

SOME NEW APPARATUS.

BY

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The constant activity of the laboratory workshop during the two years since its first productions were described¹ has resulted in over fifty new pieces of apparatus for the purposes of research and demonstration. Of these I have selected for description only a few whose fundamental ideas may be serviceable to the investigator.

Pendulum chronoscope.

The spark method previously described² has reduced the labor of making records of reaction-time to a point lower than obtainable by any other method recording accurately in thousandths of a second. The apparatus, however, is not portable. We set ourselves, therefore, to produce an apparatus fulfilling the following requirements: 1, accuracy to the thousandth of a second; 2, ease in transport; 3, readiness of setting up; 4, quickness in reading; 5, availability for many kinds of experiments on time. These requirements were met after eight months of labor by the first pendulum-chronoscope. Two chronoscopes were built later, but the model remained essentially the same.

The pendulum-chronoscope contains in the first place an accurately adjusted double-bob pendulum. This pendulum is held by a catch at the right hand side. In making an experiment this catch is pressed noiselessly and the pendulum starts its swing. It soon reaches a light pointer held in position by a delicate spring and carries it along. At exactly the moment it takes up the pointer it presses a delicate catch which releases the mechanism beneath the base. This mechanism is adjusted to do several things; one of them is to drop a shutter which covers an opening in a metal plate at the back of the chronoscope. The person experimented upon is seated at the back; owing to the curtain, he can see nothing but the metal plate

¹ SCRIPTURE, *Some new apparatus*, Stud. Yale Psych. Lab., 1892-93 I 97.

² BLISS, *Investigations in reaction-time and attention*, Stud. Yale Psych. Lab., 1892-93