

UNITED STATES PATENT OFFICE.

JAMES W. GLADDING, OF NORMAL, ILLINOIS.

IMPROVEMENT IN BEE-HIVES.

Specification forming part of Letters Patent No. 122,598, dated January 9, 1872.

To all whom it may concern:

Be it known that I, JAMES W. GLADDING, of Normal, in the county of McLean and in the State of Illinois, have invented certain new and useful Improvements in Bee-Hives; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a "bee-hive," as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section of my hive. Fig. 2 is a side view, part in section, of the lower or brood-chamber; and Fig. 3 is an end view of the honey-box.

A represents the brood-chamber, made of any size or dimensions desired, and provided with a side door, B. This door is held in place at the top by a piece of iron, *a*, attached to said door, and bent in such manner that the ends hold it securely to the sides when in place. The bottom edge of the door B is kept in place by pins *b b* passing through the bottom of the hive into the bottom edge of the door. In the brood-chamber A is placed a suitable number of movable frames, C. The top piece of each frame is long enough to reach across and lengthwise the brood-chamber into a rabbet, *d*, formed at the upper side of each end. The side pieces are nailed to the top piece so as to leave about half an inch space between the inside end of the brood-chamber and each end of the frame. The bottom piece is nailed to the side pieces so as to leave about half an inch space between the inside bottom of the hive and the under side of the frame. The top, sides, and bottom pieces are all made of pieces about one inch wide and five-sixteenths of an inch thick. Each frame is provided with a comb-guide, *e*, placed on the under side of the top piece of the frame, and composed of one or more saw-teeth or triangular-shaped pieces. These comb-guides may be made of wax or wood, or of wood coated with wax. The upper part or

honey-chamber D of the hive is made of square shape, and of suitable size and depth to form, with the brood-chamber A, a double hive. The upper part is formed so as to be used as a honey-chamber during the honey-making season and for more perfect protection to the bees in winter. By lowering the upper part of the hive the entrance is made smaller. The inside upper edge of the honey-chamber D is provided with a rabbet, *d'*, on two of its sides, for the purpose of using frames, if desired, instead of boxes, in the honey-chambers, the upper part of the hive being made of such dimensions as to allow the using of the same-sized frames as are used in the brood-chamber. The top E of the honey-chamber is movable, and held securely to its place by a button, *f*, placed on the under side of the cleat or strip *g*, fastened to each end and under side of the top board. The upper part of the hive is provided with ventilation-holes *h h* covered with wire-cloth; also, with handles *k* on the outside, just below the holes for ventilation. For the convenience of keeping the upper part of the hive raised to any desired height during the season spring-catches or stops G G may be used in connection with or without corner-buttons or stops *m m*, made of pieces of iron, and sunk into and even with the outside surface of the brood-chamber. In case it is desired to use the upper part of the hive at other than one height it is very necessary that the flush buttons or stops *m m* be used at the top and above the spring-stops G G, as they allow the upper part of the hive to be more easily removed from the brood-chamber. The honey-box H is made round or tubular-shaped, without sections, of one piece, of sufficient size to make the body of the box. The ends *n n* of the box are made of glass or wood, as desired, and secured in place by metallic strips *p p* fastened to the sides of the box. The saw-tooth or triangular-shaped comb-guide *s* is placed at suitable distance apart in and at the top of the box. Said honey-box can be made of any dimensions desired, and is provided with holes *t t* corresponding with the holes in the honey-board I of the hive, so that the bees can readily pass from the brood-chamber to the said honey-box. The board I fits inside of the hive on top of the brood-chamber, dividing the same from

the honey-chamber. Square boxes can also be used with the saw-tooth or triangular comb-guide.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the side-door B, of the iron strap *a* bent over the sides of the hive and the pins *b b* passing into the bottom edge of the door, substantially as and for the purposes herein set forth.

2. The round or tubular honey-box H, made of one piece, with wood or glass ends *n n* secured by the metallic strips *p p*, and the box provided with triangular comb-guides *s s* and bee-entrances *t t*, all substantially as and for the purposes herein set forth.

3. The arrangement of the spring-catches or stops G G and the flush stops *m m*, constructed as described, and used either separately or combined, substantially as and for the purposes herein set forth.

4. The combination of the upper or honey-chamber D, top E, cleats *g g*, and buttons *h h*, all constructed and arranged substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 25th day of October, 1871.

JAMES W. GLADDING.

Witnesses:

THOS. SLADE,

J. D. HARBUT.

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