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DEVICE FOR BREEDING INSECTS

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This invention relates generally to the breeding of insects and more particularly to a breeding device which is adapted to accommodate a large number of insects in a relatively small space.

While insects are often considered one of man's enemies, there are many species which are quite useful in controlling other species. In many instances injurious insects are raised in the laboratory either as host insects, or food for beneficial species which are then made available in large numbers for the control of pests in the field and orchard. In addition, the eggs of some species are quite valuable as food for fish. Large quantities of insects are raised each year for these and other purposes. Commercial establishments and research institutions are the principal breeders of insects, and large capacity breeding devices have been developed for their use where great numbers of a given type of insect are to be raised. However, where a much smaller number of insects are to be raised, as may be the case where an aquarium owner wishes to maintain a small continuous production of insect eggs as a food for his fishes, or where a comparatively small quantity of certain types of insects is to be raised for experimental purposes, the large breeding devices are too expensive and inefficient and occupy too much space to meet the practical need. When insects of the moth sub-order are produced in mass, an objectionable type of dust, consisting of fine hairs and wing scales, is given off. This contaminates the air in the vicinity of the breeding cage or device making it necessary for the operator to wear a respirator as protection against throat irritation and asthma. The dust also is objectionable as such when it settles on other objects.

It is therefore the major object of this invention to provide an insect breeding device intended to be used in the breeding of relatively small quantities of a particular species of insect in a manner that is economical and in the case of moths, free from the dust hazard. Large scale production may be obtained by employing a sufficient number of the small units.

Another object of the invention is to provide a device of this type which will be relatively inexpensive to build, and which may be constructed of readily available materials.

It is a further object of the invention to provide a breeding device which is quite compact and relatively light in weight, thus providing a relatively portable device.

A further object of this invention is to provide

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an insect breeding device which is simple in construction and operation and may be used with good results by relatively inexperienced operators who have had only a minimum of training.

These and other objects and advantages of the invention will become apparent from the following description of a preferred and modified form thereof, and from the drawings illustrating those forms, in which:

Figure 1 is a perspective view of the improved insect breeding device;

Figure 2 is a vertical sectional view taken at 2—2 in Figure 1;

Figure 3 is a perspective view of one of the breeding trays used in the preferred form of the device;

Figure 4 is a perspective view of a portion of the upper part of the enclosing bag, indicating a preferred method of attaching the bag to the frame; and

Figure 5 is a cross-sectional view of the upper portion of the frame of a modified form of the device.

Referring now to the drawings and particularly to Figure 1 thereof, the numeral 10 indicates generally a frame which is preferably made of wood and of such a size that it may be used as a stool or small table. In the form shown, the frame 10 includes four vertical legs 11 which support a horizontal top or seat portion 12 at their upper ends. Horizontal braces 13 connect the lower portions of the legs 11 together, and the braces are connected so that the central portion of the frame is unobstructed, while the required rigidity is provided for the structure.

In the preferred form of the device shown in Figures 1 and 2, the top 12 is provided with a depending flange 14 in the center, spaced inwardly from the legs 11 so that a container may be attached thereto in a manner hereinafter described.

In the breeding of insects, it is necessary to have a food supply for the insects which is similar to their natural food supply, and which is maintained within the proper ranges of temperature and humidity. Many insects feed on grain, and an example of such an insect is the grain moth, *Sitotroga cerealella*, the eggs of which are useful in the production of a beneficial egg parasite, *Trichogramma minutum*. These moths and their parasites are provided with a grain food, and while it may be desired to breed other types of insects, this device is intended primarily for the breeding of insects which may be raised on a grain food.