

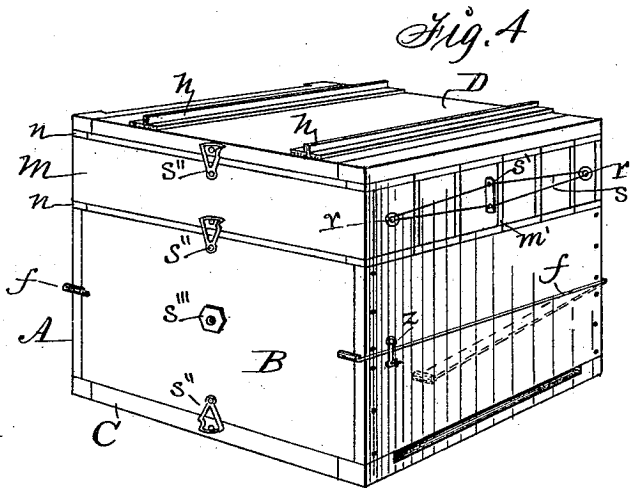
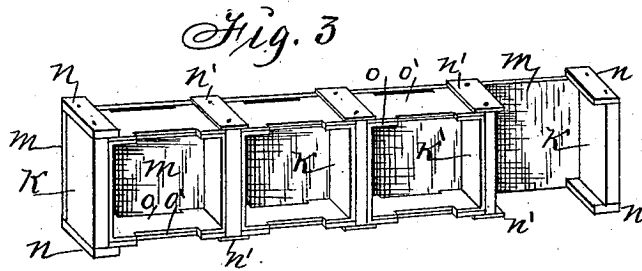
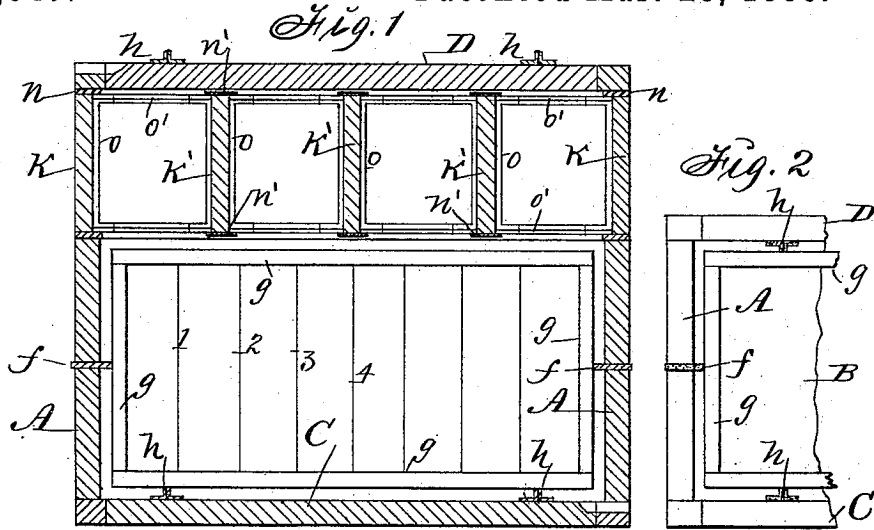
(No Model.)

J. M. SHUCK.

BEE HIVE.

No. 338,647.

Patented Mar. 23, 1886.



Witnesses:
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Inventor:
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UNITED STATES PATENT OFFICE.

JOHN M. SHUCK, OF DES MOINES, IOWA.

BEE-HIVE.

SPECIFICATION forming part of Letters Patent No. 333,647, dated March 23, 1886.

Application filed September 5, 1885. Serial No. 176,216. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. SHUCK, a citizen of the United States of America, and a resident of Des Moines, in the county of Polk and State of Iowa, have invented an Improved Bee-Hive, of which the following is a specification.

My invention relates to the manner of fastening honey-frames and surplus-sections to adapt hives and surplus-boxes to be inverted without removing the frames and sections.

Heretofore I provided honey-frames with projections at the centers of their ends and clamped such projections in rabbets cut in the mating edges of a wall formed in two parts, as shown in the United States Patent No. 329,341, issued to me October 27, 1885, and secured surplus-sections in a box that is divided horizontally, as shown in my Letters Patent of the United States, No. 333,168, dated December 29, 1885.

My improvement consists in the construction and combination of pivoted frame-clamping devices to engage the ends of frames, movable bottoms and covers having fixed frame-clamps, a surplus-box composed of sections that are joined at their vertical edges, and an adjustable fastening and clamping device, as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section of the complete hive; Fig. 2, a sectional view showing the movable honey-frame clamped fast by the devices fixed to the movable bottom and movable cover. Fig. 3 is a perspective view of one of the sections of the surplus-box, and Fig. 4 a perspective view of the complete hive.

A A are wooden end pieces fixed to the sides B by nailing, or in any suitable way to produce a hive of quadrangular form.

C is a loose bottom having a bee-passage at its end, and D is a movable cover of corresponding size and shape.

f f are rigid flat metal bars pivoted at their ends in corresponding horizontal slots formed in the centers of the ends A. These metal strips or bars are wide enough to extend inside of the hive, so that their inner edges will come in contact with the centers of the end

pieces of the movable honey-frames g, to clamp the frames fast, as clearly shown in Figs. 1 and 2.

1 2 3 4 are wires fixed to the frames g to support comb-foundations and finished and filled combs.

h h are clamping devices, preferably made by doubling strips of sheet metal together and then spreading the edges at right angles to the doubled center, and then fixing them on the top surface of the bottom C and on the bottom surface of the cover D by nailing or in any suitable way, in such a manner that the projecting edges of the strips will engage the horizontal bars of the honey-frames, to clamp the frames fast between the movable bottom and movable cover of the hive, as clearly shown in Fig. 2.

Heretofore plain strips have been fixed to the hives to engage notches in movable frames, and notched strips have been fixed in hives to engage the plain bars of movable frames, for the purpose of retaining the frames stationary and the spaces between the frames always the same; but it is often desirable to adjust the parallel frames by moving them laterally closer together or farther apart, and to accomplish this I fix plain strips to the top and bottom of the hive in such a manner that when the top cover, having plain strips on its under side, is lifted from a series of plain frames, that rest upon plain strips fixed on the upper side of the bottom, each frame can be moved horizontally and all the frames moved close together, or apart any distance desired, and firmly held wherever placed by means of the same plain strips fixed to the bottom and cover.

K K are the end pieces, and m the back piece, of one of the sections of my vertically-divisible surplus-boxes, nailed or otherwise rigidly fixed together.

n n are wooden strips fixed on the top and bottom edges of the ends K. Their inner edges project inward to overlap movable surplus-honey sections O, as clearly shown in Fig. 3.

K' are partitions fixed to the inside of the back.

m and n' are the metal straps nailed on the top and bottom edges of the partitions K', and project on both sides, as required, to overlap and engage the top and bottom corners of the

movable honey-sections O and the veneers or covers O', placed on the tops and bottoms of the sections O to keep them bright and clean. Two of the series of sections have their backs *m* made of boards an inch thick, to be used on the outside as parts of the outside wall of the complete vertically-divisible surplus-box, and the pieces K, fixed thereto, are provided with projecting screw-heads or buttons *r*, over which a wire loop, *s*, is placed to connect the entire series of sections, as clearly shown in Fig. 4.

S' represents a device (preferably a short metal bar perforated at each end and the wire S passed through each end) that serves to regulate the tension of the wire loops as required to clamp the series of sections firmly together, so that they can be handled jointly as one complete surplus-box, and lifted off and on the hive at pleasure.

S'' are adjustable fastening devices on the outside of the hive and surplus-box, by means of which the loose bottom, cover, and surplus-box are detachably fastened together in a common way.

S''' are metal sockets fixed to the outside and center of the hive to receive the pivots of my machine for lifting and inverting bee-hives, as and for the purposes set forth in my Letters Patent of the United States No. 335,153, dated February 2, 1886.

z is a fastening device, preferably a hook and staple, fixed to the outside of the hive to engage and retain the pivoted metal bar *f* when it is pressed in to clamp the honey-frames fast.

m' is a loose partition, corresponding in shape and size with the fixed backs *m*, placed between the open sides of two sections in the box.

I claim as my invention—

1. In combination with a bee-hive having

horizontal slots in its walls, removable strips fitted in said slots, and removable honey-frames in the inside of the hive engaged and fastened by said strips, as set forth.

2. The combination of the strips *f* with the walls of a bee-hive having horizontal slots *g* and removable comb-frames, as set forth.

3. The combination of a bottom, C, and a cover, D, each having plain-edged fixed strips or bars *h*, with the wall of a bee-hive and a series of plain-edged movable honey-frames, as and for the purposes stated.

4. A bee-hive having horizontal slots in opposite ends or sides, and removable bars fitted in said slots, a removable bottom and a removable cover, each having fixed strips or bars on their inside surfaces, and a series of removable honey-frames, arranged and combined to operate in the manner set forth, for the purposes stated.

5. A surplus-box section for bee-hives, having one open side composed of end pieces, K, backs *m*, and strips *n* and *n'*, substantially as shown and described, for the purposes stated.

6. A surplus-box for bee-hives, consisting of a series of three-sided sections, K K *m*, having fixed strips *n* and *n'* and clamping devices *r s s'*.

7. A vertically-divisible surplus-box for bee-hives, composed of a series of sections having closed backs and closed ends, fixed partitions, laterally-projecting strips fixed on the top and bottom edges of the ends and fixed partitions, a loose partition corresponding in size and shape with the fixed backs, and a clamping device for fastening the sections together.

JOHN M. SHUCK.

Witnesses:

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