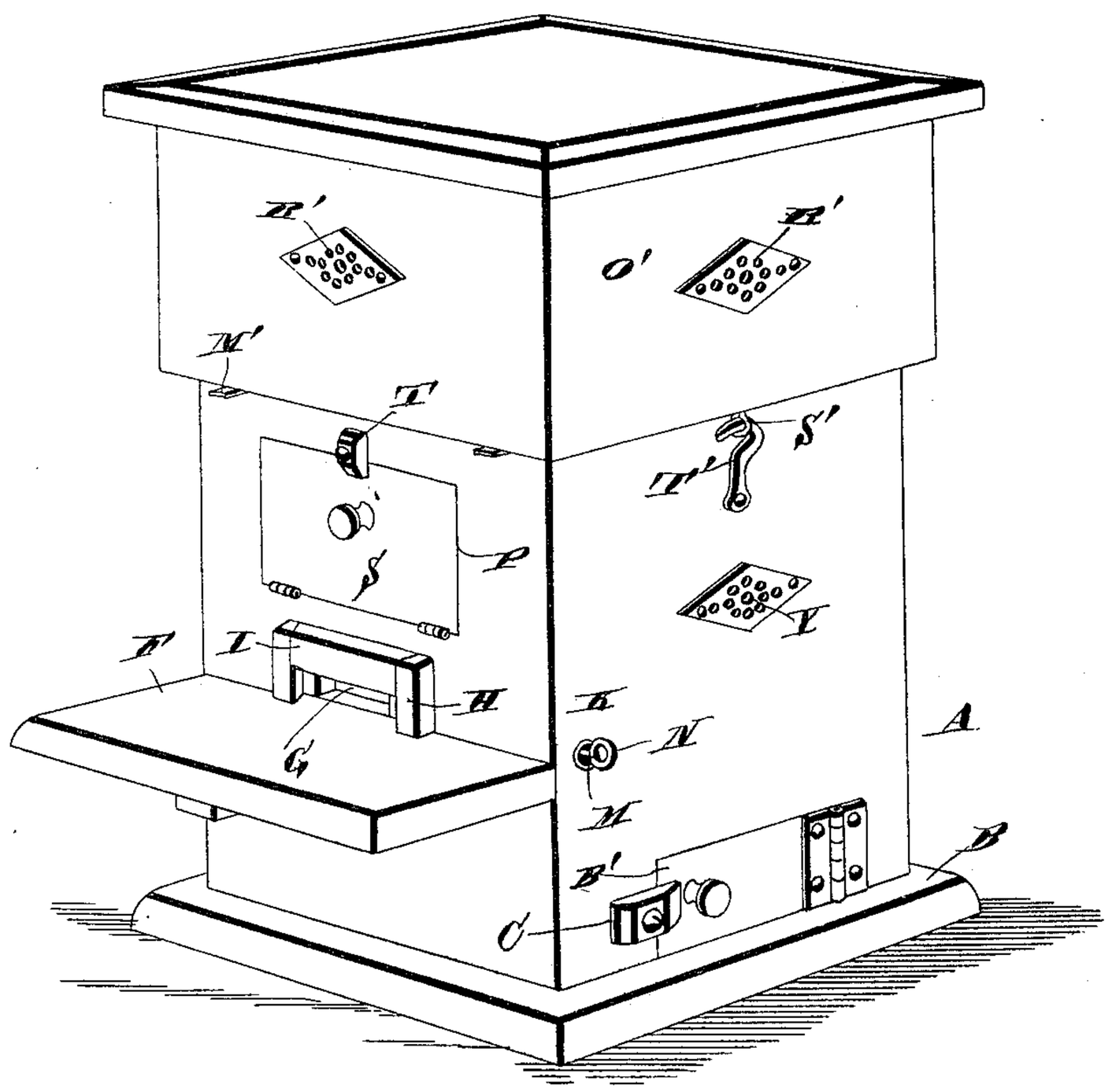
(No Model.) 3 Sheets—Sheet 1.

C. H. STUMP.

BEE HIVE.

No. 410,701. Patented Sept. 10, 1889.

Fig. 1.



Witnesses
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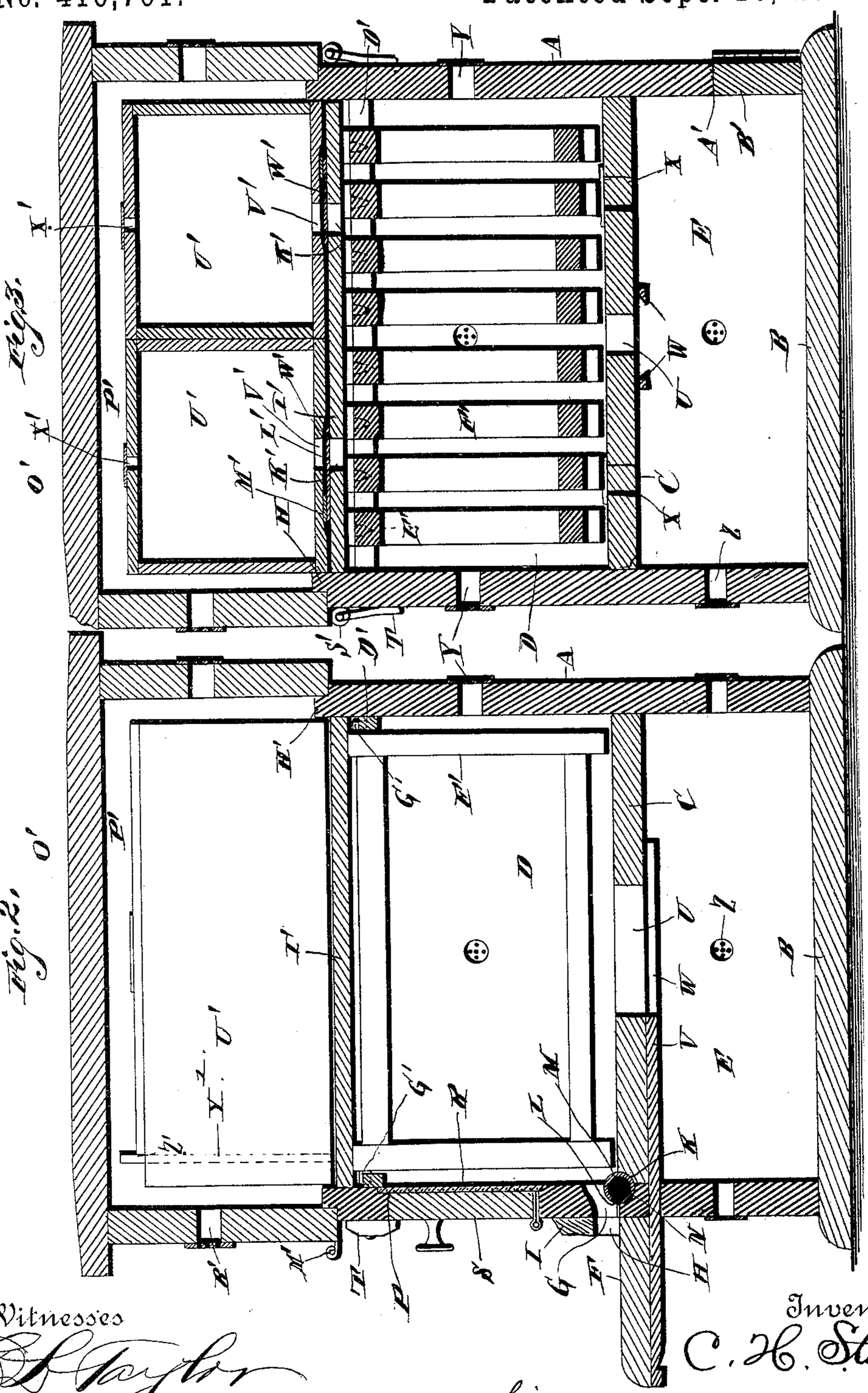
(No Model.) 3 Sheets—Sheet 2.

C. H. STUMP.

BEE HIVE.

No. 410,701. Patented Sept. 10, 1889.



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(No Model.) 3 Sheets—Sheet 3.

C. H. STUMP.

BEE HIVE.

No. 410,701. Patented Sept. 10, 1889.

Fig. 4.

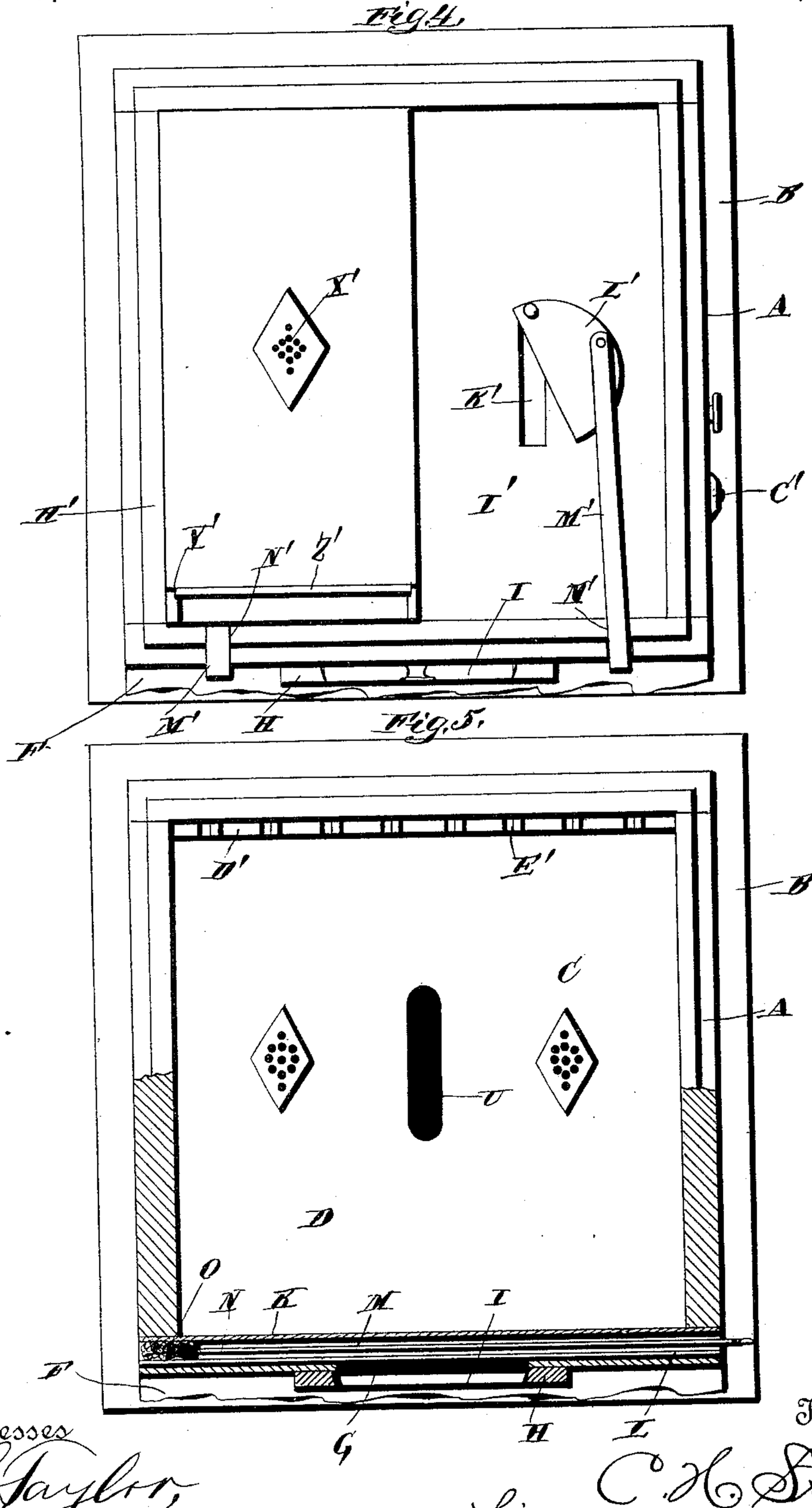

Fig. 5.

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UNITED STATES PATENT OFFICE.

CHRISTIAN H. STUMP, OF SEVIERVILLE, TENNESSEE, ASSIGNOR OF ONE-HALF TO WILLIAM P. MITCHELL, OF SAME PLACE.

BEE-HIVE.

SPECIFICATION forming part of Letters Patent No. 410,701, dated September 10, 1889.

Application filed September 8, 1888. Serial No. 284,915. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN H. STUMP, a citizen of the United States, residing at Sevierville, in the county of Sevier and State of Tennessee, have invented a new and useful Improvement in Bee-Hives, of which the following is a specification.

My invention relates to an improvement in bee-hives; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a bee-hive embodying my improvements. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a vertical transverse sectional view of the same. Fig. 4 is a top plan view of my improved hive with the honey-chamber and one of the honey-boxes removed. Fig. 5 is a horizontal sectional view of the same.

A represents the lower portion of the hive, which is rectangular in shape, and is provided with the bottom or base board B. At a suitable distance above the said bottom or base board is a board C, which divides the portion A of the hive into an upper compartment or brood-chamber D and a lower compartment or air-chamber E.

From the front side of the hive projects a ledge or alighting-board F, which is arranged in the same horizontal plane with the horizontal partition-board C, and an opening G is made horizontally in the front side of the hive, the lower side of which is level with the upper side of the alighting-board. A pair of vertical cleats H are secured to the front side of the hive, at suitable distances beyond the ends of the opening or entrance G, and a door I has its ends guided in grooves or dovetails on the inner sides of said cleats, and thereby the said door is adapted to be raised or lowered, so as to open or close the entrance to the hive.

K represents a cylindrical tube, which is arranged in a horizontal transverse bore or opening that is made in the front side of the hive and extends entirely across the same. The said tube K is arranged at a slight distance in rear of the entrance G, so as to partly obstruct the lower side of the said entrance, and that portion of the said tube which registers with the entrance is provided in its front slit with a horizontal slit or opening L, which is on the level with the lower side of the entrance, and is of sufficient size to admit the entrance of moths and ants into the tube. The upper side of the entrance G is inclined, as shown in Fig. 2, in order to make that portion of the entrance which is over the tube K sufficiently large for bees to pass over the said tube when entering the hive.

M represents a wiper, which comprises a rod N, having a brush or piston O at one end thereof. The said wiper is adapted to be inserted in the tube K and passed back and forth therein so as to entirely clear the interior of the tube.

In the front side of the hive, at a suitable distance above the entrance G, is an opening P, the inner side of which is covered by a glass pane R, and a door S is fitted into the said opening. It is hinged at its lower edge to the front of the hive, and is adapted to have its upper side engaged by a button T, with which the hive is provided, whereby the said door S may be closed in the opening P. The function of the latter is to admit light to the interior of the brood-chamber D when the door is opened, so as to permit the operations of the bees to be observed, and to enable the bee-keeper to ascertain when the frames in the said chamber are filled.

In the bottom board C of the chamber D is a central opening U of suitable size.

V represents a slide, which is arranged on the lower side of the board C, has its side edges engaging and guided by cleats W, secured to the said board C, and the front end of the said slide projects through an opening in the front side of the hive and bears against the lower side of the alighting-board or ledge, where it is within easy reach. It follows from the foregoing description that by means of this slide the opening U may be closed or opened, and thereby enable communication between the air-chamber E and the brood-chamber D to be cut off or established at any time desired.

Openings X are also made in the bottom

board C, and are covered by bits of perforated sheet metal or by pieces of wire-gauze, and similar openings Y are made in the three sides of the brood-chamber D, and are similarly covered on their outer sides, and similar openings Z, likewise covered in the same manner, are made in the side of the chamber E. The said openings serve to admit air and light to the interior of the chambers D and E.

In one side of the chamber E is an opening A′, in which is fitted a door B′, that is hinged at one end, and a button C′ is pivoted to one side of the hive, beyond the free end of the door B′, and is adapted to engage the same, so as to lock the door when the latter closes the opening A′.

In the front and rear walls of the chamber D, at a suitable distance from the upper side thereof, are secured cleats D′, which are provided in their upper edges with recesses or notches E′, that are made at suitable regular distances apart.

F′ represents a series of rectangular honey-comb frames of suitable size, which are provided at their upper corners with projections G′, the lower edges of which are beveled to a point and are adapted to fit in the notches or recesses E′, and thereby suspend the said frames in the brood-chamber D.

From the upper edge of the lower portion A of the hive projects a flange H′, which extends entirely around the same.

I′ represents a horizontal partition-board, which is loosely fitted in the upper end of the lower portion A of the hive and bears upon the upper side of the honey-comb frames. The said partition-board is provided with two or more openings K′. On the upper side of said partition-board are semicircular cut-off slides L′, which are pivoted each at one corner to the partition-board, and are adapted to be partly rotated on the said pivots, so as to cover the openings K′ or uncover the same. Link-rods M′ have their inner ends pivoted to the said slides, and the outer ends of said link-rods project through recesses N′ in the flange H′ on the front side of the hive, and hence the said link-rods are adapted to be readily grasped and operated, so as to cause the slides to open or close the openings K′.

O′ represents the upper portion of the hive, the lower side of which is open and adapted to fit around the flange H′, and thereby form a honey-chamber P′ in the upper end of the hive above the brood-chamber D. The sides of the part O′ are provided with openings R′, that are covered with perforated sheet metal or wire-gauze, and on the lower edges of said part O′, on diametrically-opposite sides thereof, are eyes S′, which are adapted to be engaged by hooks T′, that are pivoted to opposite sides of the lower part of the hive, and thereby the said upper part O′ may be readily secured to the lower part of the frame A or removed therefrom.

U′ represents honey-boxes, which may vary in number according to the size of the hive, and are adapted to be arranged side by side on the partition-board I′, so as to fill the chamber P′. Each of the said honey-boxes is provided on its lower side at its center with an opening V′, which registers with one of the openings K′ of the partition-board, and the lower sides of said honey-boxes are further provided with recesses W′, which afford clearance for the slides L′ and prevent the bottoms of the honey-boxes from bearing directly thereon.

The upper side of each honey-box has an opening X′, that is covered with perforated sheet metal or wire-gauze, and the front ends of the honey-boxes are open and provided with grooves Y′, in which are fitted removable glass panes Z′, that serve to cover the said front ends of the honey-boxes and to admit light to the interior of the same when they are removed from the hive and enable the contents of said honey-boxes to be readily inspected.

When the bees commence operations in the spring, the slides L′ are closed over the openings K′, so as to confine the bees to the brood-chamber D, and thereby cause them to first fill the frames in the said chamber with comb and honey. The openings K′ are then uncovered and the bees pass upward through the said openings and the openings in the lower sides of the honey-boxes and fill the latter also with honey.

Communication between the brood-chamber and any one or all of the honey-boxes may be cut off at any time by simply operating one or more of the slides, and the honey-boxes may be readily removed from the hive after they become filled and empty ones substituted in their stead by taking the upper portion O′ from the hive. This operation may be performed very readily without destroying any of the bees and without the danger of being stung by them.

By removing the honey-boxes as soon as they are filled and substituting empty ones in their stead the bees will be incited to increase their activity, and hence a maximum amount of honey may be taken from the hive in the course of a single season. The honey in the frames F′ should preferably be left undisturbed to afford subsistence for the bees during the winter; but said frames may be readily removed from the hive, if desired, by taking the partition-board I′ from the lower part of the hive.

The chamber E, which is formed below the brood-chamber, prevents moisture from accumulating in the bottom of the brood-chamber and maintains the same dry and pleasant at all seasons of the year, and thus promotes the health of the bees. When the weather becomes very warm, the door B′ of the air-chamber and the slide V may be opened, so as to admit fresh air in increased quantities to the brood-chamber and thoroughly venti-

late the hive. Generally, however, the door B′ will be kept closed in order to prevent ants or moths from entering the hive.

The wiper is normally out of the tube K, so that the interior of the latter is entirely unobstructed, and inasmuch as the said tube extends entirely across the front side of the hive and has its ends open a passage-way is formed entirely across the front side of the hive, as will be readily understood.

Ants and moths which find their way to the perch F and attempt to enter the hive through the entrance G will pass from the said perch through the slit or opening L into the tube K, instead of into the hive, and will be directed by the said tube to one side of the hive, and hence the efforts of the insects to enter the hive will be effectually frustrated. From time to time, when a number of moths and ants accumulate in the tube, the wiper may be inserted therein and drawn back and forth vigorously and serve to effectually annihilate the same.

In order to introduce a swarm of bees to the hive, it is only necessary to place the hive on the object on which the swarm has alighted and to open the door B′ and slide V. The bees then readily find their way into the chamber E and pass upward through the opening in the board C into the hive.

The hive may be readily transported from one place to another without the risk of losing any of the bees and without danger of being stung by them by simply closing the door B′ on the night before removing the hive, when all the bees are in the same.

Having thus described my invention, I claim—

1. The hive having the brood-chamber D, having the opening P, provided with the pane R and hinged door S and the entrance G, the air-chamber E, arranged below the brood-chamber and having the opening A′ in its side and a hinged door for the same, the bottom board C between the two chambers, provided with the opening U, and the slide V, adapted to open or close said opening and having one end projecting from one side of the hive, for the purpose set forth, substantially as specified.

2. The hive having the alighting-board, the entrance G, the tube K, extending transversely through one side of the hive and in rear of the entrance G, said tube being provided with the opening L, arranged opposite the entrance and level with the bottom thereof, for the purpose set forth, and the wiper adapted to be inserted in the opening, substantially as described.

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

CHRISTIAN H. STUMP.

Witnesses:
J. R. PENLAND,
G. L. ZISKLE.