

Waikato version of a paraffin wax dipper

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BEES DON'T seem to mind a bit of dry rot in hive components or holes here and there; and judging by the number of dilapidated hives I see in my district, beekeepers don't either. At least until they come to shift the hives or find out how expensive woodware is to replace.

Every beekeeper has his own method of preserving woodware. Some rely on paint, creosote, wood oil, old engine or gear box oil, Metalex or paraffin wax or combinations of these.

Paraffin wax has many advantages once a dipper is made or purchased. Several beekeepers can share the cost of use of a dipper. The advantages include the cheapness of the treatment per unit, the wax really penetrates joints or any repaired sections, it cleans up propolis and old wax, and can be used to sterilize equipment salvaged from diseased colonies with the approval of the local apiary officer.

Two large push through wax dippers have been described in the NZ Journal of Agriculture, October 1964 and July 1968. Many beekeepers don't want or need such elaborate equipment.

For them a simple heated steel box is sufficient. There have been many improvements to this basic design made over the years. Mr Norman Finaly made one last year that works very well.

He constructed the unit from 3 mm plate steel. All the measurements are given in Fig. 1. The unit can hold two full-depth supers at a time, the boxes being lowered over the chimney. They are held under the wax by a couple of concrete blocks. Some sort of guillotine type lever is really needed here to hold the boxes down.

The space between the end walls and the fire box can be varied according to the size of floor board you use. Norman has 50 mm x 100 mm runners on his floor boards, then tacks small blocks of ground treated 50 mm x 50 mm fence battens to these.

So he needs at least 203 mm end space. He now regrets not having made both ends the same to accommodate his modified floorboards. The sides are designed to accommodate lids or excluders.

Other features to note are the draining channel leading to a



Norman Finlay, a commercial beekeeper at Ohaupo putting supers into his hot paraffin wax dipper. Two supers have been removed from the wax and are draining.



Two supers are held under the boiling wax by concrete blocks. The metal rod across the front of the picture is part of the bracing for the shed.



Norman's wife Ngaire, applies two coats of water based paint to the hot supers. The supers rotate on the painting stand.

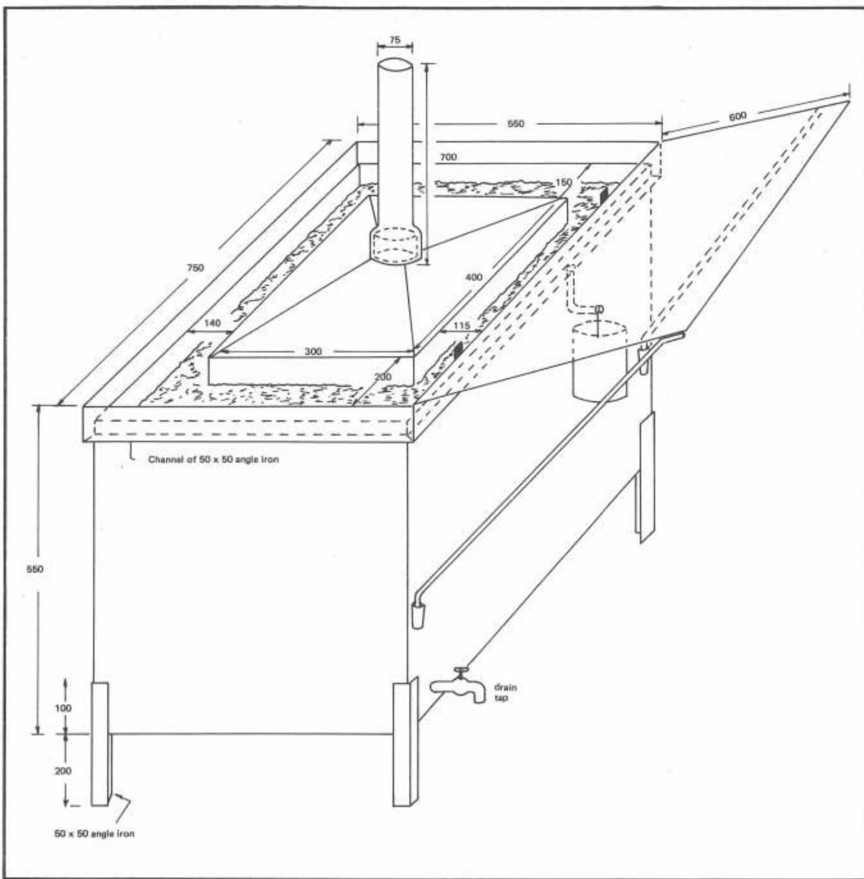


Fig. 1.
The dimensions (in millimetres) of the paraffin wax dipper. The drain plate and chimney are readily removable so that the lid (not shown) can go over the dipper to keep the rain out when not in use. The bottom is closed in on three sides with concrete blocks and earth to ensure a good draught for the fire.

drain tap. This catches any overflowing wax and also the wax off the draining plate. The central fire box is at least 25 mm above the level of the wax at its highest point. It also drains downwards.

This is to reduce the collection of wax around the chimney. The occasional fire still occurs here and a carbon dioxide fire extinguisher should be kept on hand.

There is a drain tap at the bottom of the fire box to empty the wax out should this be necessary. Quite an amount of debris collects in the bottom. Norman has a long handled scoop to remove this.

The chimney is removable and a flat, close-fitting lid is put in place to keep out rain water. Water and hot paraffin wax do not mix very well. The height of the chimney is a compromise between keeping smoke out of

the operators eyes and not having to lift the boxes too high to clear the chimney.

This unit with a central fire box takes about 3 packets of paraffin wax to fill. The wax costs around \$13 a packet. It takes 1½ hours to reach operating temperature. This is around 160°C. In practice enough heat is kept in the fire so that the wax really bubbles and boils up around the boxes when they are immersed, but not so hot that the wax boils over into the drain channels. Norman finds that 3-4 old frames per 2 boxes seems to be about right. It is best to keep a gentle fire going rather than fluctuate between hot coals and a roaring blaze.

The time spent in the wax is governed by the speed of the painters. If only one person is painting and dipping then the boxes get about 7 minutes in the wax. With two people

working then they get 4-5 minutes. If diseased boxes are being sterilised they need at least 10 minutes, and are usually done over "smoko" or lunch-time.

The boxes are lifted from the waxer onto the draining plate and are rested against two steel pegs to prevent them from sliding into the dipper. Two more boxes are placed in the wax. By this time the draining supers are free of surplus surface wax and are ready for a quick scrape to remove propolis and any flaking paint. Boxes previously painted with oil based paints will blister and need a good scrape. They now receive two quick coats of water-based paint. The paint goes on thick

and dries very quickly. It is pulled into the wood by the drying wax and a very good "fix" is obtained. The secret is to give the boxes long enough in the hot wax so the wood is heated right through and good penetration of the wax can be obtained.

Some beekeepers do not paint after dipping. Paraffin wax is a good preservative on its own, but the paint is extra protection and gives the boxes a neat and tidy appearance.

All woodware should be as dry as possible as the wax tends to seal in any water in the timber. In this case the timber can rot from the inside out. Some beekeepers have found that waxing is not very efficient. I suspect that they are not giving their equipment long enough in wax that is sufficiently hot.

The boxes are very hot when they come out of the dipper and rubber gloves or tongs are needed. It helps to put a little cold water in the gloves before handling the boxes.

This unit cost Norman around \$60, but he made it himself from scrap steel he obtained at "mates rates". A similar unit recently built by an engineering firm from working drawings cost around \$300. All the joints were welded from both sides to reduce the risk of bursting when in use.