Improved Egg Candler for Virus Work

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Working with fertile eggs it is necessary before inoculation to make certain that the embryo is living, and to locate the positions of the air sac and embryo. The usual equipment for this purpose consists of an airtight box containing a 100-watt electric light bulb with an oval opening over which the egg is placed (Beveridge and Burnet, 1946).

Such a simple device becomes very hot, particularly after prolonged use, and this is rather undesirable when manipulations are carried out under direct vision. For example, it is convenient to complete the dropping of the chorioallantoic membrane under direct vision when using the perforator described by Nadeje, Tamm, and Overman (1955). The following design was found useful in practice.

The apparatus consists of a double-walled container, the outer wall (A) being perforated at the top and bottom by a ring of holes (D and G). During use the inner skin (B) becomes hot, heating the air between it and the outer layer. The hot air is convected upwards and escapes through the upper ring of holes, while cool air is drawn in at the bottom. In this way convection is used as a means of cooling and light traps are unnecessary. As the source of light a Lister type of ophthalmic lamp was chosen since this gives maximal light and minimal heat. The bulb has a choice of three apertures; for purposes of the candler the largest size was found most suitable. The lamp should be set approximately 6 cm. from the egg. During the manipulations an egg may break occasionally, and when this happens and the fluid contents drop on the lamp, it bursts. For this reason a glass screen is interposed between the egg and the lamp (E).

The metal top of the candler has an oval hole cut into it (H) which is approximately 5 cm. long and 3.5 cm. wide. A sheet of nylon foam $\frac{1}{2}$ in. thick is stuck to the top of the candler (F) and the edges bevelled around the hole. This cushion moulds itself to the egg, giving a light-proof seal.

The box is mounted on a base board approximately 12 in. square to give stability during the use of the apparatus.

This apparatus is obtainable from Messrs. Matburn Ltd., 20-24, Emerald Street, London, W.C.1.

REFERENCES

- Beveridge, W. I. B., and Burnet, F. M. (1946). *Spec. Rep. Ser. med. Res. Coun. (Lond.)*, No. 256, p. 11.
Nadeje, T., Tamm, I., and Overman, J. R. (1955) *J. Lab. clin. Med.*, **46**, 648.