unpolarizable boot electrodes.

placed in the clip. A thick wire of amalgamated zinc, provided at one end with a hole in which a connecting wire may be fastened with a set-screw, is placed in the leg of the boot, and the other end of the connecting wire brought to one of the four binding posts shown in Fig. 4. These four posts are in electrical connection with four other posts beneath the porcelain plate. The boot electrodes are unpolarizable. They serve equally well for leading off the nerve or muscle current to the electrometer and for stimulation. They are easily cleaned and are far more convenient than the electrodes of glass and clay or plaster of Paris.

William Townsend Porter.
Harvard Medical School,
September 20, 1901.

ANDREW ELLICOTT DOUGLASS.

Andrew Ellicott Douglass died on September 30 in his eighty-second year. Anthropological science has thus lost a sincere friend. Mr. Douglass was born at West Point, New York, on November 18, 1819. He was the son of Major David Bates Douglass, and his mother was a daughter of Andrew Ellicott, professor of mathematics at West Point.

Mr. Douglass graduated from Kenyon College in 1838 and received the degree of A.M. in 1841. On completing his undergraduate course he engaged in business, being connected with the firm afterwards known as the Hazard Powder Company. In 1867 he became president of the company and retired nine years later from a successful business career.

Since 1876 Mr. Douglass devoted much of his time to the study of the Indian artifacts of the United States. He spent ten winters cruising along the Floridian coast, locating over fifty Indian mounds, many of which he excavated. For his study Mr. Douglass brought together an excellent library relating to American archeology and made a synoptical collection of over 22,000 specimens, which latter he presented to the American Museum of Natural History during the present year. This collection of implements is arranged in various special classes irrespective of geographical distribution with the purpose of solving the theory of their use. Mr. Douglass believed, however, in the geographical method of arrangement, but that both methods were necessary. A series of over a thousand hematite objects in the collection constitutes what is perhaps a unique feature. The collection is most carefully catalogued and cross-referenced as might be expected by those who knew Mr. Douglass's painstaking business method.

Mr. Douglass was a member of the Metropolitan Museum of Art and a patron of

the American Museum of Natural History. He was a fellow of the American Association for the Advancement of Science since 1885, and attended the Section of Anthropology. He was also enrolled as a member of the Linnæan Society, the Numismatic and Archeological Society, the Anthropological Society of Washington and the American Geographical Society, as well as being a life member of the Anthropological Society of Paris. At the time of his death he was the oldest living member of the American Ethnological Society.

Mr. Douglass's most recent contribution to the literature of anthropology appeared as Article X. in Vol. VIII. of the *Bulletin of the American Museum of Natural History*. This paper was entitled 'A Table of the Geographical Distribution of American Indian Relics in a Collection exhibited in the American Museum of Natural History, New York,' with explanatory text.

Although suffering from an infirmity of old age, Mr. Douglass was enthusiastic and cheerful to the last. He was a man of great patience, charitable to those who differed from him in opinion and of a gentle and courteous nature.

HARLAN I. SMITH.

SCIENTIFIC BOOKS.

SOME RECENT WORKS ON MECHANICS.

Theoretical Mechanics. An elementary textbook. By L. M. HOSKINS, Professor of Applied Mathematics in the Leland Stanford Junior University. Published by the author, Stanford University Bookstore, agent. 1900. 8vo. Pp. ix + 436.

The Principles of Mechanics. An elementary exposition, for students of physics. By FREDERICK SLATE, Professor of Physics in the University of California. Part I. New York, The Macmillan Company; London, Macmillan and Company, Limited. 1900. 12mo. Pp. x + 299.

Theoretical Mechanics. An elementary treatise. By W. WOOLSEY JOHNSON, Professor of Mathematics, U. S. Naval Academy. New York, John Wiley and Sons; London, Chapman and Hall, Limited. 1901. 12mo. Pp. xv + 424.

Ad. Wernickes Lehrbuch der Mechanik in elementarer Darstellung mit Anwendungen und Übungen aus den Gebieten der Physik und Technik. In zwei Teilen. Erster Teil, Mechanik fester Körper, von DR. ALEX. WERNICKE. Vierte völlig umgearbeitete Auflage. Erste Abteilung, Einleitung—Phoronomie—Lehre vom materiellen Punkte. 8vo. Pp. xv + 314. Zweiter Teil, Flüssigkeiten und Gase, von RICHARD VATER. Dritte völlig umgearbeitete Auflage. 8vo. Pp. xii + 374. Braunschweig, Friedrich Vieweg und Sohn. 1900.

Of the production of books, and g od books, on the science of mechanics the end is not yet in sight. The first three works on our list fall into the same class. Each of them purports to give an elementary exposition only of the science, each is a good specimen of book-making, and each is supplemented by an index. They differ from one another, however, in several important respects; and their characteristic differences reflect clearly, it would appear, the points of view of the authors. Thus, Professor Hoskins has in mind mainly the needs of the progressive and aggressive engineer, and seeks at the same time to avoid the narrower demands of specialists. Professor Slate looks at the subject as a physicist, with a keen appreciation of the broader aspects of the science and the critical examination its principles have received from recent writers like Maxwell, Mach and Love. Professor Johnson, on the other hand, with perhaps a deeper sense of the difficulties to be encountered by the student, is somewhat conservative, and follows more closely the methods which have proved so effective in the works of the great analysts.

Singularly enough, the definitions of mechanics given by these authors are very much alike, and all of them are somewhat old-fashioned. Hoskins says, "*Mechanics* is the science which treats of the motions of material bodies"; Slate says, "The science of Mechanics