

*Practical Measurements.* By A. W. SIDDONS and A. VASSALL. Cambridge, The University Press, 1910. xiv + 60 pp.

THE definite purpose of this little note-book is to furnish for the boys at Harrow a series of elementary experiments in measuring and weighing, conforming with the recommendations embodied in the recent report on "The correlation of mathematical and science teaching" drawn up by a joint committee of the mathematics and science teachers of England.

On the mathematical side the experiments deal with the measurements, correct to three significant figures, and the necessary computations — of lengths, areas, and volumes — a practical checking up on the theorems of geometry.

The experiments emphasizing the side of physics deal with the weighing of liquids and solids and the determination of their specific gravities. Experiments with the hydrometer, barometer, pendulum, the U tube, and on Boyle's law are included. In the appendix experiments with the vernier, micrometer screw-gauge, and spherometer are added.

The methods used throughout the book are its strongest feature. Boys thoroughly grounded in the fundamental principles emphasized throughout will be able to do their future work with greater efficiency. Accuracy in estimating, measuring, computing, laying out to scale, and orderly arrangement are required. Concrete results, which should check up with theory, are required throughout. The practice of requiring such definite results, correct to a certain number of significant figures, is well worth while.

ERNEST W. PONZER.

*Azimuth.* By G. L. HOSMER. New York, John Wiley and Sons, 1909. v + 73 pp.

IN ordinary engineering practice the determination of the azimuth of some line of a survey by astronomical means is not necessary; and in the cases where it is necessary, or at least advisable, the determination is likely to be a serious matter for many a practical surveyor—not because of any inherent difficulty in making or reducing the observations with all the accuracy that is needed in the field, but because the available methods are scattered in books which stay at home. Hence the utility of Hosmer's *Azimuth*, wherein are collected and explained with all simplicity various practicable field methods of fixing the true bearing of a line to minutes (or even to within