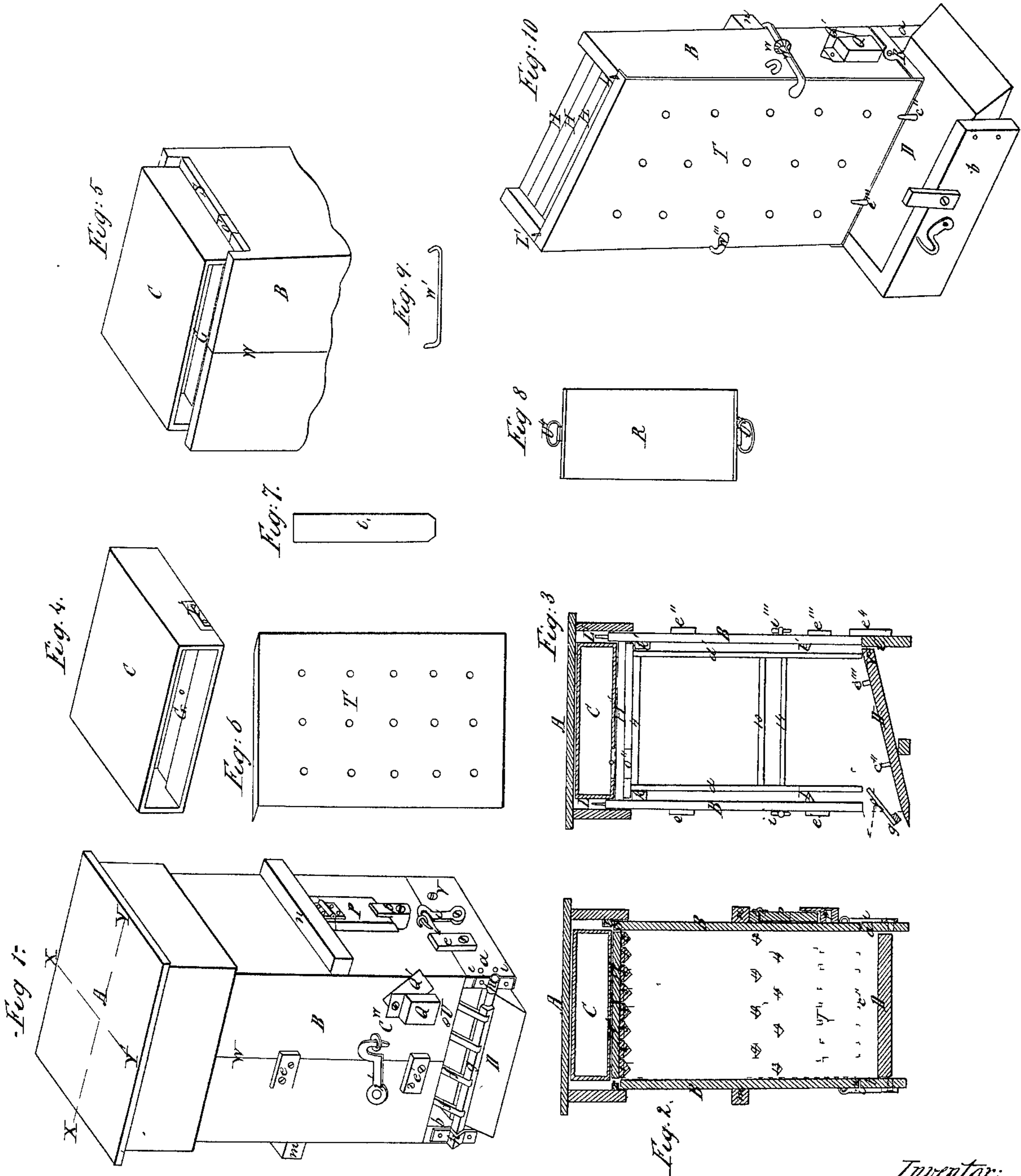


N. B. Sebring.

Bee Hive.

N^o 90,199.

Patented May 18, 1869



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Letters Patent No. 90,199, dated May 18, 1869.

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, NORMAN B. SEBRING, of Matamora, in the county of Fulton, and State of Ohio, have invented a new and useful Improvement in Bee-Hives; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, which will enable others skilled in the art to which my invention appertains, to make and use the same, reference being had to the annexed drawings, and to the letters of reference marked thereon, making a part of this specification, like letters always referring to similar parts.

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

In the drawings—

Figure 1 represents a perspective view of one of my improved bee-hives, set up and ready for use;

Figure 2 represents a vertical section, cutting the line X Y in fig. 1;

Figure 3 represents a transverse section, cutting the line X' Y' in fig. 1;

Figure 4 represents a perspective view of the honey-box C, detached from its place in the cap A and body B of the hive, and having glass walls, front and rear, G and G' respectively, and an opening, *o*, in the floor to let the bees pass up through into the box;

Figure 5 represents, in perspective, the said box C, and the mode of attaching it to the body of the hive, the cap having been removed so as to show the box; and

Figures 6, 7, and 8, represent separators, of tin or sheet-iron, to be hereafter more particularly described.

The body of the hive, after the cap A has been removed, is capable of being separated into two sections by means of the tin separator T being passed downward through the dividing line W.

The outside shell of the body B of the hive is constructed of boards, nailed together in the form of a square box, a little higher than its width or thickness, and on the opposite sides are fastened the horizontal cleats *m* and *n*, to facilitate handling the hive.

The front end of the bottom board D is made to rise and fall, turning on the pin or screw *v*, thus forming, when down, an inclined plane, as shown in fig. 3, when the bees are at work.

The front end of the bottom-board D, being down, a passage is thereby formed for the bees into and out of the hive, between it and the lower end of the front board of the hive.

In this passage is located a self supporting railing, *g*, with slats, *f f*, &c., for the bees to alight on.

This railing is prevented from turning by one end being made three-square, and fitting into a corresponding strap, *h*, and at the other end supported by a slip-tenon sliding into a loop, *h'*, for this purpose.

The bottom-board D and railing *g* are supported by a base made of boards, *a*, *b*, and *c*, nailed together on a line with the three sides of the hive which rest upon them.

Inside of the body B of the hive are located eight comb-supporting frames, each consisting of four pieces, to wit, the two stiles, *d* and *d'*, and the two railings, 1 and 4, all being nailed together, a part of the railing 4 projecting over the upper end of the stiles, and resting on the cleats *k* and *k'*, thus giving a support to the comb-frames.

Below these cleats are two others of triangular shape, 1 and 1', to keep the frames central in the hive, and give passage-room for the bees to and from the top of the hive, between the frames and sides of the hive.

The stiles are a little narrower than the railings, so as to allow the bees also to pass between them, the railings closing up the whole surface of the top of the hive, and would prevent access to the box C, were it not for the passage *o'* which is cut out of one edge of each of the railings 1, 2, 3, 4, &c.

These railings, in fig. 2, show the transverse sections of the parts designated by corresponding figures in fig. 3.

I design having eight, or any other suitable number of these comb-supporting frames in each hive, half in each section of the hive.

Whenever it is desirable to prevent the bees entering the honey-box C, I simply turn the box over, thus closing the passage into it.

The frames for supporting the honey-comb are kept at equal intervals at the lower ends, by means of the several intervening stays *j*, fig. 2.

The boards or covers, H and H', are to be used only when dividing the hive into sections, this division being adopted to effect, so to speak, a sort of artificial swarming of the bees.

When the hive has been divided by reason of the removal of one of its sections, I place another similar empty section by the side of each, in order to give the bees sufficient room in both new hives.

The opening *o* in the floor of the box C, fig. 1, extends outward through the side of the box, and is covered by an isinglass door, I, swinging on pivots or loops at the top, so as to be easily swung outward to let the bees pass out, but to prevent their passing back through it into the box.

o', in fig. 5, is a small movable block of wood to prevent, when desirable, the egress at the door I, while the bees are at work in the box C.

c, *c'*, *c''*, and *c'''*, are stationary guides to prevent lateral displacement of the sections of the hive, as respects each other.

*e*¹, *e*, and *e*², are three buttons, placed on each side of the hive, except the front, and are to prevent lat-

eral displacement of the body of the hive and base *a*, *b*, and *c*, and turn on their respective pivots in the base.

i, *i*"', and *i*"', are four hooks, with their staples, to fasten the two sections together, and both to the base as represented.

P and *p* represent a door, and button to fasten it shut.

Behind this door, *P*, is a glass window, through which the apiarist may at any time observe the working of the bees.

Q is a tin or sheet-iron ventilator, open at the bottom, so as to keep out wet and storm, and open, also, at the side next to the swing-door *Q*'.

Behind the swing-door *Q*' is a wire screen, covering an opening through the side of the hive into the ventilator *Q*.

The swing-door *Q*' is made to turn up or down between the ventilator and the side of the hive or screen, to keep out or let in the air, at the pleasure of the apiarist.

On the opposite side of the hive, near the top, and in the other section, is another ventilator, *Q*"', swing-door *Q*"', with a wire screen precisely the same as the one just described, in front of the hive, the object of these openings through the hive being to let in air and keep out weather and storm.

T are simply two similar flanged pieces of tin, perforated in the centre with many small holes, so as to admit the air when used to cut the two sections of the hive apart, as hereafter described.

R is a tin, with flanged ends, with rings attached to the flanges to hook on to the pins *U*, in front of the hive, and *U*' in the rear of the hive, fig. 1, as will be hereafter described.

Having thus described the construction of my improved bee-hive, the mode of operating with it is as follows:

I first fill two (right and left) sections of my hive with their respective comb-frames, as previously described; then hook the two sections together with the hooks *i* and *i*"'; then place the whole upon the base *a*, *b*, and *c*, as shown in fig. 1, and hook it there by the hooks *i* and *i*"'.

Then (omitting the boards *H* and *H*') I place the honey-box *C*, bottom upwards, upon the upper railings of comb-frames, thus preventing access by the bees to the interior of the box; then place the cap *A* over all, as shown in fig. 1; then place the self-supporting railing *g*, with its slats *f f*, &c., in position.

The bees are next put into the hive by laying them down by the entrance, at the front end of the bottom-board *D*, whence they can readily ascend the slats *f f*, &c.; thence up the stiles of the comb-frames, and thus reach their destination at the top of the hive by the shortest possible route, without having to traverse the bottom-board and rear of the hive.

Thus arranged, the hive remains until the bees have nearly completed their work in the body of the hive, or until it becomes necessary to divide the swarm, which is done by separating the hive, with its bees, into its two original sections, in the following manner, to wit:

I first remove the railing *g*, with its slats, and then raise the front end of the bottom-board *D* until it strikes the lower end of the front side of the hive, placing a pin or nail into the hole *i* to keep the board up, thus shutting off all escape of the bees out of the hive.

Then remove the cap *A*, and slide the tin cutter *t*, fig. 7, under the box *C* and the small movable block *o*', thus preventing escape of the bees in that direction when the box is removed, which is then done. Then, placing the boards *H* and *H*' across the tin *t*, which is also now drawn out and laid away. Then unhook the two hooks *i* and *i*"', slightly separating the two sections of the hive, and then slide both tin cutters, *T*, (there being two of them,) down lengthwise between the two sections, the flanges at the upper ends turn-

ing over the top of their respective sections, thus separating the body of the hive into its two original constituent sections.

The upper ends of these perforated tin cutters *T* are kept pressed against their respective sections by the small pins *L* and *L*', in the upper end of the sections, entering into notches cut in the flanges for that purpose.

The lower end of one of these tin cutters, that is, the right-hand one, is kept pressed against its section by means of the wire grapple *w*', fig. 9, passing through the loop or staple *w*, fig. 1, and hooked around the cutter at one end, and at the other end around the corner of the section, there being another similar grapple, *w*"', for the same purpose on the opposite side of the same section.

The lower end of the other perforated cutter *T* is kept close against its section by the two pins *c*' and *c*"', fig. 3, in the middle of the bottom-board *D*.

I next turn down the button *e*', at the right hand of the hive, unhook the hook *i*, and then slide the tin tray *R*, fig. 8, under this section, with its flanges turned upward, and its rings, *U*² and *U*³, hooked or looped on the pins *U* and *U*¹ respectively.

This keeps the tray *R* up against the bottom of the section, which is now to be removed from the base and placed upon another base, and beside another and empty section to form another hive as before, with half the number of bees to fill it. Then, removing the perforated tin *T* and tray *R*, we have another hive started.

The remaining section is, in like manner, to be supplied with another empty section, forming, in part, another hive. Removing the other tin cutter *T*, and we have two swarms, with double the room, made out of the one.

The two tin cutters *T* are each perforated so as to admit the air during the process of separation.

After the hive has been separated, and the boards *H* and *H*' removed, the honey-box *C* is to be placed in its proper position in each hive, as represented.

I next remove the small isinglass door *I*, fig. 4, to prevent the bees waxing it down, and place the movable block *o*' over the door-way, and then replace the cap *A* over the top of the hive, drop the bottom-board *D*, replace the railing *g* and slats *f f*, &c., when both hives are open for the bees to commence their work.

Now, when I wish to remove the surplus honey from the hive, I first remove the railing *g*, raise the bottom-board *D*, as before, to prevent escape of the bees, remove cap *A*, slide the tin *t* under the opening *o* in the floor of the box *C*, to prevent any more bees crawling up into the box; then remove the movable block *o*' and replace the isinglass door *I* upon its staple-hinges over the door-way, placing the cap *A* over the top of the hive, with the right-hand side slightly elevated to allow the bees to go out of the box under the cap, raising the door as they go out, and its own weight dropping it, prevents their returning into the box. Then lower the bottom-board *D* and replace the railing *g*, and retire until the box *C* is emptied of its bees, when it may be removed and its place supplied with another.

Having thus described the construction and operation of my improved bee-hive,

What I claim as new, and desire to secure by Letters Patent, is—

1. The self-supporting railing *g*, with its several inclined slats *f f*, &c., in combination with the comb-supporting frames, in the manner set forth and described.
2. The two perforated tin cutters *T T*, tray *R*, grapples *w*¹ and *w*², for the use and purposes herein described.

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Witnesses:

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