taught as a science to those who have no knowledge of geology. However much entertainment a boy or girl may get from dabbling in these subjects, for the common run of students they are university studies or studies for minds capable of doing university work.

JOHN C. BRANNER.

STANFORD UNIVERSITY, CALIFORNIA,
December 1, 1898.

The Story of Photography. By ALFRED T. STORY. The Library of Useful Stories. New York, D. Appleton & Co. 1898.

In this little book of one hundred and sixty-five pages, which can be carried in the pocket, the author has gathered together an epitome of the gradual development of photography from the early attempts of Schultze in 1727 to the present day. The experiments of Wedgwood and Davy, Niépce, Daguerre, Fox, Talbot and St. Victor are given at length. An account of the usual printing processes, of photo-block printing and reproduction processes for illustrating, are included; also the recent application of the X-ray and the kinetoscope. There is just enough of physics and optics to enable the lay reader to form a good idea of the principles on which photography is based. 'The Story of Photography' reads easily and pleasantly, and it is doubtful if elsewhere in so small a compass can be found as comprehensive a description of an art that has so wide and varied applications. It will undoubtedly form a desirable addition to many private libraries.

E. L.

SCIENTIFIC JOURNALS.

American Chemical Journal, December. 'Camphoric acid:' By W. A. Noyes. In this paper, which is a continuation of former reports, the methods of preparation and the derivatives of xylic acid and xylidene are described. 'On some relations among the hydrates of the metallic nitrates:' By J. H. Kastle. Attention is called to the amount of water of crystallization of the different nitrates and the explanation that can be given for the complex and basic compounds. 'Liquid ammonia as a solvent:' By E. C. Franklin and C. A. Kraus. The solubility of about 400 substances has been determined. 'Determination of the molecular rise in the boiling point of liquid ammonia:' By E. C. Franklin and C. A. Kraus. 'On the non-existence of four methenylphenylparatolyl amidines:' By H. L. Wheeler and T. B. Johnson. 'An active principle in millet hay:' By E. F. Ladd. 'Comparison of methods for estimating caffein:' By E. F. Ladd. 'Creatin and its separation:' By E. F. Ladd and P. B. Bottenfield. 'A double citrate of zirconium and ammonium:' By S. H. Harris.

J. ELLIOTT GILPIN.

THE *Revue des Sciences Médicales*, an excellent quarterly journal, established twenty-six years ago and edited by M. Hayem, has been compelled to suspend publication. *L'Éducation Mathématique* is a new journal edited from Paris by Professors J. Griess and H. Vuibert.

SOCIETIES AND ACADEMIES.

THE PHILOSOPHICAL SOCIETY OF WASHINGTON.

THE 491st meeting of the Society was held at the Cosmos Club, December 10th, at 8 p. m. Mr. W. H. Dall spoke on the proposed University of the United States, to establish which efforts are being made in pursuance of the ideas of Washington expressed in his will; and its possible relations to the scientific bureaus of the government.

He thought that the projectors of the enterprise should avoid any official connection with the government and that the institution should not attempt to duplicate the undergraduate work of existing colleges with which the city is already abundantly supplied. He then outlined a scheme for post-graduate work in connection with the scientific bureaus which he believed practicable and which would occupy a promising field at present unutilized, and which would also involve a minimum of expense, little legislation and no costly buildings. The paper as a whole will appear in the *American Naturalist*.

The second paper, on 'Two Remarkable Semidiurnal Periods,' was by Professor F. H. Bigelow, of the United States Weather Bureau. An account was given of the three components of the diurnal barometric wave, their distribution and variations in different latitudes, and of