In the case of nickel this was done in order to emphasize the difference between the atomic weights of cobalt and nickel, although in both values there may be possible deviations of ± 0.2. The true atomic weights of bismuth and tin are not correct to a certainty, to within 0.1. The value of hydrogen is 1.008, correct to within 0.001, but the approximation of 1.01 has been regarded as permissible for the requirements of practice, as it involves an error of only one-fifth of one per cent. The values given for the elements marked in the table with interrogation points are not necessarily exact within whole units of the atomic weights assigned.

Ferdinand G. Wiechmann.

JOHN CUMMINGS.

In the decease of Hon. John Cummings, of Woburn, Mass., on the 21st of December, there terminated a life which has been noteworthy for the encouragement it has given to the study and teaching of science. In the early part of his manhood days Mr. Cummings acquired a reputation for honorable dealing and for his success in the manufacture of leather in his native town of Woburn. To that town he was always loyal and generous, but his intelligence and his activity led him into larger circles until he became favorably known and his influence was felt in a large and populous community. He became acquainted with the late William B. Rogers, for whom he always cherished an admiration and a profound regard. He also knew Louis Agassiz, Jeffries Wyman, Asa Gray and others, and he soon became a student as well as a lover of nature. The offices of trust and of business responsibility which he filled make a long and notable list, but his large affairs did not prevent him from cultivatiug a love for science, and they aided him in multiplying his gifts to the cause of education. Through his attachment for William B. Rogers he was interested in the founding of the Massachusetts Institute of Technology, and he became one of its most substantial supporters, contributing to its financial needs and serving as its Treasurer for 17 years. It was through his generosity that the Boston Society of Natural History started its 'Teachers' School of Science,' and it was through his liberality that its botanical collection was developed and that it has received special care to the present day. He was actively and generously interested in the work of public instruction, and he extended his aid to the South after the close of the Civil War. In one instance he purchased a building and supplied teachers, urging them to work for the establishment of free public schools, and when this was about to be accomplished he donated the building to the cause. His gifts and his efforts were never calculated to attract attention to himself, and many of his good deeds were scarcely known even by his friends. He was one of a class of honorable and broad-minded business men who have been magnanimous in their support of science education, and who have found time to participate in the acquisition of knowledge, while aiding others to means for the prosecution of their studies or investigations.

Wm. H. Niles.

SCIENTIFIC BOOKS.

Matter, Energy, Force and Work. By Silas W. Holman, Professor (Emeritus) Massachusetts Institute of Technology. New York, The Macmillan Company.

Lovers of exact science are already indebted to Professor Holman for numerous important contributions to our knowledge of physics and especially for valuable suggestions as to the best treatment of the experimental solution of physical problems. His most pretentious work thus far is that on 'Precision of Measurements,' which is everywhere recognized as a standard and which ought to be in the hands of every