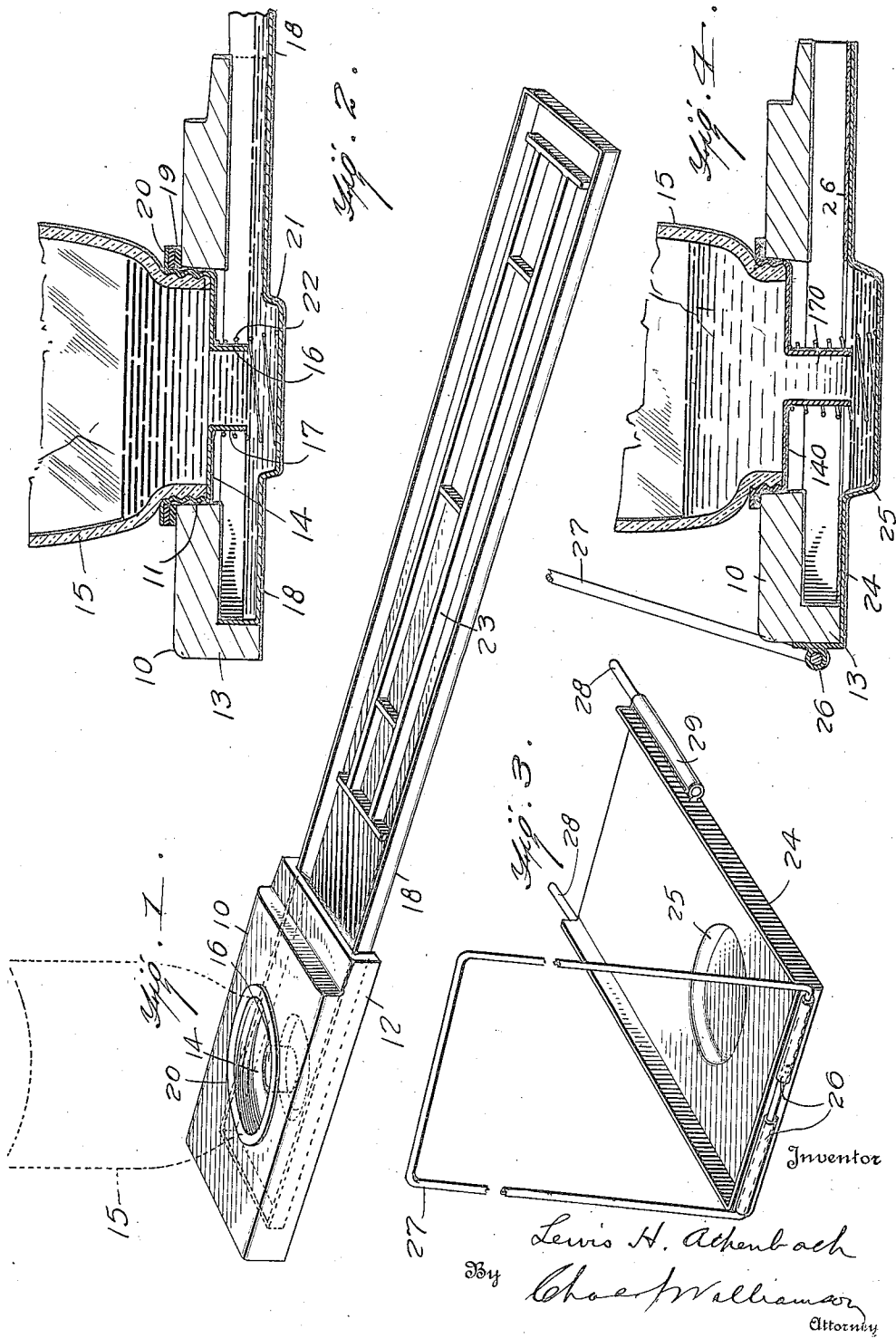


L. H. ACHENBACH.
BEE FEEDER.
APPLICATION FILED FEB. 13, 1922.

1,426,701.

Patented Aug. 22, 1922.



UNITED STATES PATENT OFFICE.

LEWIS H. ACHENBACH, OF POTTSVILLE, PENNSYLVANIA.

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Specification of Letters Patent. Patented Aug. 22, 1922.

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To all whom it may concern:

Be it known that I, LEWIS H. ACHENBACH, residing at Pottsville, county of Schuylkill, and State of Pennsylvania, a citizen of the United States, have invented certain new and useful Improvements in Bee Feeders, of which the following is a specification.

My invention relates to bee feeders and in particular to entrance feeders of the type in which an inverted jar containing the syrup is employed, the quantity of syrup fed out being regulated by the sealing and unsealing by the level of the syrup at the outlet, and my object is to provide a feeder which is adaptable to the conditions required at all seasons of the year when feeding is necessary and which will have other desirable qualities such, for example, as facility of manipulation in adapting it to the hive in view of the conditions obtaining at the season when feeding is to be done, and which will be inexpensive and will be free from danger of harm or injury to the bees. My invention consists in the feeder constructed as defined by or embraced within the meaning of the claims which follow this specification.

In the annexed drawing which form part of this specification,—

Fig. 1 is a perspective view showing my feeder when arranged for use under conditions of weather in, for example, the late fall;

Fig. 2 is a vertical section thereof;

Fig. 3 is a perspective view of a shorter tray than that shown in Figs. 1 and 2 and which is most suitable to be used on the winter case on warm days in winter, and on hive in the spring, summer, and early fall.

Fig. 4 is a vertical section thereof with the base block.

Briefly described, my invention comprises a base in the form of an oblong block which is applied to or supported to the front of the hive and has an opening into which is inserted the lower open end of a liquid container such as the familiar Mason preserving jar, and a sheet metal tray that forms or provides a well or receptacle to contain a limited quantity of syrup at a time accessible only to the bees within the hive, the base block having a chamber on its underside into which extends a portion of the tray, or receives the tray, means, such as a screw cap, being provided to partially close the lower end or mouth of the inverted

jar and firmly support it in position over the hole in the base block.

Referring now with some detail to what is shown in the drawings, 10, designates the oblong base block made of wood which, substantially at the center, has a circular hole, 11, which opens into a space or chamber in the underside of the block formed by parallel side flanges, 12, and a flange, 13, at one end, the round hole, 11, being of a diameter for the snug fitting of a metal screw cap, 14, into which the threaded open end of the jar, 15, is screwed. The cap, 14, at its center, has an opening, 16, from which a short section of pipe or tubing, 17, projects downward into the block chamber and into the sheet metal tray, 18, but terminating that distance above the bottom of the tray at which it is desired to maintain the level of the syrup in the tray, syrup ceasing to flow from the jar, 15, when its level in the tray closes the lower end of the tube or nozzle, 17. By placing washers, 19, in appropriate number, (which washers may be the customary packing rings of the preserving jar), between the top of the base, 10, and the flange, 20, on the cap, 11, the distance which the nozzle, 17, extends into the tray may be varied and thereby the level of the syrup in the tray be fixed. The bottom of the tray, 18, has directly below the nozzle, 17, a circular depression, 21, which forms a dish or well. A coil spring, 22, attached at one end of the nozzle, 17, extends to the bottom of the tray, its coils being sufficiently close together to prevent bees getting into the nozzle of the jar and being injured by the syrup therein, the spaces between the coils, of course, allowing the free flow of the syrup.

The tray, 18, shown in Figs. 1 and 2 has a length to reach through the hive and hence a great many bees at a time may feed therefrom, so that, for example, a colony can empty a two quart jar in a few hours. A wooden rack or frame, 23, formed of a pair of longitudinal and several cross bars is placed in the portion of the tray within the hive to form a perch or support for bees in taking the syrup from the tray, the syrup in the tray, of course, not being sufficiently deep to submerge the rack whose upper side is thus available for the purpose stated.

The tray, 24, shown in Fig. 3, is suitable for spring, summer, and early fall feeding and for winter case feeding on warm days,

the tray, 24, having a length only the same as that of the base block, 10, which is usable therewith interchangeably with the use of the long tray, (so that only one base block need be provided), and such tray, 24, being closed only on three sides and open at one end, just as is the block, the open end of the tray and the block being applied to or inserted within the hive at the entrance.

10 The short tray, 24, also has a well, 25, which is of greater depth than the well of the larger tray because having the tray open at one end the level of the syrup in the tray, 24, must not extend above the well, 25, for it would flow out of the open end of the tray. When using the tray, 24, a cap 140 similar in all respects to the cap 14 shown in Fig. 2 is used, but its nozzle 170 is longer so that the bottom of the nozzle may at all times be not higher than the top of the well, 25. At the outer end of the tray, 24, it has pivoted to it by eyes, 26, a loop or bail, 27, of wire which is adapted to be turned up against the front of the winter case and caught over hooks attached thereto so as to aid in supporting the feeder whose forward end or its end next the winter case may be supported either by resting upon a short block tacked or nailed to the front of the

30 hive below the entrance openings of a winter case, or by means of a rod, 28, at each side of the tray slidably supported in a tube, 29, on each side and which may be projected through the slot of the removable entrance stick with which hives are customarily provided, it being thus unnecessary to remove the entrance stick for feeding.

To safeguard the bees from cold when using the tray, 24, its surface over which they walk to the well, 25, may be covered with a sheet 26 of asbestos or heat insulating material, an opening being provided in the sheet of the size of the well, 25.

It will be understood that the packing washer or washers, 19, make an air tight joint and that one is applied to the neck of the jar before the cap or top is screwed on.

What I claim is:

1. A bee feeder comprising a base block having a hole for the reception of a liquid

container and a removable tray into which a nozzle from the container extends.

2. A bee feeder comprising a base block having a hole for the reception of a liquid container and a removable tray into which a nozzle from the container extends, the tray having a well below the nozzle.

3. A bee feeder comprising a base block having a hole for the reception of a liquid container, a removable tray into which a nozzle from the container extends, and a guard at the nozzle that prevents bees entering the nozzle.

4. A bee feeder comprising a base block having a chambered underside which opens into the hive at one end and the block having an opening from its top into such chamber, a cap within such opening having a nozzle terminating in the chamber, said cap having means for the attachment of a jar, and a tray having a bottom surface below the open bottom of the nozzle.

5. A bee feeder comprising a base block having a chambered underside which opens into the hive at one end and the block having an opening from its top into such chamber, a cap within such opening having a nozzle terminating in the chamber, said cap having means for the attachment of a jar, a tray having a bottom surface below the open bottom of the nozzle, and a wire coil depending from the nozzle with adjacent coils less than a bee space apart.

6. A bee feeder comprising a base block and a liquid receptacle, a nozzle passing through the base block and stopped short of the bottom of the receptacle, and means to vary the distance between the bottom of the receptacle and the lower end of the nozzle.

7. A bee feeder comprising a base block having a chambered bottom, trays of different length interchangeably usable with such bottom, each forming a closure for the bottom of the base block chamber, and a vertical nozzle for delivering liquid to the tray having its lower end terminating short of the tray bottom.

In testimony whereof I hereunto affix my signature.

LEWIS H. ACHENBACH.