

SOME NEW FORMS OF PHYSIOLOGICAL APPARATUS.

BY J. F. WOOLSEY.

All branches of scientific work require special apparatus to fulfill their particular needs. The apparatus here shown was devised to meet certain requirements for adjustable apparatus, for use with the kymograph, in recording physiological experiments. It is apparently desirable in this work to have as many adjustments to the apparatus as possible, the solidity of the apparatus being unimpaired.

ADJUSTABLE STAND.

This stand consists of a base $5\frac{1}{2}$ "x8"x1"; a standard 18" high and 1" in diameter, to which is attached, by means of arms, the swinging rod upon which is supported, by means of universal clamps, the various forms of apparatus used in making the records upon the smoked drum of the kymograph. The entire stand weighs 15 pounds.

The swinging portion of the apparatus deserves special notice. Figure 2 of the mechanical parts serves as the top arm, and the upper plate of the lower arm. It is $3\frac{1}{2}$ " long and $1\frac{5}{8}$ " wide at the broadest part. Figure 1 is the lower plate of the lower arm, and is proportional in size to the upper plate. Figures 3 and 4 show the entire mechanism. In Figure 3, (a) is the coarse adjustment, and by releasing the set-screw the swinging rod (d) can be revolved about the standard (c); the desired pressure of the stylus against the drum of the kymograph is obtained by the manipulation of the more finely-threaded screw (b). In Figure 4, (b) represents the fine adjusting screw, and (f) the strong coiled spring, which operates the swinging rod attached to (g), as shown in Figure 3. The swinging rod is 14" long.

The University of Pennsylvania uses adjustable stands, devised and made by themselves, but the entire movement of the swinging rod is obtained from the bottom, and the mechanism is entirely different from

the above. Credit is due Mr. R. P. Hobbs for his assistance in devising the mechanical parts.

FROG TABLES.

These tables are modifications of those used in the University of Pennsylvania, and meet certain requirements better. They consist, Figure 6, of a brass plate $4\frac{1}{2}'' \times 8''$, to which is glued a single piece of cork $\frac{1}{2}''$ thick, and the adjustable arm or support. The adjustable part consists of a brass block (c) which slides upon the square rod (e), the set-screw (b), and has a horizontal play of $4\frac{1}{2}''$. The set-screw (a) allows of a further circular movement of the plate, and the square supporting arm is held to the stand by a universal clamp.

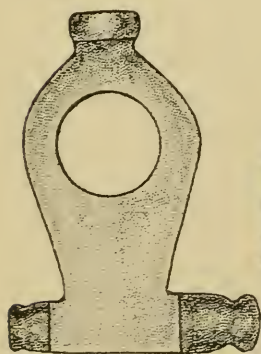


Fig-1

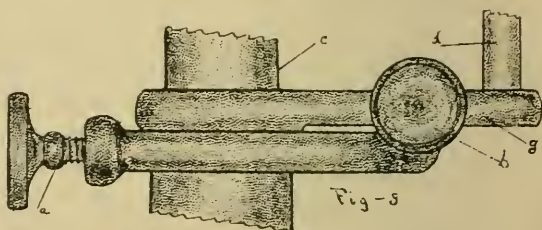


Fig-5

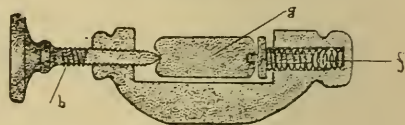


Fig-4

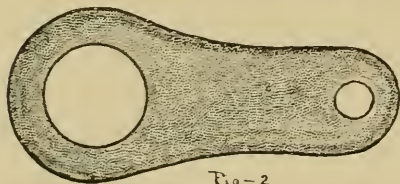


Fig-2

Mechanical Parts
of

Adjustable Stand.

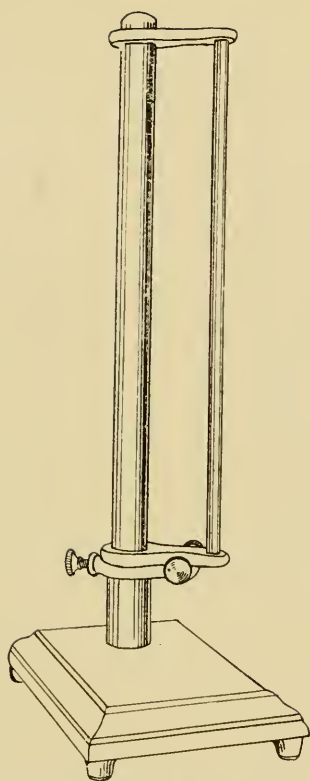


Fig. 5. Adjustable Stand.

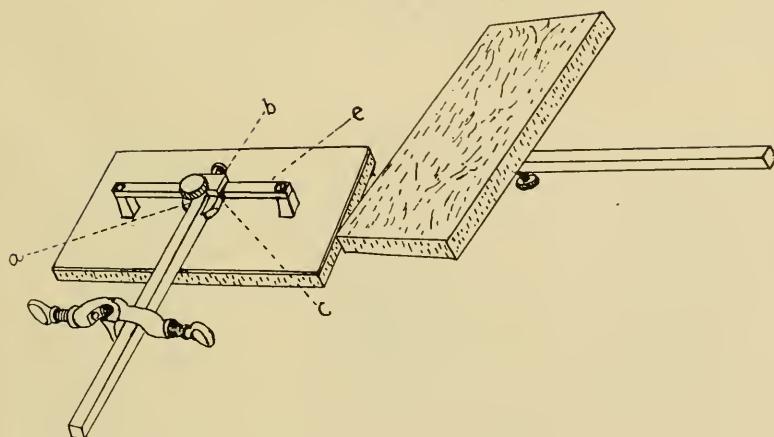


Fig. 6. Frog Tables.

