

Aedes aegypti hosts for long periods under these conditions. This is well indicated by Figures 1 and 2 which show photomicrographs of malarial

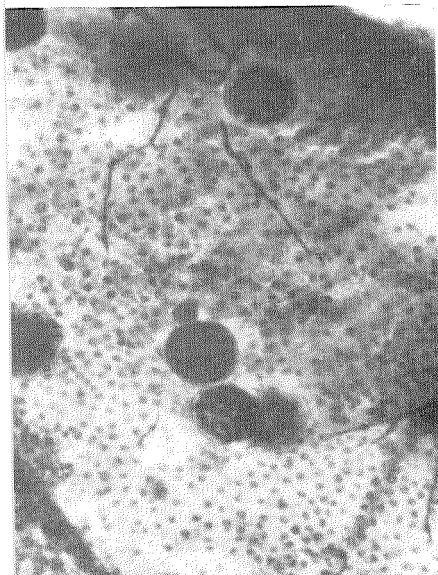


FIG. 2.—Oocyst detail at higher magnification.

150 Medical Audio Visual Dept., Walter Reed Army Inst. of Research, Washington 12, D. C.

oocysts from frozen material. We have found it easier to dissect the gut from specimens preserved by freezing than from freshly killed mosquitoes. Salivary glands are slightly more difficult to remove and the sporozoites have a tendency to adhere to the cells of the salivary glands. However, it has always been possible to demonstrate their presence in infected mosquitoes. In addition to *Aedes aegypti*, we have successfully stored *Plasmodium gallinaceum* infected *Aedes taeniorhynchus*, *Anopheles quadrimaculatus* and *Culex pipiens pallens* at -20°C .

With the use of this convenient procedure malaria workers should be able to collect and process many times the volume of material now being handled.

Literature Cited

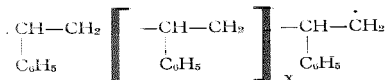
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APPARATUS FOR THE TRIMMING OF FOAMED POLYSTYRENE FOR THE USE IN INSECT COLLECTIONS

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Small insects, including mosquitoes are often mounted either on angular pieces of the pith of *Sambucus nigra* or *Sambucus ebulus* or on stiff paper by the help of so called "minuten" needles. In an earlier paper [Trpiš 1962] we have suggested the use of a plastic material, foamed polystyrene



for the production of these supports, this material being in fairly general use.

The properties of fine porous polystyrene are similar to those of the pith of *Sambucus nigra* and *Sambucus ebulus*, but it is much whiter than the natural product. The whiteness of foamed polystyrene blocks facilitates microscopic observation of insects mounted on them. The esthetic appearance of supports made of this material is also not to be underestimated.

Foamed polystyrene is marketed usually in plates of the size of 50 x 48 x 5 cm. As a consequence of the properties inherent in foamed polystyrene, the manufacture of small blocks from it is difficult. During manual cutting a warping and permanent deformation of the material often takes place, resulting in irregular shapes and untidy blocks, as well as in a very low rate of production. These problems of polystyrene block manufacture are solved by cutting apparatus, as described and figured in this paper.

DESCRIPTION OF THE APPARATUS. The apparatus consists of three main parts: (1) The base plate; (2) the guiding bars; (3) the movable cutting head. For details see Figures 1 and 3.

1. *The base plate.* It is made of a plastic material—e.g., Pertinax. As the apparatus is relatively light, the base plate is provided with four holes for screwing it to the table. The surface of the base plate is covered by an aluminium plate of the size of 162 x 288 mm provided with a groove 1 mm wide in which the cutting knife slides. Under the guiding bars a slide gauge is situated, by the help of which the width of the cut strips is regulated. The rectangularity of the strips is secured by an elevated metal guiding strip fastened to the back side of the apparatus.

2. *The guiding bars.* The guiding bars are mounted on the base plate by the help of two metal supports. The bars serve for the guidance of the cutting head.

3. *The movable cutting head.* On the right side of the body of the cutting head a blade

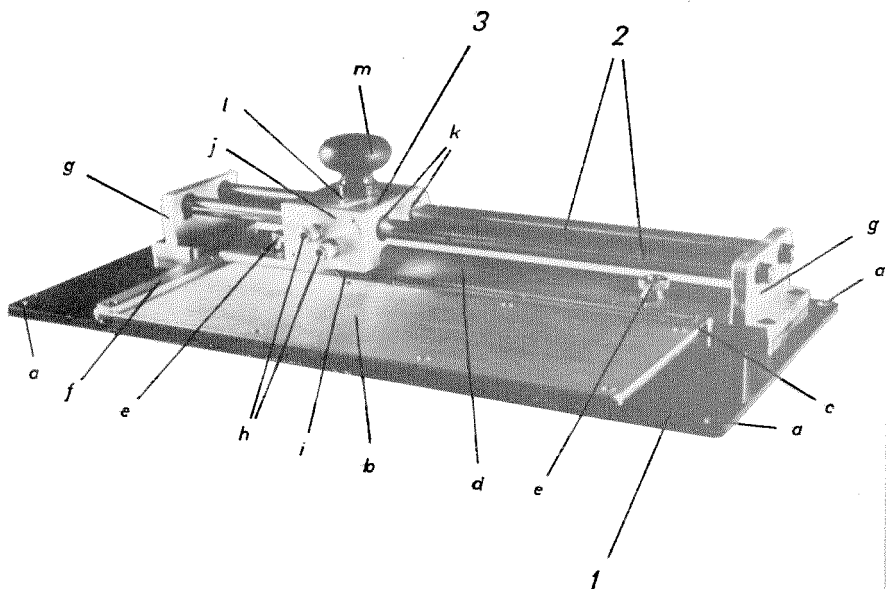


Fig. 1.—General view of the apparatus with the designation of individual parts

Main parts: 1—base plate, 2—guiding bars, 3—movable cutting head.

Details: a—holes for the screwing of the apparatus to the table, b—aluminium plate, c—groove in which the knife slides, d—slide gauge, e—nuts for the clamping of the slide gauge, f—metal guiding strip, g—supports of the guiding bars, h—nuts for the clamping of the blade, i—blade, j—metal plate for covering the blade, k—brass bearings of the cutting head, l—lubricating points, m—handle of the cutting head.

having a slope of 50° to the base plate is clamped by two nuts. No special knife is needed for the cutting tool, a safety razor blade serving very well for this purpose. See Figure. The blade is fixed on two metal pins provided with threads; then it is covered with a metal plate and clamped by the nuts. The body of the cutting head is provided with two apertures with brass bearing inner pieces by which the smooth movement of the cutting head on the guiding bars is secured. For the lubricating of the bearings, in the upper part of the cutting head two holes of a diameter of 2 mm are situated perpendicular to the guiding bars. On the upper part of the movable cutting head a handle is fixed by the help of which the cutting head is put into motion.

OPERATION OF THE APPARATUS. Thick plates of polystyrene are cut (e.g. in a joiners' shop) to sheets 5 mm thick, which are further cut manually with a sharp knife to plates, up to 26.5 cm wide. These plates are put into the apparatus and prior to cutting the width of the strips to be cut (e.g. 15 mm) is set by the help of the slide

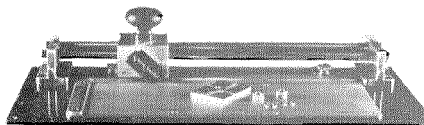


Fig. 2.—General view of the apparatus with the knife uncovered

gauge. The cutting head has to be in the front position, away from the operator, prior to cutting. The polystyrene plate is held down by the right hand, while the left hand holds the handle of the cutting tool. By a regular movement toward the operator a strip of the material is cut. Practically no resistance is felt during the cutting operation and the edges of the strips are ideally smooth. After the cutting of the desired number of 1 mm strips, the apparatus is set for the cutting of 5 mm strips, 5–6 15 mm strips are put into the apparatus perpendicularly to the former d

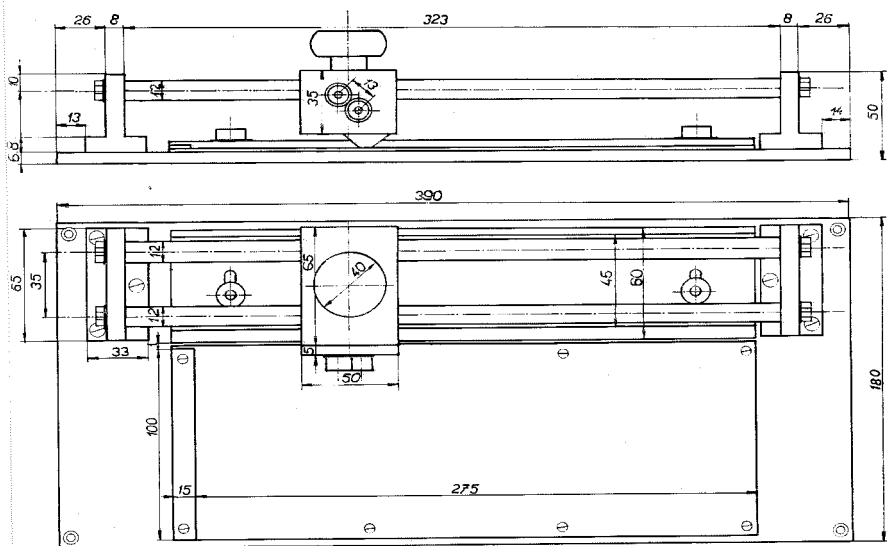


FIG. 3.—Technical draft serving for constructing the apparatus [the numbers give the dimensions in mm]

A—side elevation, B—top view.

operation of cutting and they are cut again. By this operation small blocks of the dimensions of 5 x 5 x 5 mm are obtained.

APPLICATION OF THE APPARATUS. According to our experiences with the apparatus described, we feel that the making of small blocks of foamed polystyrene will be facilitated not only for purposes of study, but also for natural science museums and exhibitions.

Acknowledgment. I am indebted to Mr. A. Kubal, technician of the Czechoslovak state film company for the construction of the apparatus.

Reference

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THE OCCURRENCE OF *Orthopodomyia alba* BAKER IN NEW MEXICO

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On September 9, 1959, 22 larvae (1st and 2nd instars) of the species *Orthopodomyia alba* Baker were collected from a tree hole in a cottonwood tree, *Populus deltoides*, about three miles north of Alcalde, New Mexico. The area is located in the northern Rio Grande Valley of New Mexico at an elevation of 5700 feet above sea level. The average annual precipitation in the vicinity is

11.66 inches, and the mean monthly temperature is 51.7° F.

The tree hole from which the larvae were collected was about 2 inches in diameter and 8 inches in depth. The water in the tree hole was very dark brown and was almost "thick" with organic matter. The water was placed in paper cups covered with cheesecloth, and kept at room