

work may be regarded as a briefer presentation of the doctrines taught by Mill, and hence this digest will serve to a certain extent as a summary of Mill's work also.

*What Shall we Talk About?* New York, T. Nelson & Sons. 16°. \$1.

THIS is one of the old-style educational books, in which some parents or grand-parents entertain a party of children with wise and instructive stories and adventures. The present volume treats in this style a great variety of subjects referring to natural science. Descriptions of animal life, and anecdotes, come in for a large share of the space; but, besides, astronomical and physical phenomena are explained. We fear that some of the subjects treated, as well as the style of the book, are quite beyond the grasp of children as young as those for whom it is intended. The treatise on the physical properties of air on p. 139, to point out one instance, cannot be understood by children. The author neglects throughout the book to stimulate the power of observation, and gives theories instead. Besides, the cursory way in which phenomena having no connection whatever are treated without order and regularity must be rejected from an educational standpoint, as it promotes superficialness.

*A Text-Book of Algebra.* By W. S. ALDIS. Oxford, Clarendon Pr. 12°. \$1.90.

THE present work is in its general plan similar to that of Professor Chrystol, published in 1886. While containing many of the new methods and conceptions which render the latter work so valuable, Aldis's work is less exhaustive than Chrystol's, and does not depart so far from the ordinary text-books in general use as Chrystol's does. On this account it is better suited to teachers and students familiar with the rudiments of algebra. Indeed, the book is one which should be in the hands of every mathematical teacher in a high school, academy, or college in the country. It is only by the help of such works as the present one that mathematical education can be raised to a higher standard than it at present possesses.

The peculiar excellences of the book are found in the two opening chapters, which together occupy fifty-one pages. The book begins with a thorough discussion of arithmetical ideas. The process of counting leads to the idea of positive integers; thence addition, and its inverse operation subtraction, arise; next come multiplication, and its inverse division. By division we are led to the idea of fractions.

Chapter II. is devoted to algebraic notation. By subtraction we are led to the idea of negative numbers. The laws governing such numbers are fully discussed and carefully illustrated.

At the end of the second chapter is introduced a brief treatment of vector quantities: this is introduced simply to show the student that "algebra is something very much wider in its scope than a mere substitution of letters for numbers to aid in the solution of general arithmetical problems." These words are the author's own.

The remainder of the book differs little from the well-known text-book of Todhunter. The last chapter, on choice, might have been extended with advantage.

The book is marred by clumsy and faulty language. Many of the definitions lack precision, and many terms are introduced without definition. Some words are made to have two inconsistent meanings.

#### NOTES AND NEWS.

THE first number of the *Internationales Archiv für Ethnographie* has just been issued. The new journal is edited by J. D. E. Schmeltz, curator of the National Ethnographical Museum at Leyden. It is novel in plan, being exclusively devoted to the discussion of the ethnographic specimens collected among the various tribes and races. The journal will make accessible by illustrations the collections deposited in the various museums of the world. The text will contain papers in French, English, German, and Dutch, according to the choice of the author. The subjects of the papers will be the ethnographical results of expeditions, descriptions of newly discovered ethnographical objects, and studies of

collections. Objects the origin of which is doubtful will be figured and discussed. The plan of the journal includes also the study of prehistoric remains. As the material for ethnographical studies is so widely scattered in private and public collections, the establishment of such a journal must be welcomed by all students of the science of man. In order to make it the centre of such studies, a number of co-editors in various countries contribute to the journal. The first number shows that the journal will be of the greatest value. Three beautiful chromolithographic plates and a number of cuts illustrate the text. The plates show a large collection of New Guinea arrows, to illustrate a paper by Dr. L. Serrurier, in which the various forms of arrows of this large island are ably discussed, and the principal object of which is to show that only a large collection will enable us to determine the typical forms of ethnographical objects, and to draw reliable conclusions. The third plate is devoted to the mandaus, the sword of the Dayak, the manufacture and ornaments of which are described in detail by S. W. Tromp. This paper is illustrated by a series of cuts showing the ornaments and various forms of handles. The rest of the paper is taken up by notes on recent additions to collections, a bibliographical review, and a discussion of objects of doubtful origin. The periodical is to appear bimonthly, and each number will contain about twenty-four pages text in quarto, and three chromolithographs. The journal is published by O. W. M. Trap, Leyden.

— The most interesting feature of the twenty-first report of the trustees of the Peabody Museum is Professor Putnam's report on the purchase of the Serpent Mound in Adams County, O., for which a number of ladies of Boston subscribed a sum of nearly six thousand dollars, and on the steps taken to secure the preservation of the interesting monument. Eight weeks were given to the careful restoration of the great earthwork, erecting a fence about it, so that only persons on foot can enter the enclosure. The land was cleared of brush and briers, and the mound was sown with bluegrass-seed. A road half a mile long was made, extending to a grove of maples in the south-eastern corner of the grounds, in which are two springs. This grove has also been enclosed by a fence. A substantial spring-house of stone has been built, and trees are now being planted along the road. A gravel path has been laid out from the spring to the serpent, and various other improvements have been made. It is highly gratifying that Professor Putnam has succeeded in preserving this remarkable monument, and the liberal action of the subscribers will undoubtedly be a material help to future endeavors to preserve ancient monuments in the United States. Several changes have taken place in the board of trustees of the museum: Col. Theodore Lyman resigned his trusteeship, and Mr. Samuel H. Scudder was elected his successor. George F. Hoar, who resigned the presidency of the American Antiquarian Society, was succeeded by Stephen Salisbury. Professor Putnam became trustee as president of the Boston Society of Natural History. Professor Gray was succeeded by Professor Lovering, president of the American Academy of Arts and Sciences.

— A new thermometer for measuring the temperature of the air has been constructed by R. Assmann. In order to protect it from the influences of radiation and other sources of heat, he inserts the bulb of the thermometer in a metal tube which is open at its lower end. An aspirator is fastened to the tube near the bulb, and a continuous current of air of about seven feet velocity passes the latter. Thus it assumes the true temperature of the air. The tube is made of highly polished nickel-plated brass in order to protect it from radiation. Experiments show that this thermometer gives entire satisfaction. Two instruments, one of which was exposed to the sun in July while the other was shadowed, showed the same temperature. A dry and a wet thermometer being inserted in the tube, it serves as hygrometer in the same way as the ordinary thermometer. Undoubtedly the device is superior to the arrangement of thermometer now in general use.

— Prof. David S. Martin is about to publish the large-scale geological map of the environs of New York City, which he exhibited at the recent meeting of the American Association for the Advancement of Science. The object is to furnish a map in which all those important geological features which were not before brought together in one representation, can be clearly seen by an audience or