SCIENTIFIC APPARATUS AND LABORATORY METHODS

IMPROVEMENTS IN THE HARVARD SPRING KYMOGRAPH

THE Harvard kymograph, which is used so generally in physiology laboratories, ordinarily requires frequent adjustments which can be avoided to a large extent by a few minor alterations.

Constant tension of spring clip for drum: Cut off three eighths of an inch from the free end of the clip (A, Fig. 1). Bend clip downward 100° one fourth

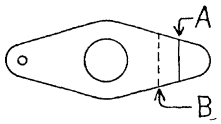

Fig. 1

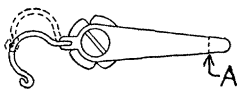

Fig. 2

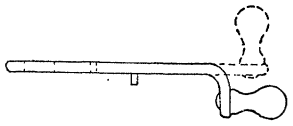

Fig. 3

inch from the cut end (B, Fig. 1). This allows the free end of the clip to move about three sixteenths of an inch when mounted on the drum. Tension, once adjusted, remains constant.

Brake: Bend the end of the brake arm one fourth inch from the end downward 90° (A, Fig. 2). Adjust brake shoe so that braking occurs when arm is moved to the right as far as possible. Brakes so adjusted require no attention for years.

Winding lever: Bend the winding lever downward 90° one half inch from the free end (Fig. 3). This places knob in a horizontal position on the side of the kymograph and prevents interference with the rotating vane.

HUGH B. McGLADE
THE OHIO STATE UNIVERSITY

A PLASTIC COVER GLASS, ISOBUTYL METHACRYLATE

EITHER Canada balsam or gum damar, long used media for cementing covers over tissue sections, have the objection of taking days to harden sufficiently to permit cleaning and may turn yellow in time.

Nevillite, or Clarite, as recently suggested by the General Biological Company, dries rapidly and is practically without color.

We have recently found that another plastic, isobutyl methacrylate, dissolved in benzol or in xylol is a water-white solution, dries hard in from five to ten minutes and results in a mounted preparation that is somewhat more brilliant when viewed under the microscope than are specimens mounted in Clarite. The refractive index is given as 1.477, almost exactly that of glass.

Isobutyl methacrylate may also be used to replace the cover glass. A stained section on a slide when dipped into a thin solution of this plastic, withdrawn carefully so that the solution drains evenly from the slide, will be so coated as to protect it with apparently the same adequacy as does the usual cover glass. The coating on the back of the slide may be allowed to remain or can be removed with a cloth moistened with benzol or xylol.

The thinness of this coat will interfere less with the transmission of light than does a cover glass. Immersion oil does not dissolve it and the film can be washed in alcohol and polished with a paper handkerchief. The film will scratch, but these scratches can be removed by dipping the slide into the solution of the plastic.

This film can be written on with ordinary ink. Or a label can be written directly on the glass and then dipped, for protection, into isobutyl methacrylate. The quick drying characterisics of this new solution may make it useful in filling up deep well mounts. The crystals sell for about one dollar a pound. It was originated by the du Pont Company.

HAROLD C. O'BRIEN
ROBERT T. HANCE
DUQUESNE UNIVERSITY

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