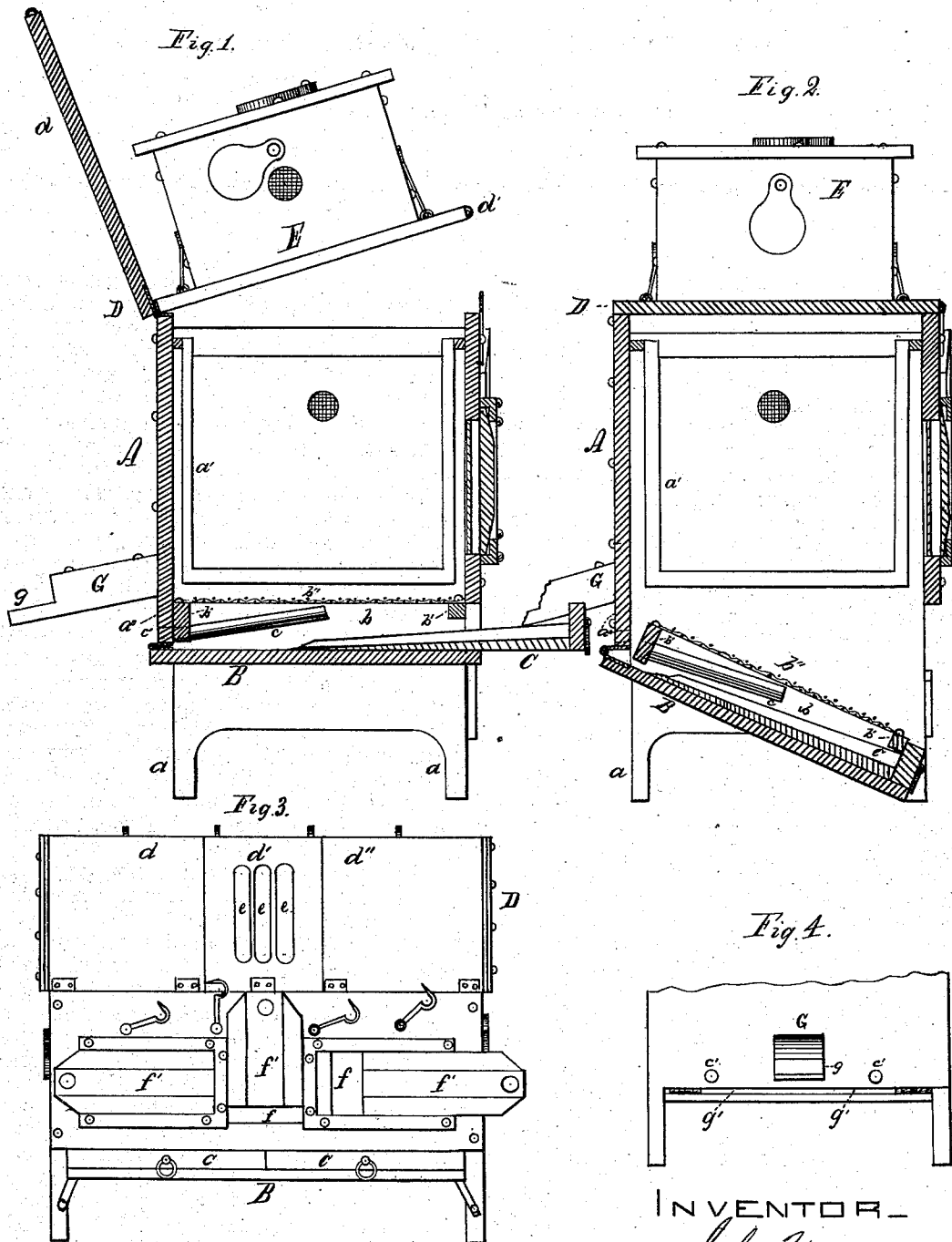


J. YODER.
Bee-Hives.

No. 156,623.

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WITNESSES=
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UNITED STATES PATENT OFFICE

JOHN YODER, OF LAGRANGE COUNTY, INDIANA.

IMPROVEMENT IN BEE-HIVES.

Specification forming part of Letters Patent No. 156,623, dated November 3, 1874; application filed August 10, 1874.

To all whom it may concern:

Be it known that I, JOHN YODER, of the county of Lagrange and State of Indiana, have invented certain new and useful Improvements in Bee-Hives; and I do hereby declare that the following is a full, clear and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

My invention consists in an improved arrangement of devices for capturing moths and robber bees, and preventing them from entering the working chambers of a bee-hive; also, in an improved device for ventilating bee-hives; also, in an improvement in the bottoms of bee-hives; also, in an improved arrangement by which the removal of honey from hives is facilitated.

In the accompanying drawing, Figure 1 is a transverse section of a bee-hive constructed according to my invention, the view being taken on line *x x*, Fig. 3, and showing the moth and robber trap and hinged bottom in position as when in use. Fig. 2 is the same section, showing the hinged bottom let down for the purpose of being cleaned. Fig. 3 is a front view, showing the hinged sections of the lid elevated to screen the person removing honey. Fig. 4 is a back view, showing the bee, moth, and robber entrances, *G g'*, *c'-c'*.

A is the body of a bee-hive, supported by legs *a a*, and containing the comb-frames *a'*. *B* is the bottom of the hive, hinged to the back wall *a''*, and separated from the lower edge of said wall by about the thickness of the hinges. Upon the upper side of this bottom are two or more cleats, *b*, one at each end, and in this instance, one midway its length, while cleats *b'* extend along its edges lengthwise. These cleats support a wire-netting, *b''*, the length of the bottom, and are high enough to bring the netting or gauze about on a level with the lower edge of the bee-entrance, so that the bees enter the hive above it. In the space between the netting *b''* and bottom *B* fit drawers *C*, the inner sides of which are open, allowing the tubes *c* to extend over the bottoms of said drawers. These tubes are inserted in

openings in the wall *a''*, and serve as entrances for robber-bees, which the netting prevents from getting into the upper part of the chamber. *D* is lid of the hive, and is composed of three sections, *d d' d''*, which are separately hinged to the top edge of the wall *a''*. In the central section *d'* of the lid are slots *e e e*, which lead into a honey-box, *E*, arranged on top of section *d'*. This honey-box is provided with openings in its sides and top, said openings being covered on the inside by wire-netting, and swinging blinds are arranged on the outside of the box, by which the openings may be closed when desired. The front of the hive is provided with glazed windows *f f f*, and sliding blinds *f' f' f'*, the windows allowing inspection of the comb-frames and the bees at work. *G* is the spout by which the bees enter the hive. It extends outward some distance from the hive, and is provided with an alighting-ledge, *g*. The aperture *g'*, between the hinged bottom and the lower edge of wall *a''*, is for the entrance of moths into the space below the wire-netting *b''* when they are endeavoring to enter the hive.

The operation of my invention is as follows: When moths, the well-known pests of bee-hives, are seeking an entrance into hives, they alight upon the top and sides, and crawl about seeking apertures away from the regular bee-way, which, in the working season, is usually crowded by outgoing and incoming bees. When moths alight upon my hive the only entrance they can find is the aperture *g'*, between the hinged bottom and the lower edge of wall *a''*, and this leads them into the drawers below the netting *b''*, which prevents them from rising up into comb, and in the drawers they become smeared with the drippings from comb and bees above, and are prevented from getting away. The drawers can be removed and cleaned, as desired. Robber-bees are also pests of working hives, and they too prefer to find an entry away from the passage used by the workers. For these marauders I have provided the tubes *c*, which are easy enough to get in through, but very hard to return by, owing to the small alighting accommodations at their inner ends. When the netting *b''* becomes clogged and covered with debris, dead bees, &c., the hinged bottom *B* may be swung

down, as shown in Fig. 2, and the netting cleared with a brush, or washed. The bottom may be supported by any suitable means. When it is desired to remove comb from the hive, the sections *d d'* of the lid are raised to a vertical position, in which they may be supported by the stiffness of the hinges, or any other suitable device, and thus they screen the person removing the comb from observation by the bees, the person standing in front, while the bees are usually on the rear side, where their entry-way is. The honey-box *E* is detachable from the lid-section *d'*, to which it is secured by hooks and staples, and in the winter it should be removed, cleared of its honey, the blinds swung aside to open the apertures, and the box replaced, when it becomes a ventilator. The apertures *h* afford sufficient ventilation for summer, but more is required in winter, because then all the swarm is crowded into the hive, and the exhalations are

apt to condense upon the frame-work and run into the comb, and cause it to become sour.

Having now fully described the construction and operation of my improved bee-hive, I claim and desire to secure by Letters Patent—

1. A bee-hive, having a reticulated bottom opening downward by a hinge or hinges, substantially as described.

2. The hinged base *B*, and the reticulated bottom *b''*, in combination with an intervening frame, drawers, and tubes, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own invention I affix hereto my signature in presence of two witnesses.

JOHN YODER.

Witnesses:

A. A. STUTZMAN,

WM. BEALE HALE.