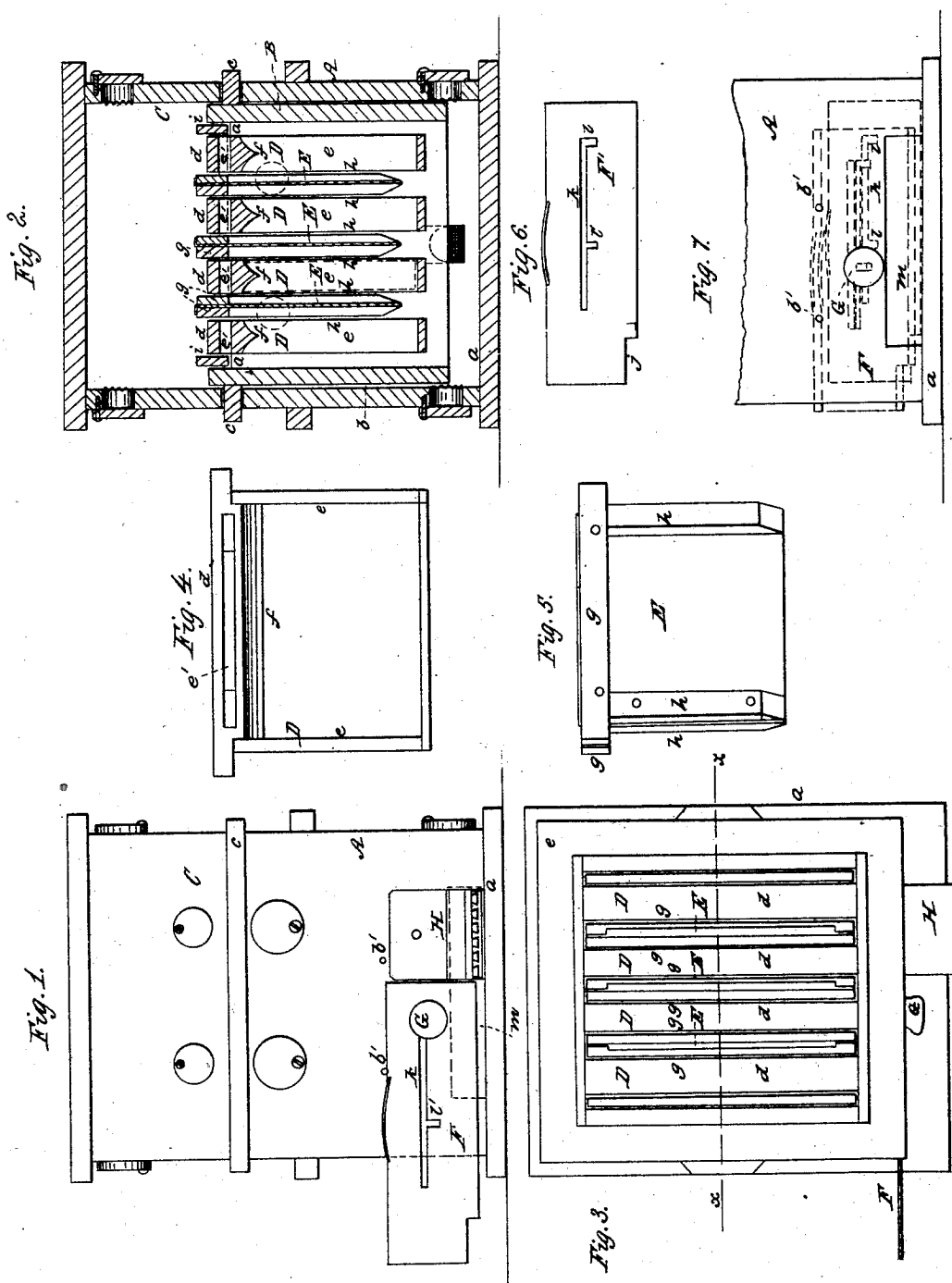


K. P. KIDDER.

Bee Hive.

No. 37,915.

Patented March 17, 1863.



Witnesses:  
Mr. J. Partridge  
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Inventor:  
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# UNITED STATES PATENT OFFICE.

K. P. KIDDER, OF BURLINGTON, VERMONT.

## IMPROVEMENT IN BEE-HIVES.

Specification forming part of Letters Patent No. 37,915, dated March 17, 1863.

*To all whom it may concern:*

Be it known that I, K. P. KIDDER, of Burlington, in the county of Chittenden and State of Vermont, have invented a new and Improved Bee-Hive; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front elevation of my invention; Fig. 2, a vertical section of the same, taken in the line *x x*, Fig. 3; Fig. 3, a plan or top view of the main portion or body of the hive, the upper part or cap being removed; Fig. 4, a detached side view of a comb-frame pertaining to the same; Fig. 5, a detached perspective view of a division-plate or comb-separator pertaining to the same; Fig. 6, a detached view of the regulator, which is placed at the bee-entrance of the hive; Fig. 7, a front view of the regulator applied to the hive.

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

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

The hive is composed of three separate distinct parts, A B C. The part A, which forms the exterior of the lower portion of the hive, is of rectangular form, and is fitted upon a proper base, *a*. B is a rectangular box, constructed of such dimensions that it will fit in A, and admit of an air-space, *b*, all around between it and A, as shown in Fig. 2. The upper part of B is provided all round with flanges *c*, which rest upon the edge A, and sustain B in A. C is the upper part or cap of the hive, which rests upon the flanges *c* of B, and forms a receptacle or cover for the spare-honey boxes. The hive thus constructed is not new, and, consequently, as it does not form a part of this invention, need not be more minutely described.

D represents the comb-frames, which are constructed as usual of rectangular form, and have their top pieces, *d*, projecting beyond their side pieces, *e e*, so that the ends of the former may rest upon ledges or shoulders *a'* at the opposite sides of B, and be properly supported therein. These comb-frames, it will be seen, are removable and can be readily placed in and removed from B. The top pieces, *d*, are all slotted horizontally to admit

of bee-passages *e'* above the combs, and the lower surfaces of *d* are made concave and brought down to a feather edge, *f*, which extends the whole length of the top pieces, *d*, between the side pieces, *e e*, and forms a narrow or sharp edge for the bees to commence building the combs upon, thereby insuring a guide for the bees and causing the combs to be built in planes or straight down in the frames, (see Fig. 2,) in which a comb is shown in red outline.

E represents division-plates or comb-separators. These may be constructed of wood or sheet metal, the latter being preferable, and they may be perforated with small holes that will allow bees to pass through, if desired. These plates are of rectangular form, and they have cleats *g* attached to their upper edges, one at each side, and which project beyond the plates in order that their edges may rest upon the shoulders *a'* and be, like the comb-frames D, supported within the box B. The ends of the plates E also have cleats *h* attached to them, (see Fig. 5,) and these cleats, in connection with the cleats *g*, retain the comb-frames at a proper distance apart. The cleats also perform another function—to wit, they afford a space between the plates E and the sides of the combs to admit of the bees passing between the combs and plates. This will be fully understood by referring to Fig. 2.

By the employment or use of the plates E it will be seen that each comb-frame D is inclosed within a narrow compartment, and as the plates are quite near the comb-frames, being placed at such a distance from them as only to admit of the bees passing between them and the combs, the former cannot build a comb thicker than the width of the comb-frames which is the seven-eighths of an inch, and this corresponds with the width of a worker-comb, the drone-comb being an inch and a quarter in thickness. Hence, when desired, the apiarist can obtain hives in which no drones can be propagated, and this is an important feature in bee economy, as the drones in one hive in an apiary will be sufficient to impregnate the queens of the other hives, and consequently the bees of all the hives which are provided with the division-plates or comb-separators will be employed in collecting honey and in raising working-bees only. In case it should be desirable to

have drone-combs made in any of the hives which are provided with these plates, the latter may be removed after the combs are partially built, say, about two-thirds of the distance down in the comb-frames, and the bees will then be allowed space to build drone-combs in the lower parts of the comb-frames.

I would remark that the comb-frames D at the sides of the box B are kept at a proper distance therefrom by strips *i*, which are inserted between the open edges of the box B and the top pieces, *d*, of the frames aforesaid. (See Fig. 2.)

This invention admits of the bees making a perfectly straight comb in the frames, and any one or all of the frames can be removed from the hive at pleasure. The plates, it will be seen, prevent the bees from attaching or sticking the several combs together, and the plates should at all times be removed when the frames become filled and the spare honey boxes placed on the hive in proper position.

F represents a regulator constructed of a rectangular plate of wood, sheet metal, or other proper material with a rectangular notch, *j*, made in one end of it at its lower edge, as shown clearly in Fig. 6. This plate also has an oblong slot, *k*, made longitudinally in it, as shown in Fig. 6. Said slot communicates with two shut vertical slots, *l l'*, which are also shown clearly in Fig. 6. One of these vertical slots, *l*, is at one end of the slot *k* and the other slot, *l'*, is but a short distance from the center of *k*.

G is a button, the screw of which passes through slot *k* into the front of the hive at such a point as to admit of the lower edge of the regulator resting on the base *a* of the hive, and also to admit of the regulator being adjusted entirely over the bee-entrance *m* when necessary.

By constructing the regulator in this manner the capacity of the entrance *m* may be raised, so that the worker-bees can pass into and out of the hive and the queens and drones retained within the hive. This position of the regulator is shown in red outline in Fig. 7, and in order to insure this proper adjustment of the regulator, a gage may be attached to the front of the line. Two tacks, *b' b'*, driven into the front of the line, will answer for a gage. (See Fig. 7.) In this adjustment of the regulator the slot *l* admits of its elevation, the screw of the button G being in said slot.

The regulator can be used in connection with my bee-catcher, designated by H, (see Fig. 1,) and formerly patented by me, the Letters Patent bearing date June 26, 1860. When the regulator is used with the bee-catcher, the former is moved or adjusted to the left, so that the screw of the button G will be in line with the slot *l*. The bee catcher in this case performs its usual function. A full entrance can be given all the bees by drawing the upper part of the regulator outward, so that it will be free from the tacks *b' b'*, and elevating the regulator to its fullest extent, as shown by the dotted lines in Fig. 7. When a small entrance is required, the regulator is adjusted or slipped to the right, its lower edge being in contact with base *a*, so that an entrance will be afforded by the notch *j*. This entrance may be varied as desired—that is to say, made of greater or less capacity by adjusting the regulator more or less to the right, as will be fully understood by referring to the blue outline in Fig. 7. In the spring of the year, before the honey season commences, and in the fall, after it is past, an entrance from one-half to three-quarters of an inch should be given the bees. By carefully attending to this, robbery among bees will be effectually prevented.

Swarming may be prevented by adjusting the regulator in the position as indicated in red in Fig. 7, and previously alluded to; or a colony of bees can be prevented from flying to the forest in swarming time, as this adjustment prevents the queen from leaving; consequently the bees cannot leave unless the queen can go with them. The queen being thus prevented from leaving the hive, swarms of course will not issue.

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

1. Providing the division-plates E with cleats *g h*, as shown and described, for the purpose of retaining or holding the comb-frames D in proper position in the hive, as specified.

2. The regulator F, provided with a longitudinal slot, *k*, two vertical slots, *l l'*, and a notch, *j*, combined as shown, the regulator being applied to the bee-entrance *m* by means of the button G, substantially as and for the purpose herein set forth.

K. P. KIDDER.

Witnesses:

M. S. PARTRIDGE,  
TIMOTHY SHINE.