

H. GREMS,

2. Sheets. Sheet. 1.

Bee Hive

No. 100,524.

Patented Mar. 8. 1870.

Fig. 1.

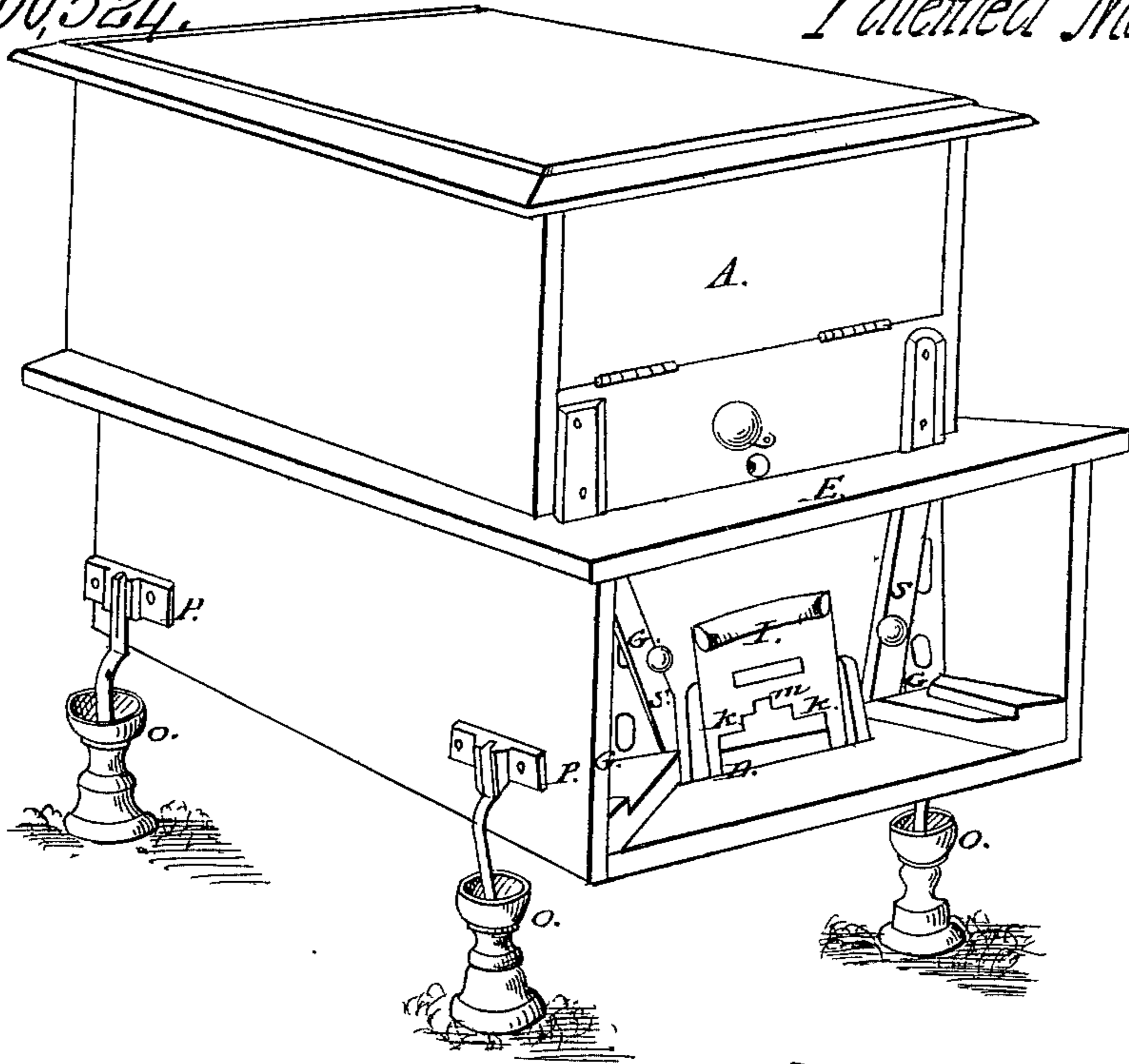
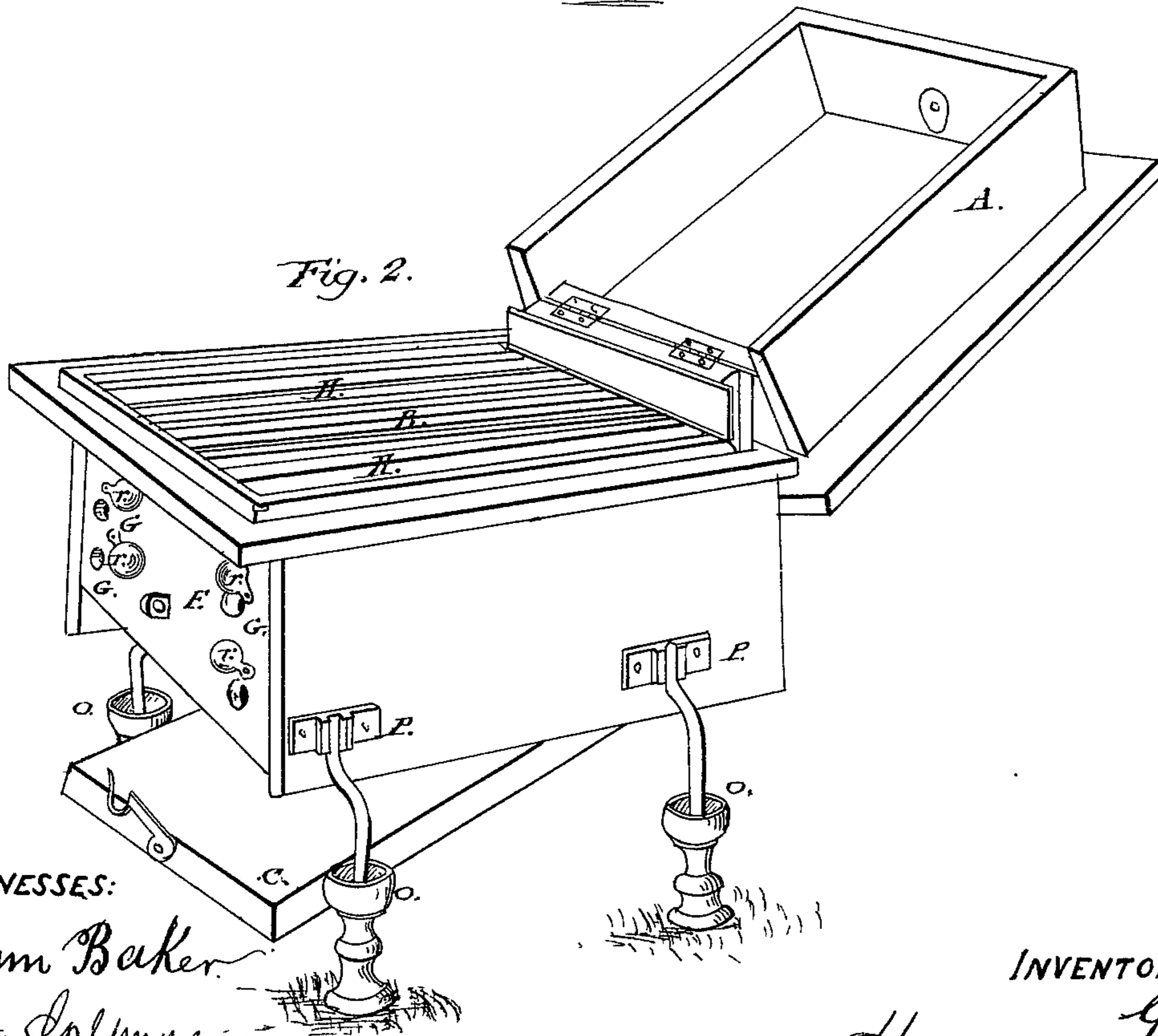


Fig. 2.



WITNESSES:

William Baker  
Doctor G. M. M. M.

INVENTOR:

Henry Grems.

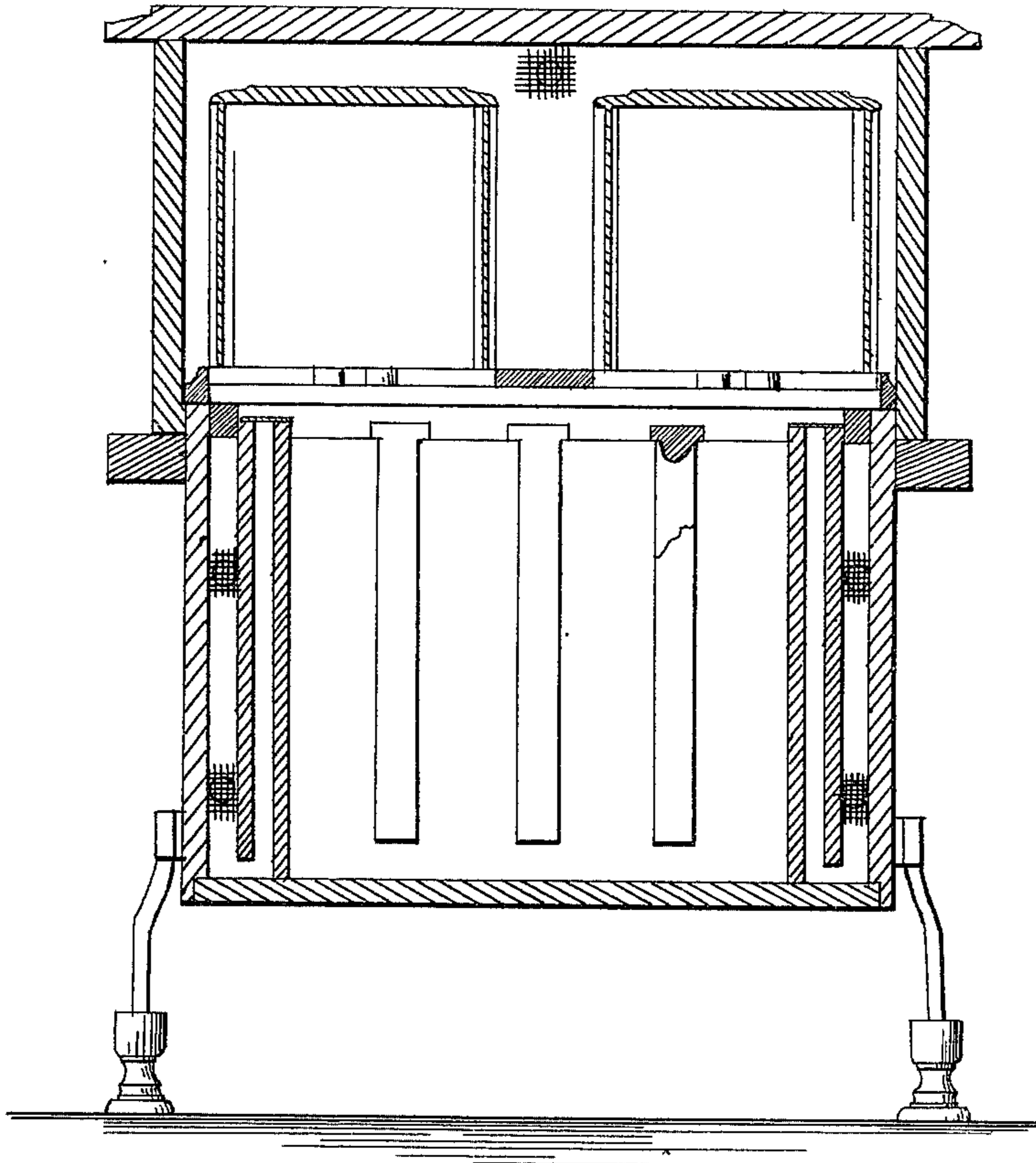
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Fig. 3.



WITNESSES:

William Baker  
Victor Gilmore

INVENTOR:

Henry Grems

# United States Patent Office.

HENRY GREMS, OF WESTMORELAND, NEW YORK.

Letters Patent No. 100,524, dated March 8, 1870.

## IMPROVEMENT IN BEE-HIVES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, HENRY GREMS, of Westmoreland, in the county of Oneida, and State of New York, 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 construction and use of the same, reference being had to the annexed drawings making a part of this specification, in which—

Figure 1 is an external view of the complete hive.

Figure 2 is the same, with the hinged top A thrown back in order to show the usual arrangement of comb-frames B and air-passages H, on the top of which and upon an intervening platform are to be set the movable boxes for the surplus honey, which boxes are covered by turning down over them the hinged top A.

This latter figure also shows the drop bottom C, made for the convenience of cleaning out the hive without disturbing the bees.

My invention consists in providing a more perfect ventilation for the hive, in order to induce the bees to continue their work during the heat of summer, instead of clustering upon the external surface of the hive in search of free air.

In fig. 1 we see the front end of the hive, with the entrance D for the bees situated in a recess overhung by the projecting canopy E.

In fig. 2 we see the rear end F, with the drop bottom C, shown here as let down, to brush off the filth which gathers upon its surface. When this is done, the bottom is again hooked up to the staple F, when all is tight and secure. This adjustable bottom is hinged at the front, and by the hinge being screwed to the upper side of the joint, the end of the board being beveled off at the under edge so as to allow the back end to fall, as shown in the figure.

The ventilation is effected by means of two air-passages, side by side on each side of the hive, formed by partitions; the first partition standing within half an inch or thereabouts of the side of the hive; the second the same distance from that. Then comes another partition, standing next to the space occupied by the comb-frames. The first partition forms a passage closed at the top, and leaving an opening underneath it communicating with the adjoining passage. The air passes up this latter passage, and over the next partition into the interior of the hive.

The second air-passage mentioned is covered by a

fine wire-gauze screen, admitting the passage of the air, but preventing that of the bees.

This arrangement of partitions and air-passages is repeated on the opposite side of the hive. They are more distinctly shown at G, Figure 3, which is a cross-section of the hive.

The air enters these air-passages at the orifices G, figs. 1 and 2, at both ends of the hive. These orifices have an inside covering of wire-gauze to exclude the bees and the insects, and are entirely closed at pleasure by the outside sliding valves *r*, seen in the rear, and the slides *s*, seen in front.

The intervening platform being here removed, the surface B, fig. 2, discloses the inside air-passages at H, covered with wire-gauze as described, the middle space B being that occupied by the usual comb-frames with their intervening spaces.

Above all this lies the usual platform, (not here shown,) containing apertures for the passage of the bees into the chamber above, where are placed, as before stated, the movable honey-cells for the surplus honey.

There is an arrangement for the entrance of the bees at D, fig. 1, designed to contract the entrance by means of the adjustable door I, so as to admit the entrance or exit of only one bee at a time, to enable the swarm within to contend with advantage against intruding swarms that come to rob them.

The cupped legs *o* are also provided to contain water to drown on their passage such creeping insects as might otherwise invade the hive.

But I do not now claim as new the device at the front entrance, nor the cupped legs here mentioned; but

What I now claim as my invention, and desire to secure by Letters Patent, is—

The arrangement of the vertical triple walls forming two connecting air-spaces for the air to pass through them from bottom to top, the inner one of which communicates with the horizontal air-spaces between the comb-frames and the upper honey-boxes, while the outer space admits air from the outside through adjustable perforated openings upon the front and rear ends of the hive, substantially as herein described and set forth.

Witnesses:

WILLIAM BAKER,  
A. WHEDON.

HENRY GREMS.