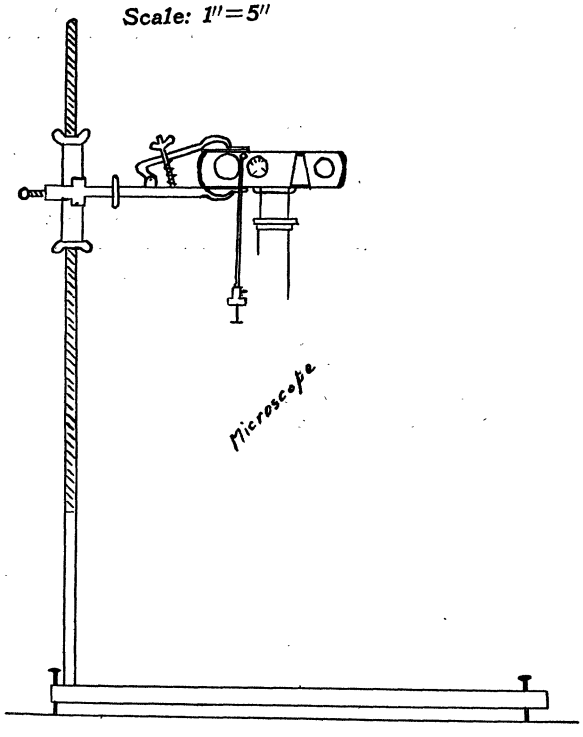
SCIENTIFIC APPARATUS AND LABORATORY METHODS

A SIMPLE APPARATUS FOR TAKING PHOTOMICROGRAPHS

WHEN making photomicrographs much time is involved in setting up the apparatus preliminary to making the exposures. Hence it is often inconvenient to take just two or three pictures. The writer has devised a stand for supporting a small camera over a microscope. The camera used is a small one made by a well-known German manufacturer of microscopes and other optical equipment. It uses standard size motion picture film and has a fast lens that enables the operator to take photomicrographs with very short exposures. The support here described



permits one to set up the apparatus in about two minutes.

The stand for supporting the camera over the microscope consists of a steel base, 15 inches long by 6 inches wide, drilled and threaded at each corner to take a thumb-screw. These are used for leveling. At one end, midway between the two thumb screws, an upright from an ordinary laboratory ring-stand is fitted into a threaded hole in the base. This upright is threaded from the top to within about 5 inches of the bottom. A wing-nut is screwed on to the upright, a loose fitting three-inch section of brass tubing is placed over the upright and on top of the first nut, then another wing-nut is screwed down on to the brass sleeve. One end of a short burette clamp is attached to the middle of the sleeve and the camera secured at the other end, lens down. By loosening the lower wing-nut and tightening the upper, the camera may be lowered and clamped firmly at any desired elevation.

The microscope is placed directly under the camera and the latter lowered until the rim of the metal mounting of the lens is in contact with the mounting of the eyepiece of the microscope. With the particular camera and petrographic microscope used, the ocular of the microscope fits snugly within the raised edge of the camera lens mounting.

Since the human eye at rest is focused at infinity, it is unnecessary to focus on the object with the camera; the camera is simply raised a bit, swung aside, the microscope focused on the object to be photographed, the focusing screw of the camera set at infinity, the lens opening set at f.3.5, and the whole swung back and lowered into place over the microscope. Of course the length of exposure will have to be determined according to existing conditions.

The accompanying figure is self-explanatory.

MARCELLUS H. STOW
WASHINGTON AND LEE UNIVEPRSITY

A METHOD FOR THE PRESERVATION OF BOOK BINDINGS

IN an earlier communication[1] a method of preserving manuscripts was discussed. In the present paper is described a continuation of the work to the protection of book bindings, etc. The dressing of the British Museum employs beeswax dissolved in hexane. We have used a wax which has advantages over beeswax and a solvent which is cheaper and more readily obtainable.

A solvent is made of equal volumes of carbon tetrachloride and benzene and kept in a tightly stoppered bottle to prevent evaporation. The carbon tetrachloride makes the solution less dangerous in the presence of fire. However, the solution should be kept away from flame.

To one liter of the solvent mixture is added 100 grams of Halowax No. HXRD–2–25. The wax is allowed to dissolve in the solvent. Halowax is a commercial product with a melting point of 252° F. It is a flexible material, and the melting point is far above the highest temperature reached during summer

[1] Sanders and Cameron, SCIENCE, 74: 1924, November 13, 1931.