

ever, appears more slowly than when ordinary glass is used. Containers other than glass will probably have to be employed before the whole problem of essential elements is solved.

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## SCIENTIFIC APPARATUS AND LABORATORY METHODS

### A CONTAINER FOR FIELD COLLECTION OF MOSQUITO LARVAE

IN the prosecution of malarial or mosquito studies larval collections play no small part. Containers used for captured larvae are subject to various disadvantages. For example, if the collecting jar is kept closed during field operations, the cover or cork must be removed whenever specimens are transferred to the container. If left open the contents are often lost because of jarring, especially if one is collecting in an area of irregular topography. Furthermore, most containers used for this purpose have either no mechanism for their attachment to the belt, or only an inadequate arrangement. The apparatus described below was devised to overcome the disadvantages just cited.

The container is a four-ounce jar with a mouth diameter of 40 mm. Two glass tubes with inner diameters of 4.5 mm. and 1.5 mm. run vertically through the rubber stopper as shown in the illustration. The outer termination of the former is flared

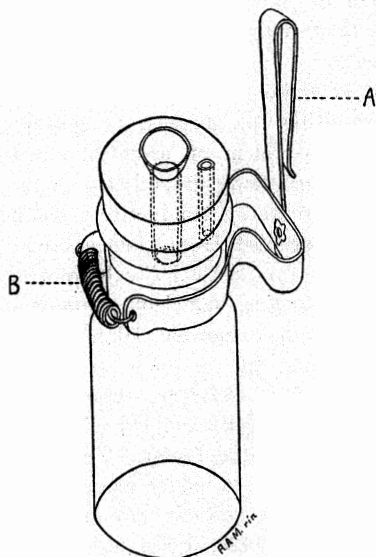


FIG. 1

into a funnel with a maximum diameter of 15 mm. and height not exceeding 10 mm. The inner end is flush with the surface of the stopper. The shorter

the height of the protruding funnel the less will be the risk of breakage. The widened portion facilitates the transfer of larvae from the dipper in which they were captured, to the receptacle, by means of a pipette. The smaller tube practically prevents the formation of air bubbles in the larger. Its inner termination extends slightly beyond the stopper to prevent particles of the rubber cork from filling the tube and thus hindering air circulation.

The bent portion (A) made of nickel plated metal served to hold a key ring to a belt. It is now used for a similar purpose except that it is riveted to the collar, a piece of spring steel 13 mm. wide, so constructed that the jar is held tightly in place when its neck is enclosed within the collar. A hook similar to that shown in the illustration, except that it extended upward from the lower part of A, was cut off to better adapt the remainder for the design in view. The coiled spring (B), while not necessary, renders slipping of the jar impossible. All metallic parts should preferably consist of rust resisting material.

The apparatus after several months' trial in Porto Rico has proven fairly satisfactory. It is hoped that this descriptive note will stimulate others to improve the present model.

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### DECALCIFICATION OF BONE IN ACID FREE SOLUTIONS

IN attempting to develop a method for the determination of an orthophosphate in bone, one of us observed that tertiary calcium phosphate is dissolved on addition of an excess of a magnesium citrate reagent even in the presence of a large excess of concentrated ammonia. White,<sup>1</sup> some four years ago, suggested the use of a solution of ammonium citrate for removing the lime salts from bone and the solvent action of the magnesium citrate reagent upon tertiary calcium phosphate suggested to us its possibilities as a decalcifying agent for histological purposes. The attempt to decalcify osseous tissue by means of this reagent proved successful.

The reagent is prepared as follows: Dissolve 80 gm of citric acid in 100 cc of hot water. Add 4 gm of magnesium oxide and stir until dissolved. Cool, and add 100 cc of ammonium hydroxide (density 0.90). Dilute to 300 cc, let stand 24 hours and filter. (If the magnesium oxide contains much carbonate, it

<sup>1</sup> White, C. P., *Jour. of Path. and Bact.*, Vol. 26, No. 3, 1923.