

proverbs, sayings and saws about the child in its various relations to the family; and the volume opens with three chapters replete with attractive examples of the child's tribute to its mother,—delightful exemplifications of the deep and holy impress which maternal love has left on the soul of the race.

Childhood is spoken of as the golden age of life, 'a moment of God,' 'a time of June,' its days as 'halcyon days,' a 'heaven on earth,' a belief, says the sanguine author, 'shared alike by primitive, savage and nineteenth century philosopher.' We wish, indeed, this were so; but, alas! our own observation is that out of a dozen persons asked, ten will tell you that the period of their childhood was by no means the happiest portion of their lives. In sad truth, the golden age of childhood is as much a popular delusion as the golden age of the world. We think of it as such merely because we forget the numberless little miseries which we then endured, and which at the time were grave and great to us.

But apart from this question of fact, about which the author's opinion in no wise injures the excellence of his labors, the thorough sympathy he has with children, their thoughts and doings, beautifies his pages and renders them charming reading as well as sovereignly instructive. He is no gleaner of dry stubble, but delights in the literary and poetic sides of his inquiry, and brings under contribution the bards, the dramatists and the moralists of the world. His reading has been wide, and not at second-hand, or through translations, but in the originals of a dozen tongues; as we might expect from one who has already made his mark as a comparative linguist.

A most useful bibliography of 549 titles and two ample indexes close his volume, and add vastly to its value to the serious student of folk-lore.

D. G. BRINTON.

*Practical Inorganic Chemistry.* By G. S. TURPIN. London and New York, Macmillan & Co. 1895. Pp. 158+viii.

This little book is evidently intended for the use of pupils in secondary schools. The first four chapters contain directions for weighing and measuring solids and liquids, for determin-

ing specific gravity, for measuring gases and observing their behavior under changes of temperature and pressure. The study of chemical action begins with an examination of the effect of air upon different metals. In these experiments the students find out that the balance is of very great service in interpreting the nature of chemical changes. The results of one experiment suggest the making of another experiment and so the work goes on step by step until the pupil finds it possible to separate the active and inactive constituents of the air and this leads him naturally to a determination of its volumetric composition. Oxygen and nitrogen are then studied more thoroughly and a quantitative analysis is made of potassium chlorate. Water and hydrogen are examined in a similarly thorough manner, and in connection with the latter the equivalent weights of a number of the metals are determined.

Only a few of the more common nonmetallic elements are dealt with. The chief merit of the book lies in this, that due attention is everywhere given to the quantitative side of chemical phenomena. It is shown how with very simple apparatus beginners can determine the relative quantities of substances that interact, and can acquire a knowledge of important laws of the science. The only criticism that might be made is that the apparatus and methods used in some of the quantitative work, as, for instance, in measuring gases by the volume of water displaced, are so very simple that by means of them only roughly approximate results can be obtained. An improvement in this direction would be made by collecting the gases in graduated gas measuring tubes, and correcting the gas volumes for the tension of aqueous vapor.

Taken altogether, the course of laboratory work here given is a most excellent one. It is refreshing to meet with a laboratory manual that is not simply a collection of qualitative tests for substances. This little book can be heartily recommended to all who are engaged in teaching elementary chemistry.

E. H. KEISER.

*Chemical Experiments—General and Analytical.* By R. P. WILLIAMS. Boston, Ginn & Co. 1895.