

E. S. ARMSTRONG.
Improvement in Bee Hives.

No. 121,837.

Patented Dec. 12, 1871.

Fig. 4.

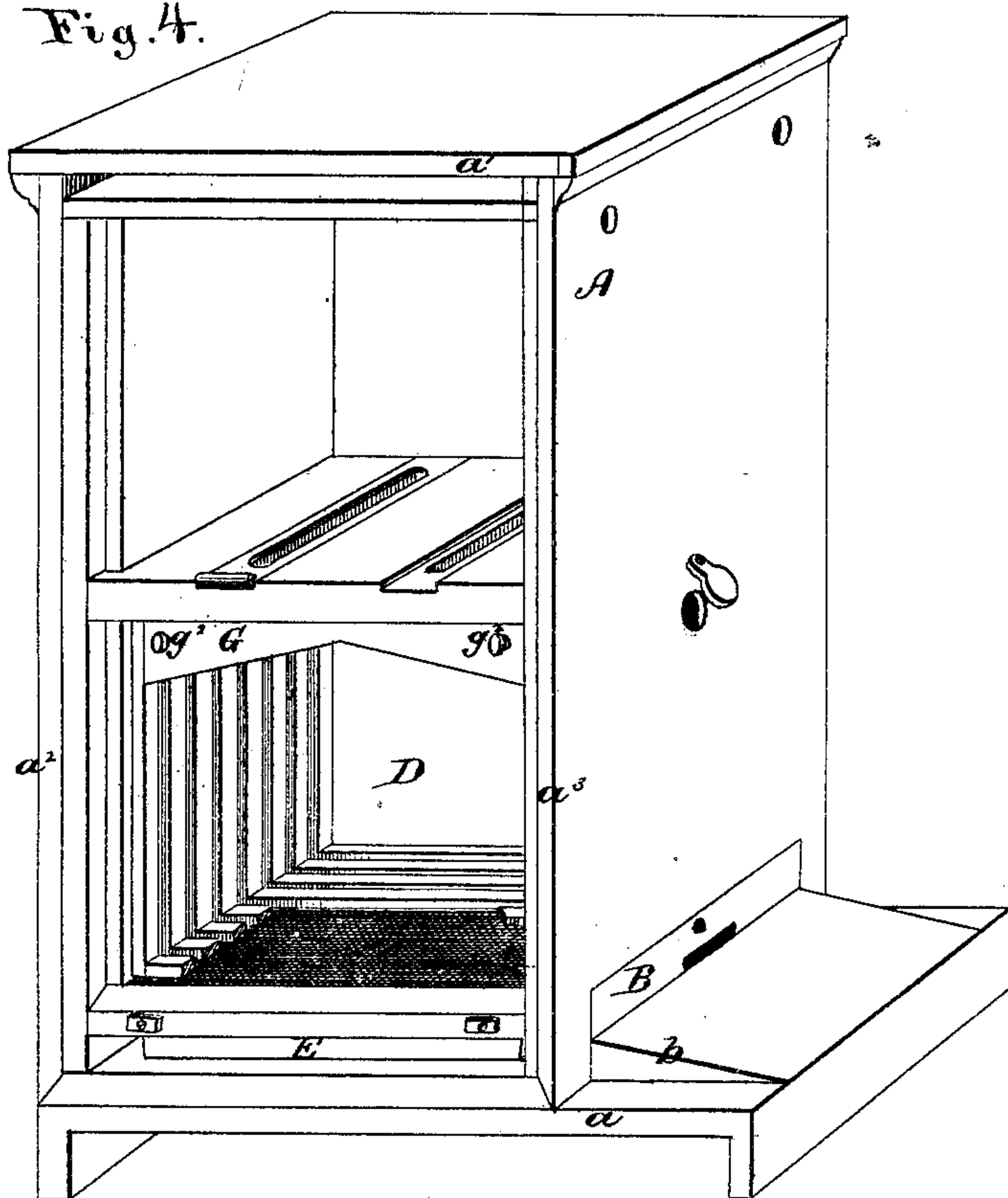


Fig. 6.

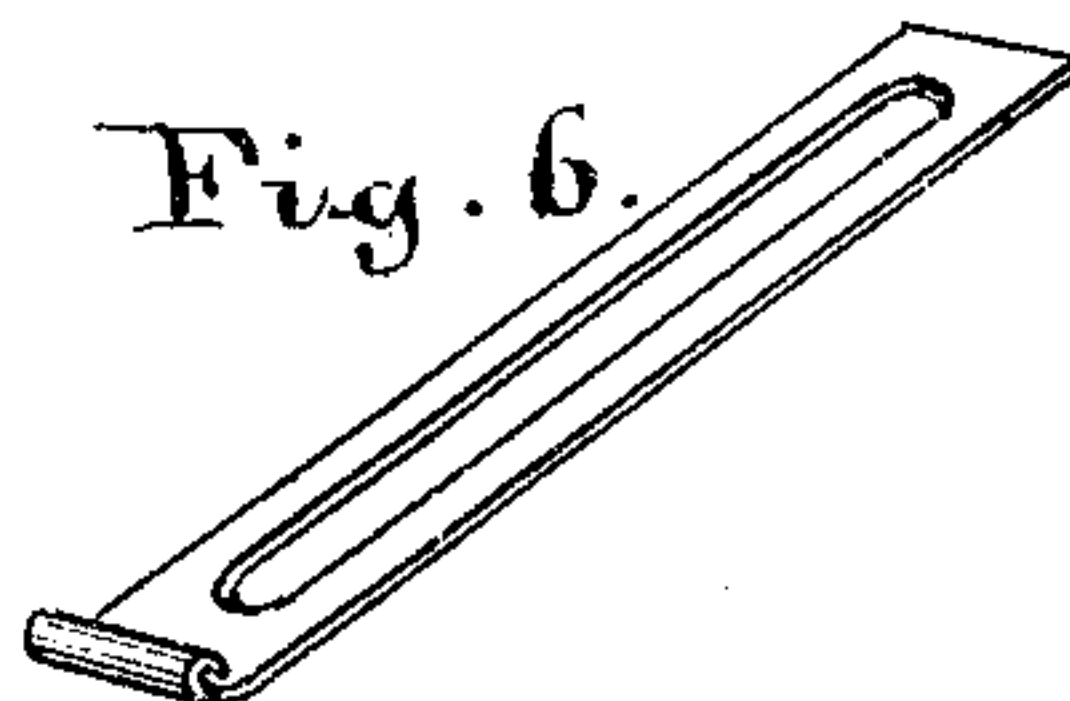


Fig. 5.

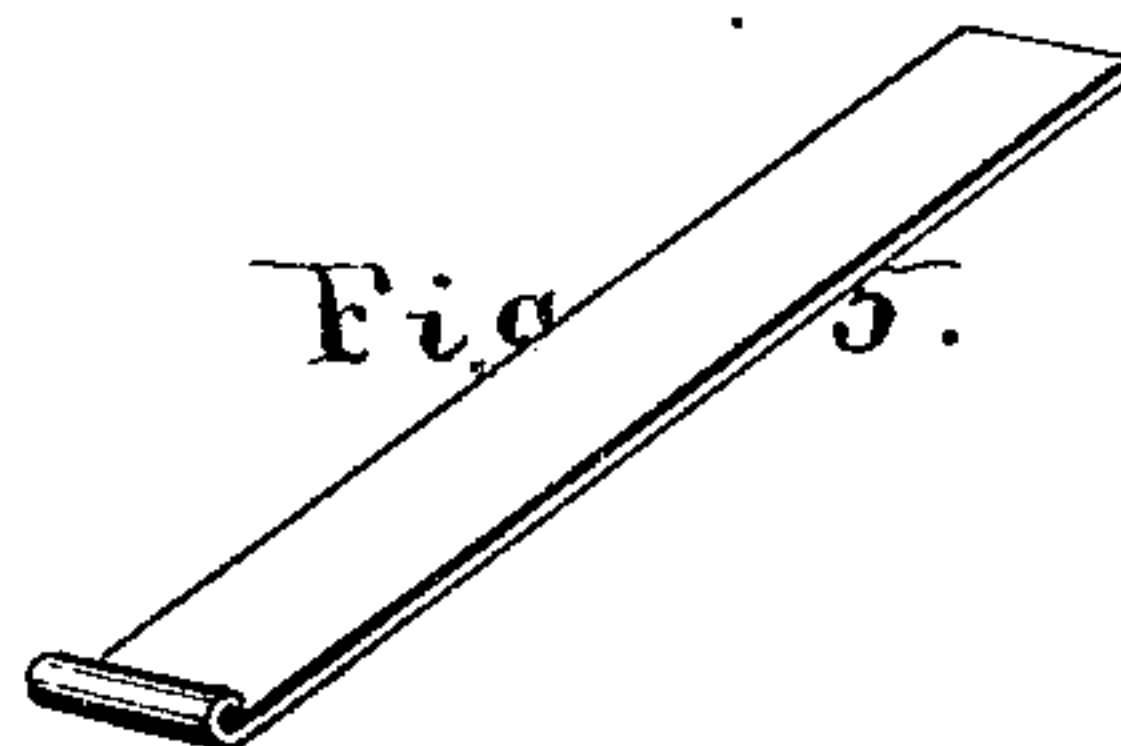


Fig. 3.

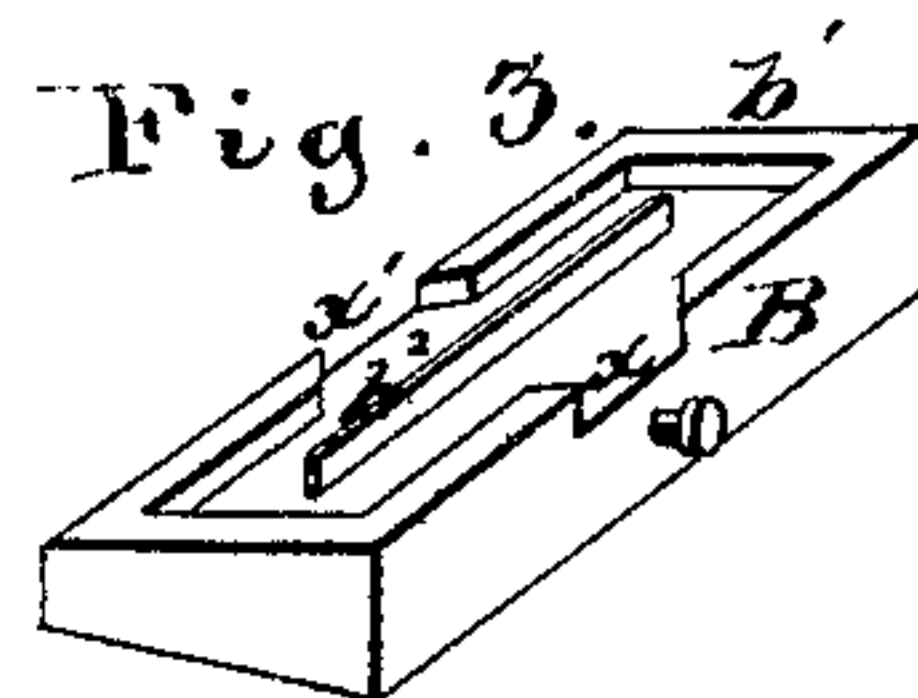


Fig. 2.

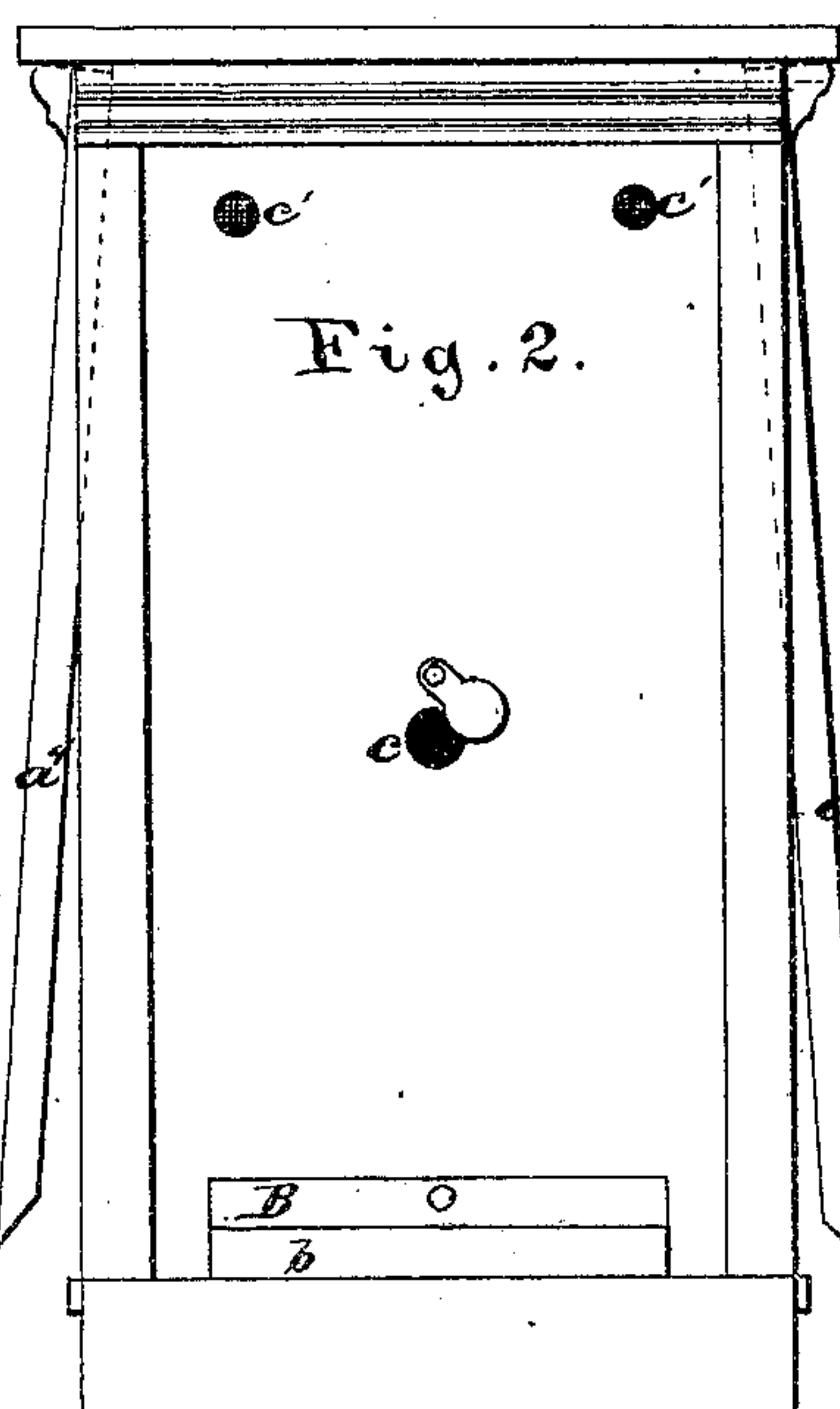


Fig. 1.

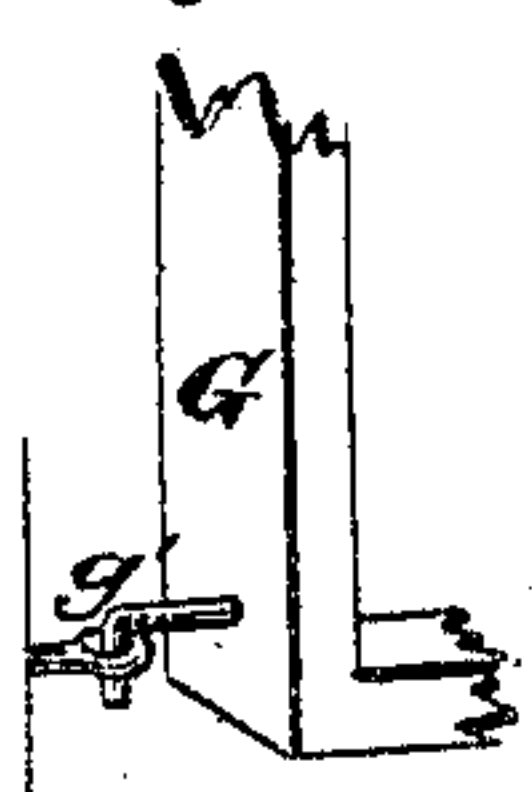
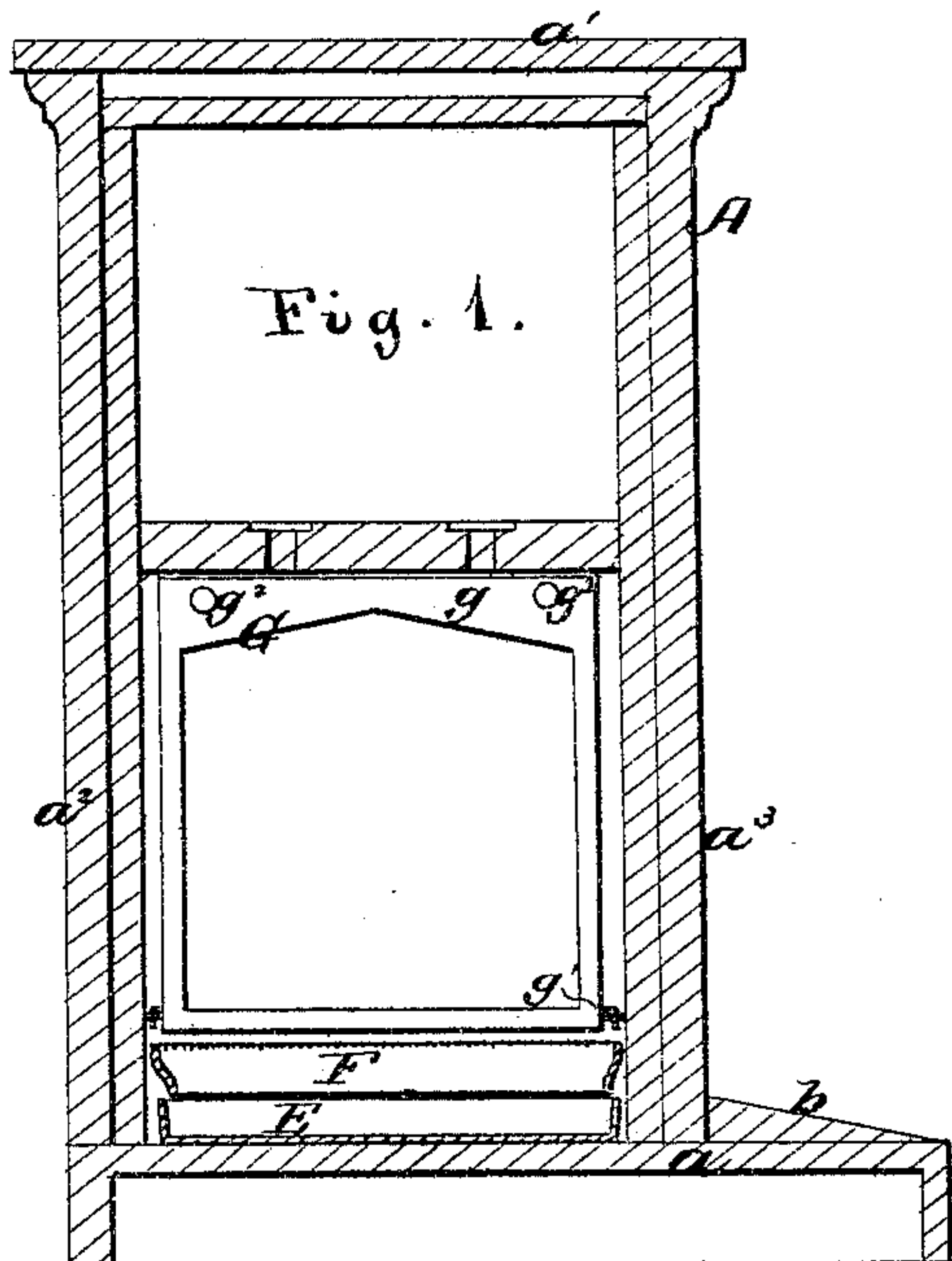


Fig. 1.



Witnesses.
C. F. Brown.
P. J. Hayes

Inventor.
E. S. Armstrong by
H. W. Beadle
att'y

UNITED STATES PATENT OFFICE.

ELVIN S. ARMSTRONG, OF JERSEYVILLE, ILLINOIS.

IMPROVEMENT IN BEE-HIVES.

Specification forming part of Letters Patent No. 121,837, dated December 12, 1871.

To all whom it may concern:

Be it known that I, ELVIN S. 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 drawing and to the letters of reference marked thereon.

This invention consists of certain details of construction, fully described hereinafter, by means of which certain marked advantages are gained over hives of the ordinary form.

Figure 1 represents a sectional elevation of my improved hive; Fig. 2, a front elevation; Fig. 3, a reversed view of the entrance-block detached; Fig. 4, a perspective view of the hive with one of the sides removed; and Figs. 5, 6, and 7, views of parts detached.

To enable others skilled in the art to make and use my invention, I will now proceed to describe fully its construction and operation.

The general construction of the hive may be described as follows: It consists of an inner and outer case with a space between the two for containing air. The inner case, which is the hive proper, of course, is divided into two main divisions, the lower being designed for containing the comb-frames and the upper for holding the honey-boxes. A represents the outer case of the hive, which is provided with a base-board, *a*, top board *a*¹, end boards *a*² *a*³, and removable sides *a*⁴ *a*⁵. The base-board *a* extends outward beyond the line of the hive, and furnishes a support for the inclined board *b*, upon which the bees alight. The removable side boards are attached to the hive in a peculiar manner. The upper edge of each when in place rests in a groove or recess in the top board, and the lower edge consequently is made inclined and rests upon a bar correspondingly inclined, and is held in place by means of buttons, as shown. The side edges of the boards are protected by strips projecting from the end boards, as shown. The front end of the hive is provided with a large wedge-shaped opening for the entrance of the bees. In the honey season this is left open, but at other times, and especially when the bees show a disposition to rob one another, the block B, which accurately fits the entrance, is employed. This block is provided upon its lower side with a flange, *b*¹, extending

entirely about its edge, excepting at the central points *xx'*; and it has also a longitudinal rib, *b*², which is centrally located in the recess formed by the flange, as shown. *c* represents an auxiliary entrance, which may also be used, if desired, during the busy season, in connection with the main entrance. *c'* *c'* represent holes for ventilation. D represents the chamber containing the comb-frames. Its floor, which is located upon a level with the lower bee-entrance, consists of a wire screen, the meshes of which should be too small to permit a bee to pass through them, but yet large enough to permit the passage of a moth. Sufficient room is left beneath the screen for the insertion of a drawer, E, which is designed to receive the dirt, moths, and larvæ that fall and accumulate in the hive, and thus permit its ready removal. This drawer is constructed with its sides turned in toward the center, as shown, by which means the escape of any moth which may fall into it is prevented. F represents a diaphragm, consisting of a suitable strip of metal properly bent, as shown, which is fastened to the sides of the hive below the screen, by which means it is rendered impossible for any moth that has fallen through the screen to return by climbing up the sides of the hive. G G represent the comb-frames, which are provided with a top bar, *g*, having its lower edge inclined upward from the sides to the center, as shown, said edge also being made triangular in form. These frames are secured in place by means of hooks *g*¹ upon each side, at their lower ends, which hooks are caught into eyes or staples attached to the ends of the comb-frame chamber, as shown. The upper ends of the comb-frames are kept separate from each other by means of projecting pins *g*², as shown. This chamber is also provided with removable sides, which are secured in place in the same manner as the sides of the outer case, heretofore described. The comb-frame chamber is connected with the upper chamber, containing the honey-boxes, by means of slotted openings, as shown. The division-board, in which these openings are made, is provided with a recess or other proper means of holding a slide. Ordinarily a slide is employed having an opening corresponding with the openings through the board; but when it is desired to take out the honey-boxes this slide is withdrawn and a blank slide without an opening is introduced in its place.

Honey-boxes having openings corresponding with the slot in the division-board are placed in the chambers.

By means of this construction described many marked advantages are obtained. By means of the removable entrance-block B a large opening or a small one is obtained, as may be desired. When the block is employed, the entrance to the hive is made circuitous, by which means strange bees are effectually prevented from entering the hive, while no impediment is offered to those belonging to it. By means of the wire-screen all dirt and filth accumulating in the hive are permitted to fall into the drawer, in which they are easily removed. The meshes of the screen are sufficiently large to permit a moth to fall through them, and, having once passed through, its return by crawling up the sides of the hive is effectually prevented by the turned edges of the drawer and by the diaphragm F. The sides of the hive are easily removed, and yet, from their peculiar construction when in place, they effectually exclude the extremes of heat and cold. The comb-frames are readily removed and replaced, when desired. From their peculiar construction they are separated the proper distance apart, and it is rendered practically impossible to injure the bees while moving them. The bees ordinarily

have ready access to the upper chamber; but when it is desired to remove the honey-boxes the slotted slide is withdrawn and a blank slide substituted in its place. The object of employing a slotted slide is as follows: The bees in passing from one compartment to the other deposit a gummy substance, termed glue, about the aperture, the accumulation of which would prevent the insertion of a slide; but by the employment of the slotted slide, which remains in place, this glue may be cut away at any time by its withdrawal, by which means room is left for the insertion of its substitute.

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

1. The diaphragm F, constructed as described, in combination with the wire-screen, as and for the purpose set forth.

2. The entrance-block B, provided with a central rib and circuitous passages, as described, for the purpose set forth.

This specification signed and witnessed this 26th day of August, 1871.

ELVIN S. ARMSTRONG.

Witnesses:

JAMES A. LOCKE,
M. C. STANLEY.

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