(No Model.)

E. ARMSTRONG.

BEE HIVE.

No. 346,883. Patented Aug. 10, 1886.

Fig. 1.

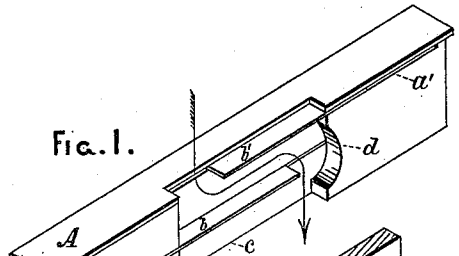


Fig. 2.

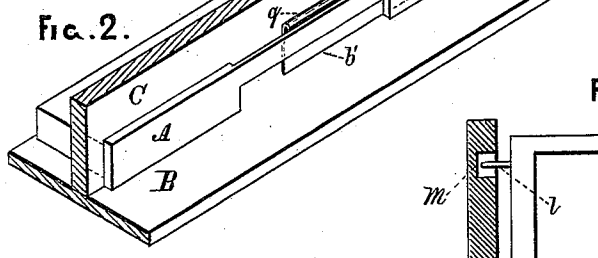


Fig. 4.

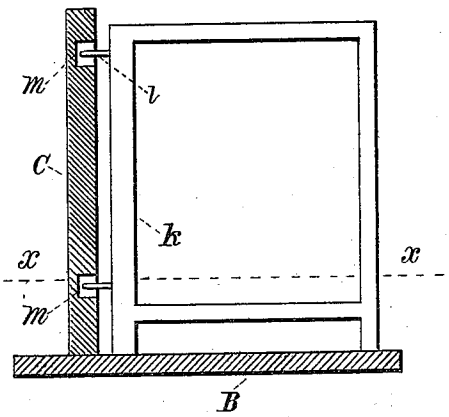


Fig. 3.

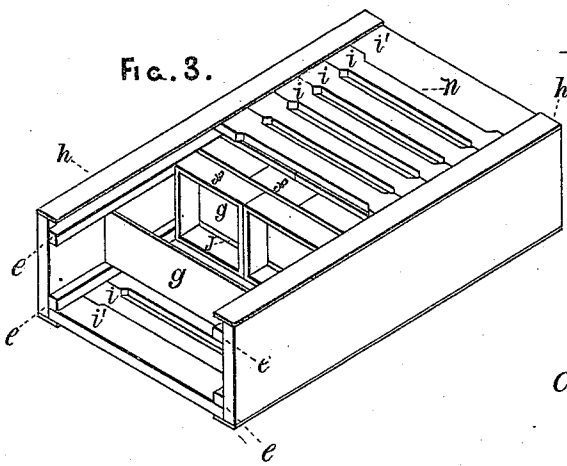
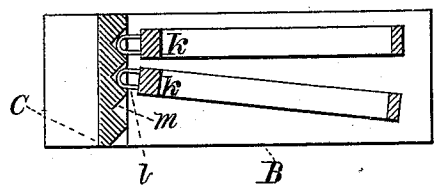


Fig. 5.



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UNITED STATES PATENT OFFICE.

ELVIN ARMSTRONG, OF JERSEYVILLE, ILLINOIS.

BEE-HIVE.

SPECIFICATION forming part of Letters Patent No. 346,883, dated August 10, 1886.

Application filed March 1, 1886. Serial No. 193,675. (No model.)

To all whom it may concern:

Be it known that I, ELVIN ARMSTRONG, of Jerseyville, in the county of Jersey and State of Illinois, have invented a new and Improved Bee-Hive; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to bee-hives; and it consists, first, in an improved entrance-block so constructed that the passage to and from the interior of the hive may be widened or contracted, and also made to afford either a straight or sinuous way for the admission and exit of the bees; second, in an improved reversible honey-rack, the construction of which is such as to combine every requisite convenience with greater simplicity and consequently at less cost than heretofore; third, in an improved means for supporting the brood-frames in a vertical position.

The details of the above-named improvements are explained in the following specification, and pointed out in the claims, and are also illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the under side of the entrance-block. Fig. 2 is a perspective view of a portion of the floor and front wall of the hive, with the entrance-block inserted. Fig. 3 is a perspective view of the honey-rack partly filled with honey-boxes. Fig. 4 is a transverse sectional view of the front wall and floor of the hive, showing one of the brood-frames in position. Fig. 5 is a plan view of the same, taken in the line *x*, Fig. 4.

In the drawings, A represents the entrance-block, B a portion of the floor of the hive, and C a portion of the front wall of the hive. In the underside of the entrance-block, a portion of which is cut away so as to form a wide opening, *c*, are grooves *a a'*, in which slide longitudinally shutters or doors *b b'*, preferably of sheet metal. The operation of this part of my device is as follows: The doors *b b'* are moved longitudinally in the grooves *a a'*, either into such position with reference to each other as to form a sinuous way into or out of the hive, as shown by the arrow, or into such a position as to afford a direct entrance the former adjustment being desirable in order to exclude robber-bees, the latter to increase the ventilation of the interior of the hive when such is desirable. To facilitate the sliding to and fro of the door *b'*, the latter is preferably made to project upward through the front part of the entrance-block, as shown at *q*, Fig. 2, thus obviating the removal of the entrance-block to open or close the hive.

By reference to the honey-rack, Fig. 3, of which the front end wall is purposely omitted to show the interior, it will be observed that the inner faces of the side walls are provided with strips *e*, adapted to support in position between the honey-boxes *f* plain rectangular separators *g*, which are of such width and length as to slide freely between the said strips, which, with the thin metallic flanges *h*, secured to the upper and lower edges of the sides of the rack, form grooves, in which slide laterally slats *i*, the edges of which are recessed to within a short distance of their ends, so that when the broad parts are brought edge to edge, as shown in the drawings, an opening is left between them sufficiently wide to allow the passage of the bees to and from the honey-boxes, which are held the requisite distance apart by the interposition of the separators *g*, which are purposely made as much narrower than the interior depth of the honey-boxes as is necessary for the passage of the bees, as shown at J.

To close the honey-boxes against the admission of the bees, the slats *i* are pushed along the grooves in which they slide until the openings between them are over the central part of the honey-boxes, which effectually closes them all simultaneously. When it is required to close only a few at either end, the slats *i'*, which are made about half as wide again as the others, and provided with a projection, *n*, upon one edge adapted to fit into the recesses of the other slats, and with which each end of the rack is furnished, both top and bottom, are pushed forward and followed by as many of the others as there are boxes to close; all the openings between the slats following the wide ones, *i'*, being then over the middle of the boxes closes the latter against the bees.

The top and bottom of the honey-rack are strictly similar, constituting in that respect what is commonly known as a "reversible" rack.

In regard to the means by which I sustain the brood-frames in a vertical position when in the brood-chamber, it will be seen by reference to Figs. 4 and 5 that the vertical bar *k* of each frame has inserted in it two staples, *l*, the circular parts of which are adapted to enter and impinge upon the inclined sides of cavities *m*, provided for their reception in the inner side of the front wall, C, of the hive, the two vertical posts of the brood-frame resting upon the floor B. This feature of my device readily admits of the separation of the frames for examination, as shown in Fig. 5, or their removal and replacement with very little danger of crushing or disturbing the bees, while the cost of manufacture is exceedingly small.

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

1. The entrance-block A, having a broad opening or entrance-way, *c*, in the roof of which are grooves *a a'*, extending into the solid portion of the block, said grooves being provided with doors or shutters *b b'*, adapted to slide longitudinally, so as to form either a sinuous or direct entrance, as and for the purpose set forth.

2. The honey-rack, the side walls thereof having flanges *h* and cleats *e*, in combination with honey-boxes *f*, separators *g*, and slats *i i'*, all constructed and adapted to operate as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 16th day of January, 1886.

ELVIN ARMSTRONG.

Witnesses:
ROBT. NEWTON,
F. X. SCHATTGEN.