IMPROVED DEVICE FOR PRESERVING HIVE PARTS

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S. Line (1964) described a method, devised by Mr R. Berry of Havelock North, of preserving hive parts with paraffin wax. This method entails pushing the hive parts through a tank of wax heated by a wood fire. Guide rails ensure that the equipment being treated becomes completely submerged in the wax.

In addition to its value as a means of preserving hive parts, hot wax treatment can be used to sterilise equipment salvaged from diseased colonies after the combs and bees have been destroyed.

The illustration shows an improved version of Mr Berry's device designed by Mr F. A. Bartrum of Pleasant Point. It comprises a large wax tank, an oil fired heating unit and a draining tray.

The heating unit consists of three burners from an oil burning, drip feed, down-draught boiler, which are located at the front of the wax tank. Heat generated in the burners passes through the lower part of the wax tank by way of fourteen 2" boiler tubes into a smoke chamber at the back of the tank.

The smoke box is detachable to give access to the boiler tubes.

A 12ft high, 6" diameter rolled steel chimney is mounted over the smoke chamber.

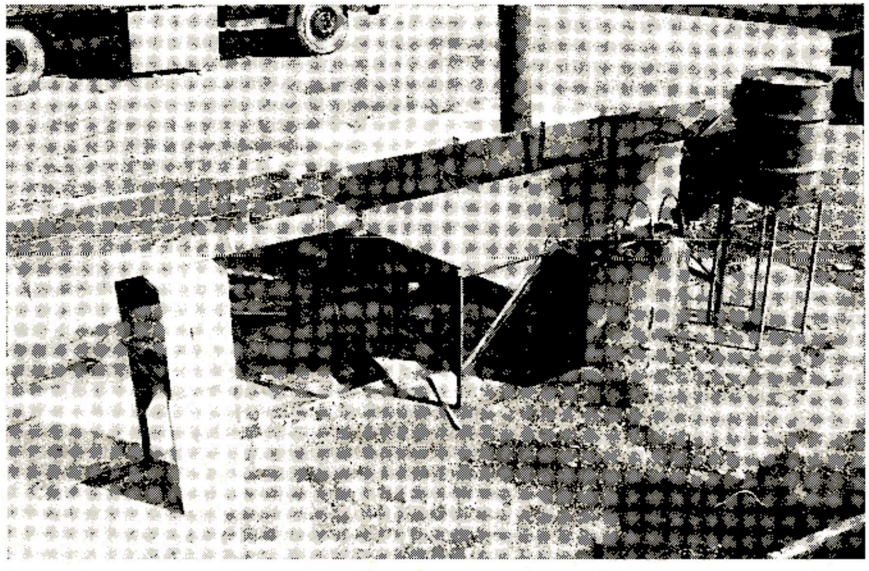
Two $\frac{3}{8}$" iron guide rails guide equipment being treated over the heating tubes. Further guide rails in the upper part of the wax tank can be adjusted to allow treatment of $\frac{1}{2}$ depth supers, bottom boards, lids, $\frac{3}{4}$ depth and full depth supers.

The fuel used is home heating oil. The rate of flow into the burners is controlled by needle valves.

Paraffin wax is procurable from petroleum companies.

The procedure for lighting the heating unit is as follows. The chimney is removed and a sheet of newspaper, soaked in heating oil is inserted in the smoke box and lit. The chimney is quickly replaced. The resulting draught up the chimney draws air down through the burners. A piece of burning newspaper is immediately placed in each burner and the fuel supply is turned on.

The boiling point of paraffin wax is about 680°F. At about 316°F white vapour comes off the surface and this temperature is suitable for both preservation and sterilisation purposes.



Oil fired device for sterilising and preserving gear salvaged from diseased hives. Designed by Fred Bartrum of Pleasant Point.

Ten minutes immersion at this temperature is sufficient to sterilise equipment taken from B.L. infected hives after the bees and combs have been destroyed.

For preservation purposes equipment is immersed for about two minutes.

Operating costs are influenced by many factors such as the wax temperature, atmospheric temperature, labour costs and the rate at which equipment is passed through the wax. Assuming an operating rate of 25 supers an hour and a labour cost based on a wage paid to a fully qualified assistant, the cost of treating one full depth super is about 6 cents.

Treated supers have very little wax on their exterior surfaces which can be painted to improve their appearance. Some beekeepers apply paint with a brush while the boxes are still hot.

Copies of plans and specifications of this device are available from local Apiary Instructors.

Acknowledgement — Mr Bartrum has generously made available full details of the appliance described in this article, for the benefit of any beekeeper who wishes to build one.

REFERENCE

LINE, S. (1964) Method of preserving hive boxes with paraffin wax N.Z. J. of Agric. 109: 329-331