## PERMANENT PRESERVATION OF INSECTS.

The following section contains a few general hints on the permanent preservation of insects, which may prove of value to school teachers or to those desirous of forming a private collection.

**Relaxing.**—Insects dry out very rapidly and become hard and brittle so that if stored for any length of time by any of the methods mentioned in the previous section it will be necessary to relax them before they can be further handled. This is done by placing them on moist sand under a bell glass or in a large closed tin, the bottom of which contains moist cork, peat or felt; in twenty-four hours—or less if the insects are small—they are as soft as when first caught Care should be taken when relaxing Lepideptera to prevent drops of necesture forming on the wings at they frequently cause unsightly spots especially when blue or green colours predominate. In the case of specimens packed between cotton, the whole layer may be placed in the relaxing box, the top layer of cotton being first removed. A drop or two of carbolic acid will prevent the formation of mould. Papered specimens may be quite satisfactorily relaxed by placing the envelopes between damp cloths.

For a permanent collection all larger insects are pinned according to the directions already given. Small Lepidoptera, Diptera and Hymenoptera are nounted on fine pieces of pointed wire called micro, or minuten-pins; as these

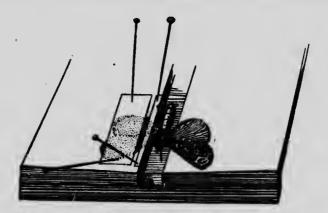


Fig. 6.-Portion of a spreading board showing mounted moth.

pins are only one-third the length of an ordinary insect pin the method involves the use of a double mount, the micro-pin being inserted into a small rectangular piece of cork raised to the required height on an ordinary stout insect pin (Fig. 4, C). Other small insects may be affixed by means of glue or shellac to the apex of a small triangular piece of cardboard in such a manner that the head of the insect faces the right. An ordinary insect pin is then pinned through the base of the cardboard (Fig. 4, D).

Spreading.—Specimens of insects other than Lepidoptera, Odonata and a few Neuropteroid insects, if already pinned in the field, do not require relaxing, but are ready for the cabinet after having been properly labelled. Specimens of these orders, however, must have the wings expanded before being placed in the permanent cabinet. Spreading boards of various sizes are, therefore, necessary and may either be purchased from any entomological dealer or made at home from pine. or some other soft wood. They consist of two strips of wood, generally 12 or 18 inches long, attached at each end to braces, leaving a space of varying width between them to contain the body of the insect; the illustration (Fig. 6) shows a portion of such a board. A piece of thin cork or