

April 22, 1924.

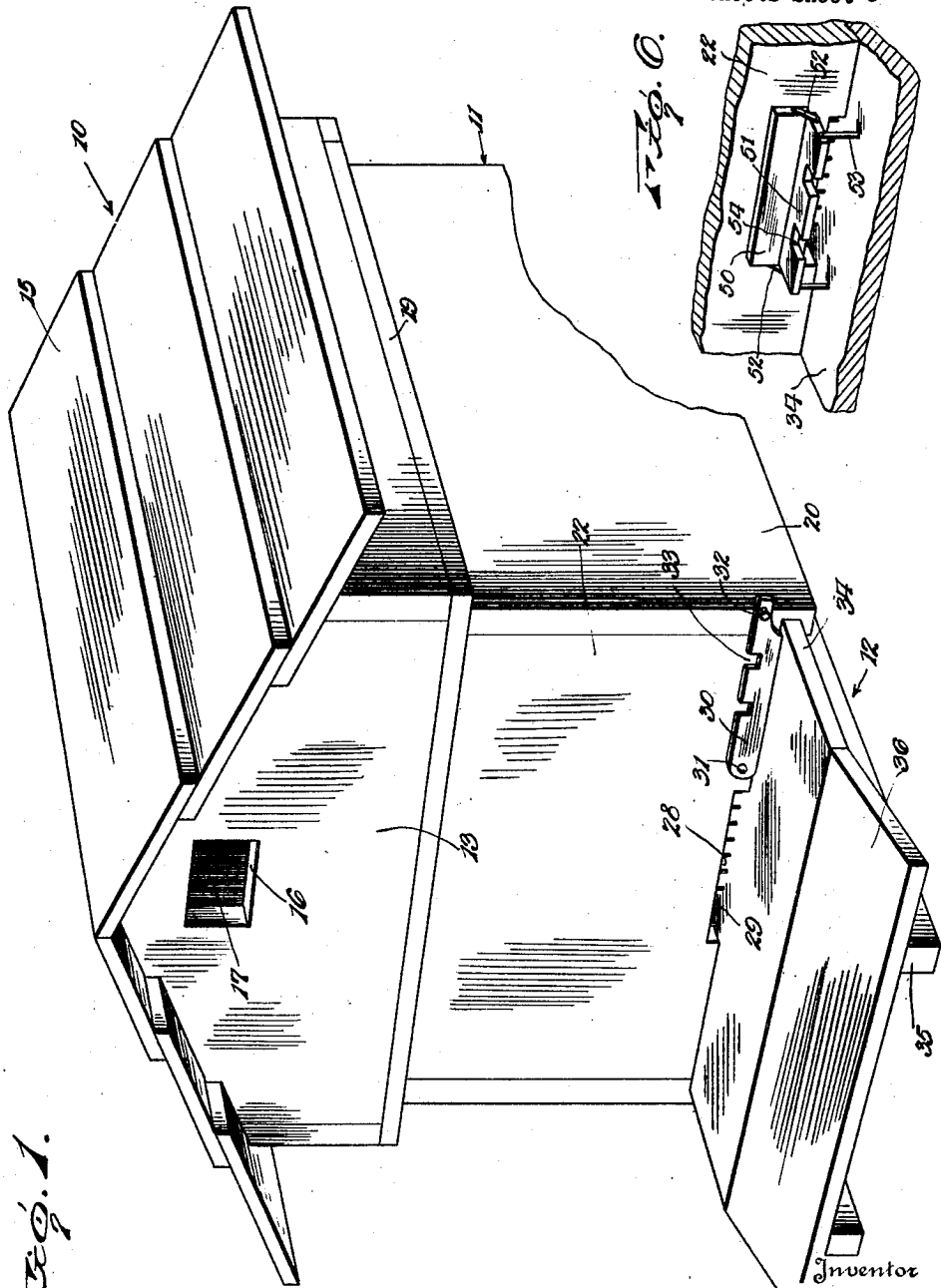
B. TROILO

1,491,213

BEEHIVE

Filed July 3, 1922

3 Sheets-Sheet 1



*B. Troilo.*

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By

*Lawyer*, Attorneys

April 22, 1924.

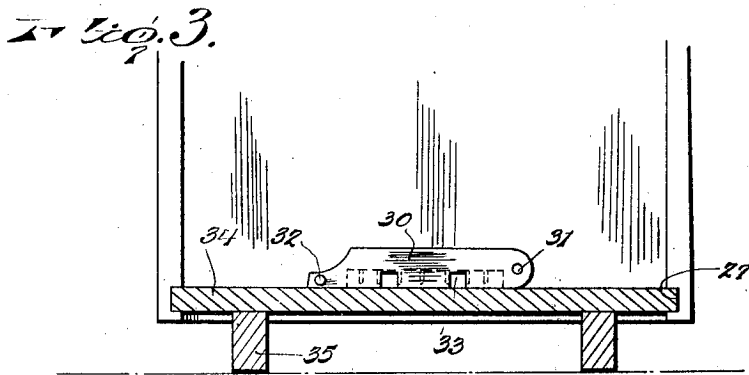
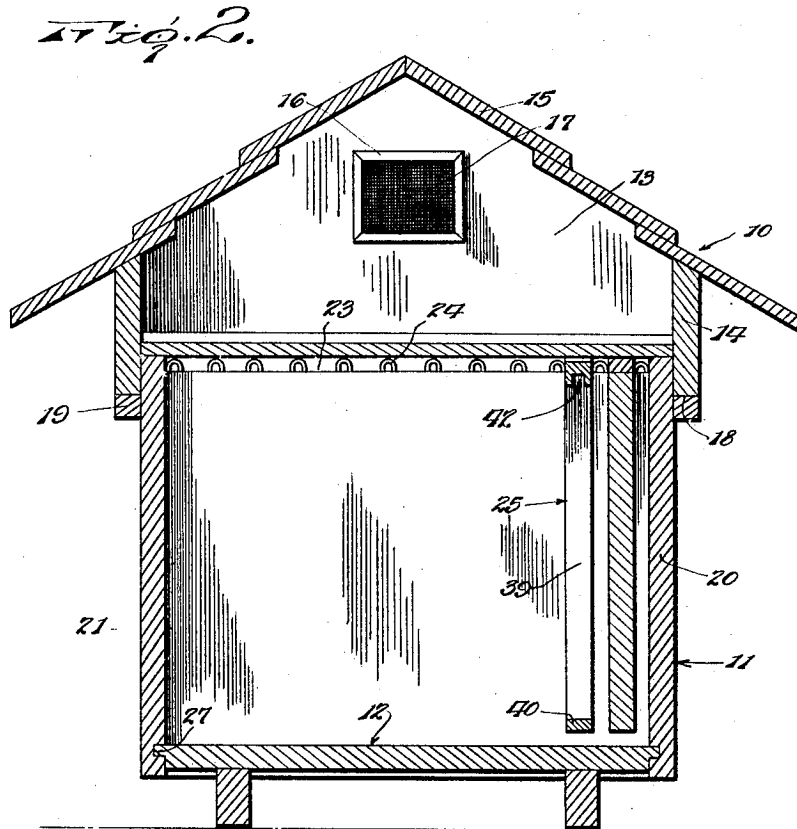
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BEEHIVE

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3 Sheets-Sheet 2



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## UNITED STATES PATENT OFFICE.

BIAGIO TROILO, OF ONEIDA, NEW YORK.

## BEEHIVE.

Application filed July 3, 1922. Serial No. 572,659.

*To all whom it may concern:*

Be it known that I, BIAGIO TROILO, subject of the King of Italy, who has declared his intention of becoming citizen of U. S. A., residing at Oneida, in the county of Madison and State of New York, have invented certain new and useful Improvements in Beehives, of which the following is a specification.

My invention relates to improvements in bee hive construction and the object of the invention is to provide a sanitary nest which can readily be inspected and cleaned. For this purpose my bee hive consists of three main parts, namely, the roof, the nest, and the bottom or floor, any one of which may be easily removed from the others but which, when assembled, form a compact house both damp free and draft free, two conditions which tend to keep a bee colony healthy and thriving.

In addition to the above named parts, the bee hive is furnished with the usual frames for carrying the cells and a removable partition for dividing the nest into separate compartments.

In the accompanying drawings one embodiment of the invention is illustrated and:

Figure 1 shows a perspective view of the bee hive,

Figure 2 is a transverse sectional view thereof,

Figure 3 is a cross section of the platform in front of the bee hive,

Figure 4 is a perspective view, in partial longitudinal section, of the hive,

Figure 5 is a perspective view of a detail and Figure 6 shows in perspective view a modified form of gate.

As already stated, the bee hive consists of three main parts, the roof 10, the body or nest 11, and the floor 12. The roof has two gables 13, two side walls 14, and a slanting covering 15. At each end is provided a small window 16, which is covered with gauze or netting 17 to prevent small insects from entering but still giving good ventilation. The bottom edges 18 of the roof walls and gables are all level and are adapted to rest on a ledge 19 provided on the body or nest portion 11 of the hive.

The nest 11 comprises two side walls 20, a rear wall 21, and a front wall 22, all joined together to form a box-shaped construction open at top and bottom, and near the upper edge of which is provided the ledge 19, as

described. This ledge is a short distance down from the top of the nest so that the roof can slip over the top and stand on the ledge as set forth. The rear wall 21 has a rabbet 23 running along the same near the top of the nest and in this rabbet are driven pegs 24 at equal distances apart across the rear wall and intended to form seats for the frames 25. The front wall 22 is also provided with a rabbet 26 at the same distance down on the wall as the rabbet 23 in the rear wall and provided for the same purpose as the former. However, it is not necessary to furnish pegs in this rabbet as the pegs in the rear wall are sufficient to space the frames.

Near the bottom edge of the side walls 20 as well as the rear wall 21, runs a groove 27 along the inside of the nest, but the front wall is slightly shorter than the other walls and ends level with the upper side of the groove 27. This groove 27 is intended to receive the bottom or floor 12 which is made to run easily in the groove for displacement when desired. It will be evident that the floor will just pass under the bottom edge of the front wall so that there will be no opening under the front wall except for the door opening 28 which is comparatively wide and low and divided by means of studs 29, into a plurality of passages each wide enough for passing a bee. These studs 29 extend to the floor and no further. A gate 30 is pivoted, as at 31, to swing from its outward or open position, as seen in Figure 1, into its closed position, as seen in Figure 3. The gate has a small handle 32 and two notches 33 adapted to register with two of the openings between the studs 29. In this manner, it will be evident that in cold weather only two passages will be available for the bees to go in and out of the hive.

The floor 12, which is of such thickness as to fill the groove 27 and of such width as to extend between the side walls 20, consists of a flat board 34, strengthened by means of a pair of bottom runners 35. The length of the floor, however, is greater than the length of the nest 11 so that when the rear end of the floor has entered the groove 27 in the rear wall 21, a suitable portion of the floor will extend beyond the front wall 22 to form a platform for the bees to land on before entering the hive. The extreme forward end 36 of the floor slopes slightly downward and provides a still further ex-

tension of the platform upon which the bees may alight.

The reference numeral 37 represents a ceiling portion or cushion inside of the roof, reinforced by cross strips 38. This ceiling portion is substantially of the same width and length dimensions as the inside of the roof or the outside of the nest so as to fit snugly on top of the nest between the walls of the roof and permit no passage between the nest and the chamber thus formed above it. This chamber is provided to form an air space and prevent excessive heating of the nest from the action of the sun's rays. It also prevents upward displacement of the comb frames 25.

The reference numeral 25 represents one of the frames built of narrow slats constituting sides 39 and a bottom strip 40 forming a square cornered structure together with the top rail 41. This top rail is grooved along its entire length, as at 42, in order to receive the cell portions upon which the bees start building to fill the frame. The ends 43 of the top rail extend beyond the sides 39 so as to form supports to engage in the rabbets 23 and 26 of the rear and front walls 21 and 22 respectively, and to rest between the pegs 24 to space them equally apart. The length of a frame, measured from the outside of its sides 39, is slightly less than the inside length of the nest 11 between its front and rear walls, and the depth of the frame is also somewhat less than the height of the nest, so that sufficient space is left between the bottom strip 40 and the floor 12 for the bees to pass under the frames. In this manner, the frames are easily removed from the nest. A sufficient number of frames is provided for each nest, usually twelve, which fill the nest from side to side.

A solid partition 44 having a top rail 45, the ends 46 of which extend beyond the ends of the partition to form supports similar to those described in relation to the frames 25, is provided to rest in the rabbets 23 and 26 in the rear and front walls of the nest. This partition practically fills the nest from top to bottom and end to end is intended to provide two compartments in the nest in case the bee colony should be very small or in case of cold weather, when the partition can be placed near the most exposed side of the nest, in this manner providing an air space between the outer wall and the nest chamber.

When inspecting or tending the bee colony, the roof 10 is lifted off and then the cushion or ceiling portion 37 also removed, whereupon any of the frames 25 may be closely inspected by lifting each one out of the nest.

In order merely to clean the floor, the latter is drawn out from underneath the

nest, after first supporting the latter upon suitable blocks, and then again replacing the floor after cleaning the same. In this manner, the floor may be cleaned without disturbing the bee colony, as the bees will stay on the frames during this operation. It will thus be evident that disease among the bees may be prevented and that enemies of the bees may be removed from time to time, when necessary.

By providing a roomy air chamber above the nest, this also tends to sanitary conditions with regard to the bee colony and will improve their general comfort.

The frames are also constructed to provide means whereby the bees may be assisted to build, as artificially made portions of cells are easily attachable in the groove provided in the top rail of each frame.

A modified form of gate is illustrated in Fig. 6.

The gate here shown consists of a short strip of wood 50, secured to the hive above the door opening and another similar strip constituting a door 51 adapted to fill the space between the floor 34 and the bottom edge of the fixed strip 50, to which it is hinged by means of links 52. In raised position the door 51 is supported by a pair of hinged props 53, which may be folded along the sides of the door, when the latter is in lowered or closed position. A pair of notches 54 forming passages, are provided in the door as already described with regard to gate 30.

Having thus described the invention, what is claimed as new is:

1. A bee hive consisting of front, back and side walls rigidly secured together, the back and side walls being provided in their inner faces near their lower edges with aligned grooves and the lower edge of the front wall being located at the top wall of said grooves, each of said walls being a single unitary element, a floor slidably engaged in and supported by said grooves and extending under and past the lower edge of the front wall to form a lighting platform, runners on the under side of the floor, the upper edges of the front and back walls being rabbeted, comb frames supported on said rabbeted edges, spacers on said edges between the frames, an imperforate ceiling resting at its edges on the upper edges of the walls, and a roof fitting around the edges of the ceiling and the upper edges of the walls and supported by the walls in spaced relation to the ceiling.

2. A bee hive comprising a roof, a nest open at top and bottom, a solid ceiling member, and a floor, all detachably connected, the walls of the nest being grooved for slidably engaging with the end and side edges of the floor and the ceiling member covering the top of the nest, the floor filling

the entire bottom of the nest and extending through the front wall thereof to provide a downwardly inclined exterior platform, said front wall having a plurality of wall openings contiguous to the platform, a gate hinged at both ends on the front wall above the openings therein, and props pivoted on the gate at the ends thereof to rest upon the platform and support the gate in open position.

3. A bee hive comprising a nest open at top and bottom and consisting of unitary front, back and side walls secured together, a floor slidably engaged with and supported

by the side and back walls, a ledge secured to and extending around the exterior of the nest below the top thereof, an imperforate ceiling resting upon but free of the upper edges of the walls of the nest, a roof having depending gables and side walls fitting around the top of the nest with their lower edges resting on said ledge and retaining the ceiling on the nest, and comb frames supported within the nest by the front and back walls of the same below the ceiling.

In testimony whereof I affix my signature.

BIAGIO TROILO. [L. s.]