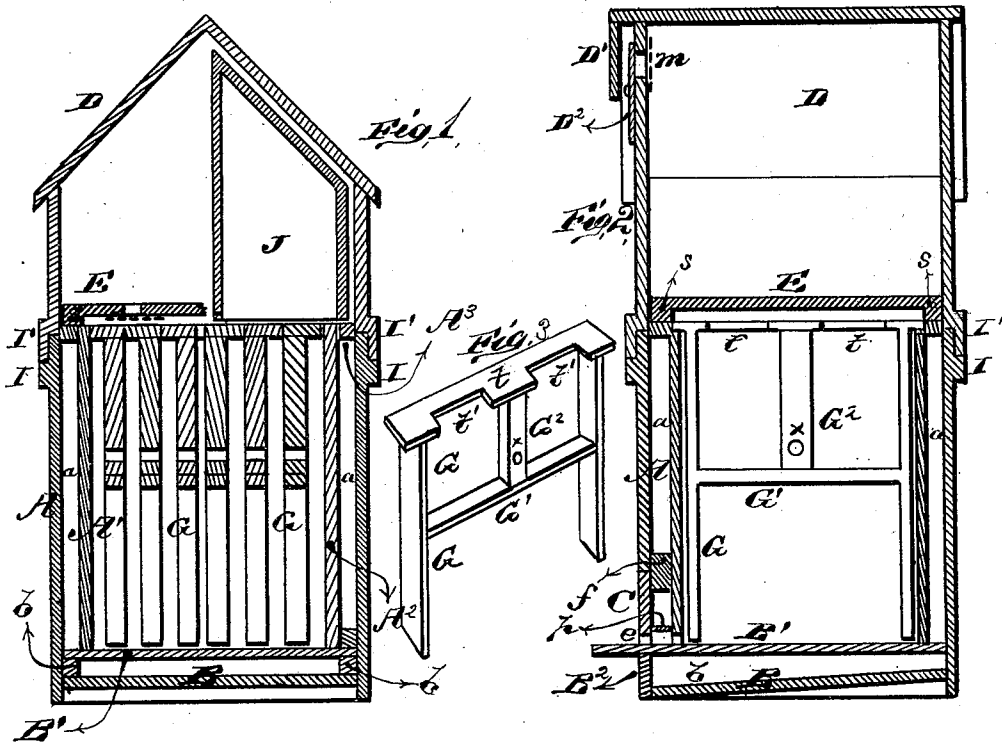


J. PALMER.
Bee-Hive.

No. 200,084.

Patented Feb. 5, 1878.



WITNESSES.
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JAREB PALMER, OF ORR, MINNESOTA.

IMPROVEMENT IN BEE-HIVES.

Specification forming part of Letters Patent No. **200,084**, dated February 5, 1878; application filed September 8, 1877.

To all whom it may concern:

Be it known that I, JAREB PALMER, of Orr, in the county of Jackson and State of Minnesota, have invented a new and valuable Improvement in Bee-Hives; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical sectional view of my bee-hive. Fig. 2 is a sectional side view. Fig. 3 is a perspective view of the comb-frame.

The nature of my invention consists in certain improvements in a bee-hive, as will be hereinafter more fully set forth, and pointed out in the claim.

The bee-chamber of my hive is surrounded by, or rather formed of, double walls A and A', with dead-air space *a* between the outside and inside walls, such space being entirely closed, both at top and bottom, and forming a complete protection for the bees, both against the extreme heat of the summer and the extreme cold of the winter.

The bottom of the hive is also double, the outside or lower permanent bottom B slanting toward the front. The upper or inside movable bottom B' has wedge-shaped cleats *b b* on the under side, by which it is supported upon the lower stationary bottom. The movable bottom B' extends forward sufficiently to form the alighting-board, and on its under side it is provided with a strip, B², to form part of the front of the hive between the two bottoms.

By slanting the permanent bottom B, and the construction of the inside movable bottom B' with wedge-shaped cleats *b b*, the movable bottom is held more securely in place by being wedged in position, while an air-space is formed between the two bottoms.

Above the bottom B' is a strip or board, C, which forms the lower part of the outside wall on the front of the hive, with bee-entrances *e*.

D is the cover of the hive, with a ventilating device, D¹, D², and *m*.

Around the outside of the hive, near the top, is a strip, I, for convenience in moving the hive; and around the bottom edge of the cover D is a downwardly-projecting strip, I', forming a junction with the strip I, to protect the joint between the hive and cover, keeping out cold and storm.

The movable honey-board E is supported on top of the comb-frames by three strips, *s s*, (not fully shown in the drawings,) fastened to its under side.

The comb-frames G have their top slats *t* so formed that at the ends and in the middle they are left the full width of the space to be occupied by the comb-frame, and the intermediate spaces cut out, as shown at *t'* in Fig. 3, to permit the bees to ascend readily to the honey-boxes.

The comb-frames are entirely open at the bottom, which I have found to be of great advantage in the bees building their comb. A slat, G¹, is, however placed between the side pieces, at a distance from the top of less than one-half the height of the frame, and a short upright bar, G², connects said intermediate slat with the top slat *t* of the frame. In this bar G² is a passage, *x*, to allow the bees to pass in the winter.

J J are the honey-boxes, constructed to fill the cover D.

What I claim as new, and desire to secure by Letters Patent, is—

The comb-frame G for a bee-hive, open at its bottom and having the top slat *t*, provided with the spaces *t'*, the horizontal piece G¹, arranged about midway, and the perforated upright bar G², connecting the intermediate piece G¹ and the top slat *t*, substantially as shown, and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JAREB PALMER.

Witnesses:

A. A. MOSHER,
WM. H. BAILY.