

(No Model.)

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S. PERKINS.

BEE HIVE.

No. 331,539.

Patented Dec. 1, 1885.

Fig. 1.

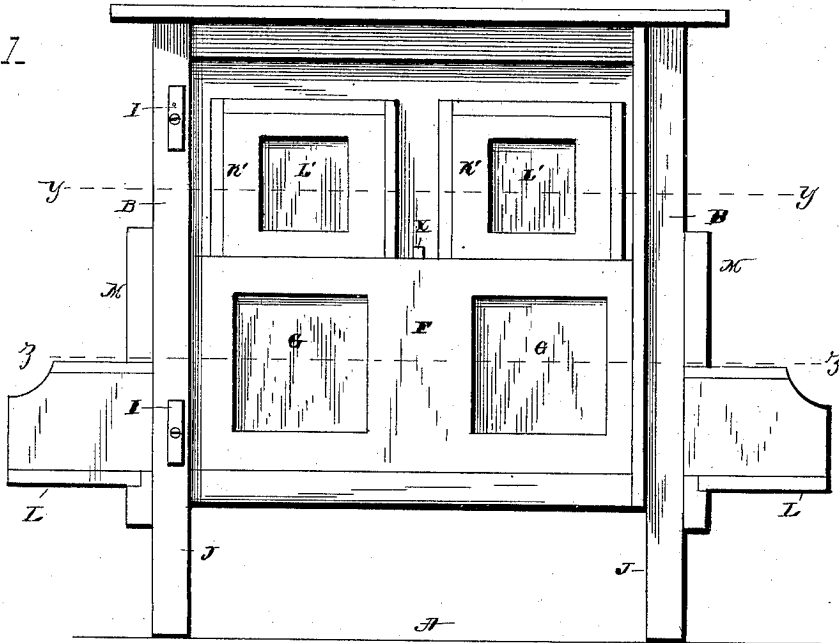
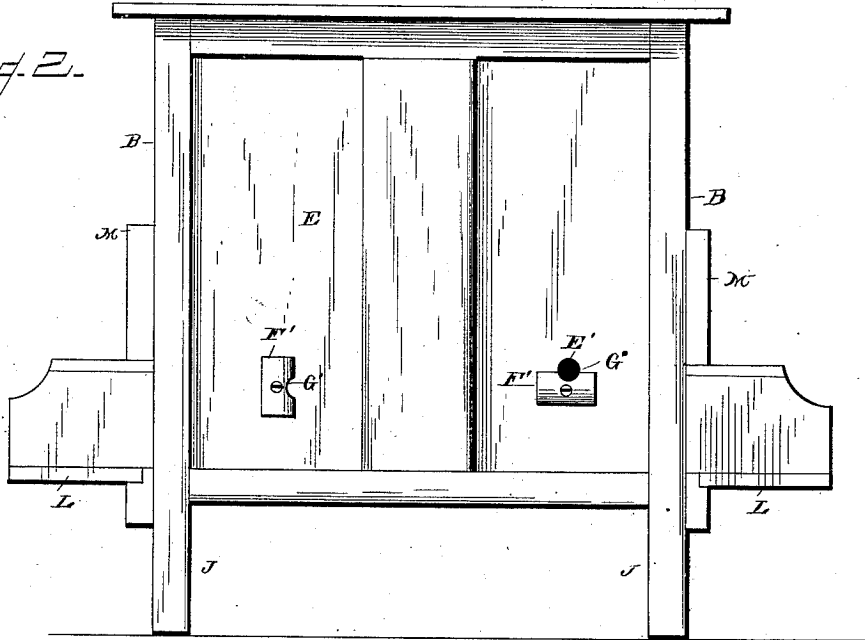


Fig. 2.



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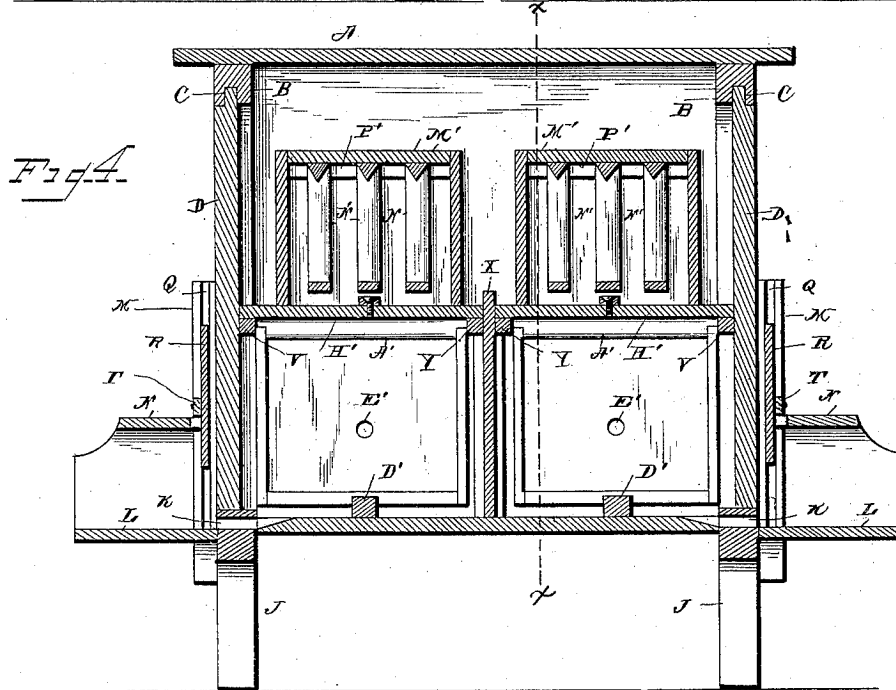
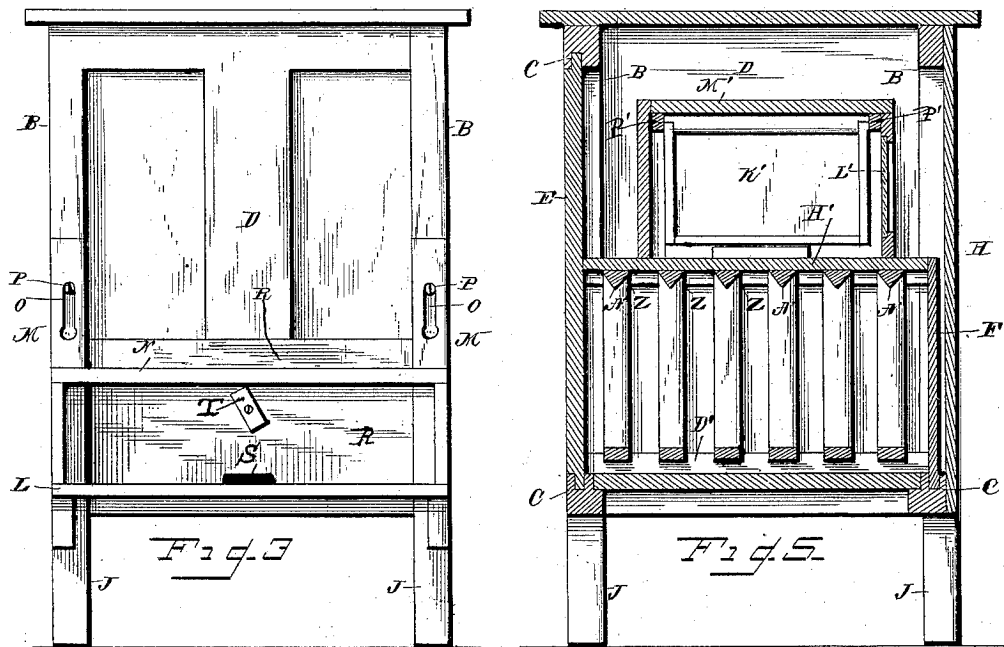
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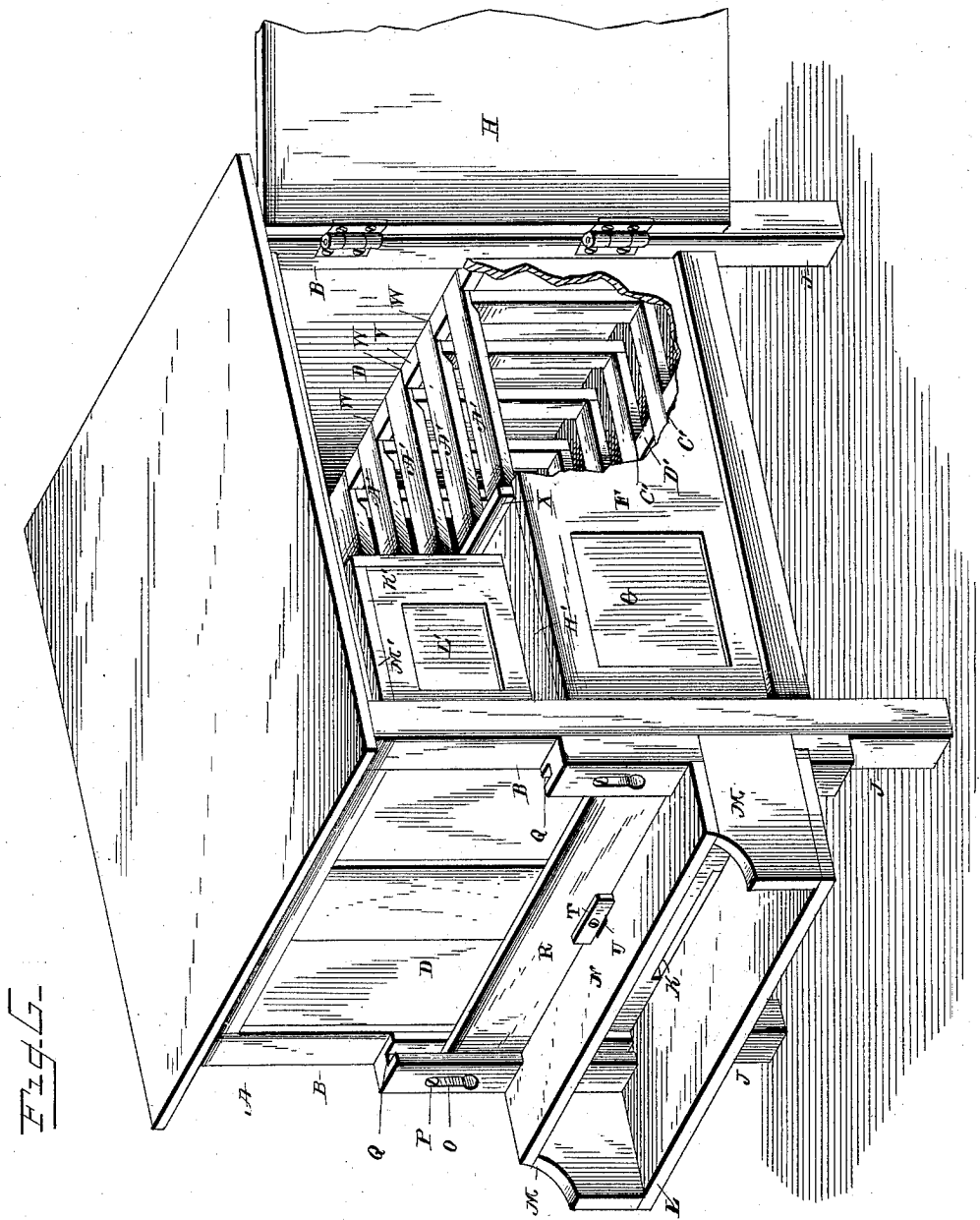


Fig. 6

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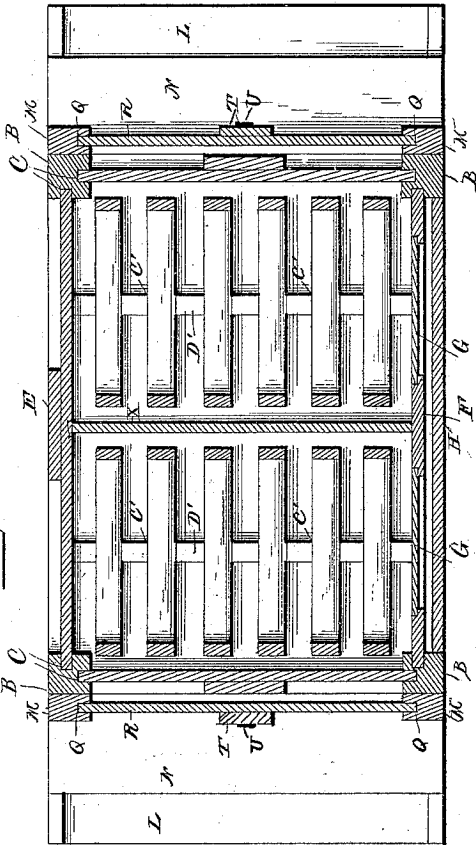
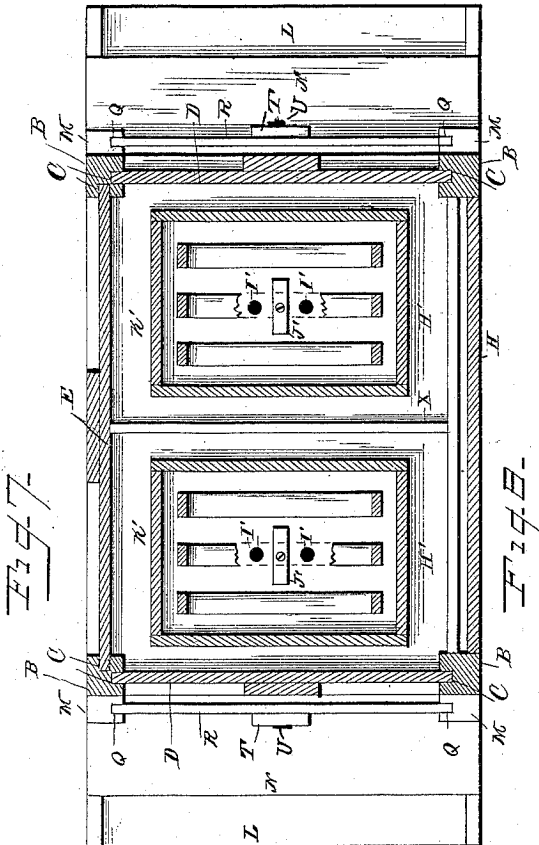
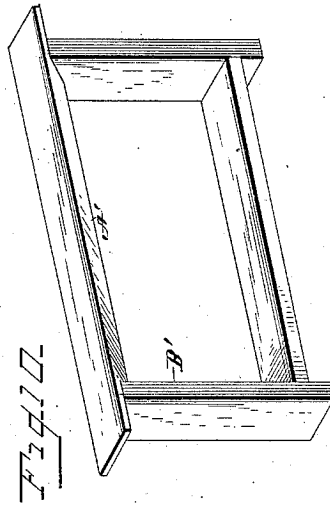
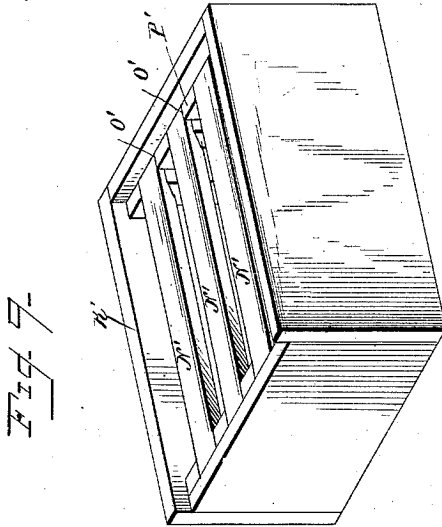
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# UNITED STATES PATENT OFFICE.

SIDNEY PERKINS, OF STANFORD, KENTUCKY.

## BEE-HIVE.

SPECIFICATION forming part of Letters Patent No. 331,539, dated December 1, 1885.

Application filed July 22, 1875. Serial No. 172,295. (No model.)

*To all whom it may concern:*

Be it known that I, SIDNEY PERKINS, a citizen of the United States, and a resident of Stanford, in the county of Lincoln and State of Kentucky, 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 of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a front view of my improved bee-hive, showing it opened. Fig. 2 is a rear view. Fig. 3 is a side view. Fig. 4 is a longitudinal vertical section. Fig. 5 is a cross-section on line  $x x$ , Fig. 4. Fig. 6 is a perspective view of the hive, showing one of the honey-boxes and one of the honey-boards removed and a portion of the inside front-piece broken away. Fig. 7 is a horizontal section on line  $y y$ , Fig. 1. Fig. 8 is a horizontal section on line  $z z$ , Fig. 1. Fig. 9 is a perspective view of one of the honey-boxes with the lid removed. Fig. 10 is a perspective detail view of one of the brood-frames.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to bee hives; and it consists in the improved construction and combination of parts of the same, as herein-after more fully described and claimed.

In the accompanying drawings, the letter A indicates the casing of the hive, which is composed of four posts, B, having longitudinal grooves C in two of their sides, into which grooves the ends of the side or end pieces, D, are inserted, and the ends of the back piece, E, and of the low inner front piece, F, which only extends up about one-half of the height of the side and back piece, and which is provided with panes G of glass, allowing the brood-chamber to be inspected from outside. A door, H, is hinged to one of the forward posts, and covers the entire front of the casing, turn-buttons I, or similar means, retaining it closed. The lower ends, J, of the posts form legs for the support of the hive, and the entrance K into the hive are at the bottom of the side pieces.

The foot-boards L, upon which the bees alight, are provided with upwardly-projecting side pieces, M, which form supports for top

boards N, and the upper ends of the said side pieces are formed with vertical slots O, which slide upon headed screws or bolts P, inserted into the sides of the hive-box. The side pieces, M, have vertical grooves Q upon their inner sides, and sliding doors R slide with their ends in the said grooves, and have notches S in their lower edges, registering with the bee-entrances, but of less width than the said entrances. These doors are provided with turn-buttons T, and the rear edges of the top pieces N have notches U, through which the turn-buttons can pass when they are turned vertically. During the working season these doors are held up from the bottom of the hive, and the entrance K is entirely unobstructed; but during the winter, when it is desired to have the hive closed as much as possible, the button is turned vertically, and the doors slipped down as far as they will go. When they are in this position the button is turned slightly to one side, and the top of it engages with the under side of the top piece, N, as shown in Fig. 3. This locks the doors in place, and prevents their being raised by mice and such like small animals that may try to gain an entrance.

The side pieces of the hive-box are provided upon their inner sides with cleats V, having equidistant notches W, and the lower half of the hive-box is divided by a partition, X, having near its upper edge a pair of cleats, Y Y, having equidistant notches Z, which cleats are at a level with the cleats upon the side pieces, and the ends of the top pieces A' of the comb-frames B' rest in the notches of these cleats. The bottom pieces of the comb-frames rest in notches C' in cleats D', secured to the bottom of the hive-box, which cleats serve to raise the frames from the bottom and to prevent their sagging when full of honey and brood, and the notches in these cleats, as well as in the cleats supporting the top pieces of the frames, prevent the frames from sliding too close together, keeping them at equal distances.

The back piece of the hive has two perforations, E', one for each compartment, formed by the partition, and these perforations may be covered by means of two turn-buttons or pivoted strips, F', which are pivoted upon screws or nails, and which have round notches G' in one edge, which will register with a portion of the edge of each aperture, thus

enabling the said turn-buttons or strips to be made comparatively short, while they will cover the perforations when they are turned over them, and entirely uncover them when they are turned off from them.

The honey-boards H' rest with their edges upon the cleats supporting the comb-frames, and are provided each with two perforations, I', which may be covered by a turn-button or pivoted strip, J', pivoted between the perforations, the said perforations affording free passage from the lower brood-chamber to the honey-boxes K', which rest upon the honey-boards, and serve as receptacles for the surplus honey. The bottoms of these honey-boxes are open, and their front sides are provided with panes L' of glass through which their contents may be viewed from the outside, and the tops of the honey-boxes are provided with sliding lids M', through which access may be had to the interior of the boxes, the surplus-honey frames N' resting with the ends of their top pieces in equidistant notches O' in cleats P', secured at the upper edges of the end pieces of the boxes.

The top pieces of the comb and honey frames are triangular in cross-section, having the ridges formed by this construction projecting inward into the frame, so that the bees will not waste wax in building the upper rows of cells, the ends of the cells being, as is well known, pyramidal, and consequently resting with their inclined faces against the inclined faces of the top pieces of the frame, while in frames having flat top pieces the spaces left between the pyramidal ends of the cells would be filled with wax.

The surplus-honey boxes are placed with their open lower sides upon the honey-boards, and there will in this manner be no covered space in which ants or other insects may be harbored, as is often the case in hives in which the honey-boxes are provided with a closed bottom, and rest with this bottom upon the honey-boards, in which case a space is formed between the bottom and the honey-board, in which ants, roaches, and other insects may hide and annoy the bees, rob them of their honey, and ruin the combs.

The sliding doors R at the entrances in the sides of the hive-box are raised during the summer, when the entire entrances K will be uncovered; but in winter the doors are let down and the narrower entrance-slots S in the lower edges of the doors will partly close the entrances and prevent cold from entering the hive.

If for any reason it is desired to prevent the bees from entering the hive for a short time, as when a swarm tries to enter the hive, or the colony formerly occupying the hive has been transferred and it is desired to keep the bees from entering their old hive, the foot-board L may be removed entirely by raising it until the heads of the screws P will pass through the slot O, which is slightly larger at the bottom for putting on, or taking off the

foot-board or the board can be raised until the entrance of the hive is covered, and then secured in place by tightening the screws P; or a small piece of wood can be put in the slot above the screw.

The perforations in the back of the hive are for the purpose of ventilating the hive, and may be opened during warm weather and closed during cold weather by means of the turn-buttons or pivoted strips F'.

The honey-boxes may remain in the hive after the working season is over and after they have been emptied of their honey, and access from the brood-chamber up into the honey-boxes may be cut off by simply turning the turn-buttons or pivoted strips J', so as to cover the perforations in the honey-boards H'.

Free access may always be had to the hive by opening the door in the front side of the box, and the working of the bees may be observed through the panes of glass in the honey-boxes as well as in the brood-chamber.

The honey-frames in the honey-boxes may be removed by sliding the covers off from the boxes, so that the frames may be removed as they are filled without disturbing any other parts of the hive.

The notched cleats D', supporting the bottom pieces of the comb-frames in the brood-chambers, prevent any possible breaking down of the said frames, which grow very heavy as they are filled with honey and with the brood, the cleats removing some of the strain which otherwise would fall entirely upon the top pieces of the frames and upon the cleats at the top of the brood-chamber.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a bee-hive, the combination of the hive-box having an entrance at the lower edge of its side, a frame consisting of the foot or a lighting board, side pieces having vertical grooves in their facing sides, and a top board secured between the said side pieces above the foot-board and having a notch in its inner edge, a door sliding in the grooves of the side pieces and having a notch in its lower edge registering with the entrance, but of smaller dimensions than the same, and a turn-button pivoted upon the door registering with the notch in the top piece and slightly narrower than the said notch, but longer than the same, as and for the purpose shown and set forth.

2. The combination, with the hive-box having the entrance at the lower edge of its side, of a foot-board having vertically slotted upright side pieces and engaging screws in the side of the hive, whereby the foot-board can be raised to cover the bee-entrance, as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

Witnesses: SIDNEY PERKINS.  
A. A. MCKINNEY,  
GEO. L. PENNY.