

in the Galapagos group, or five according to the former finer division of Ridgway (1894). One is peculiar to Chatham Island, while the other exists on nine islands. The isolated Juan Fernandez has a peculiar species (*Spizitornis fernandezianus* Philippi) of a continental genus. The Falkland Islands possess a *Muscisaxicola* (*M. macloviana* Garnot) which is only subspecifically distinct from the mainland representative; and the same sort of thing occurs in the Island of Fernando Noronha, off Brazil, the *Elaenia* (*E. ridleyana* Sharpe) obtained there being only a large insular race of a continental species. The genus *Elaenia* is rich in peculiar insular types in the West Indies, and has one on the Tres Marias Islands, off Mexico. *Myiarchus* is similarly rich in West Indian endemics, while the genus *Tolmarchus* is confined to the West Indies, with special forms in the Bahamas, Cuba, Cayman Islands, Jamaica, Porto Rico and Haiti. The monotypic genus *Hylonax* (*H. validus* Cabanis) is restricted to Jamaica.

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SCIENTIFIC APPARATUS AND LABORATORY METHODS

A SIMPLE DEVICE USEFUL FOR DRAWING SYMMETRICAL OBJECTS

THE method commonly employed in drawing a bilaterally symmetrical object such as an insect is to make a drawing of one half of the object, either free-hand or by use of a camera lucida, trace this on semi-transparent paper, and then retrace from the latter to outline the other half of the drawing. For several years I have used the device described below and have found it much more satisfactory than the tracing-paper method. Inquiry among entomologists, to whom it should be especially useful, has yet revealed no one familiar with it.

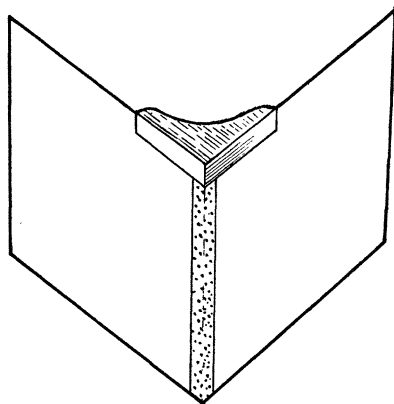


FIG. 1

The device consists essentially of two rectangular pieces of glass. A convenient form may be made by removing the emulsion from two 5" x 7" photographic plates and fastening these together in planes at right angles. They can be held rigidly in position by placing a narrow strip of adhesive plaster or binding tape along the angle where the edges meet and gluing across the upper corner a portion of the lid of a small pasteboard box, as shown in the accompanying figure.

Draw one half of the object and make a straight line constituting the median line of the final drawing. Then place one section of the glass upon this line, look diagonally through the glass from above the part drawn and outline the image on the opposite side.

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AN AIR-TIGHT STOPPER FOR BOTTLES CONTAINING VOLATILE LIQUIDS OR FOR LARGE MARIOTTE APPARATUS

THE difficulties involved in securing air-tight seals with rubber stoppers are a matter of common experience to those working in the laboratory. This is particularly true where large Mariotte apparatus are employed or where volatile liquids are enclosed in bottles from which corks may be easily blown out. An expansible stopper is shown in the illustration which overcomes some of the uncertainties frequently accompanying the use of an ordinary stopper. The stopper was improvised for use on a metal Mariotte apparatus supplying a shallow evaporation tank. It was found to be so well adapted to the purpose that it has seemed desirable that some note should be made of it.

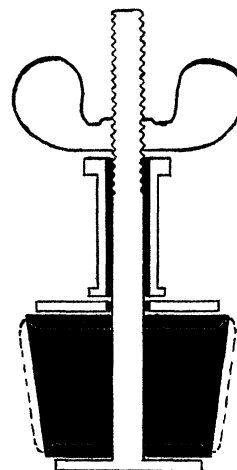


FIG. 1