

Fig. 1

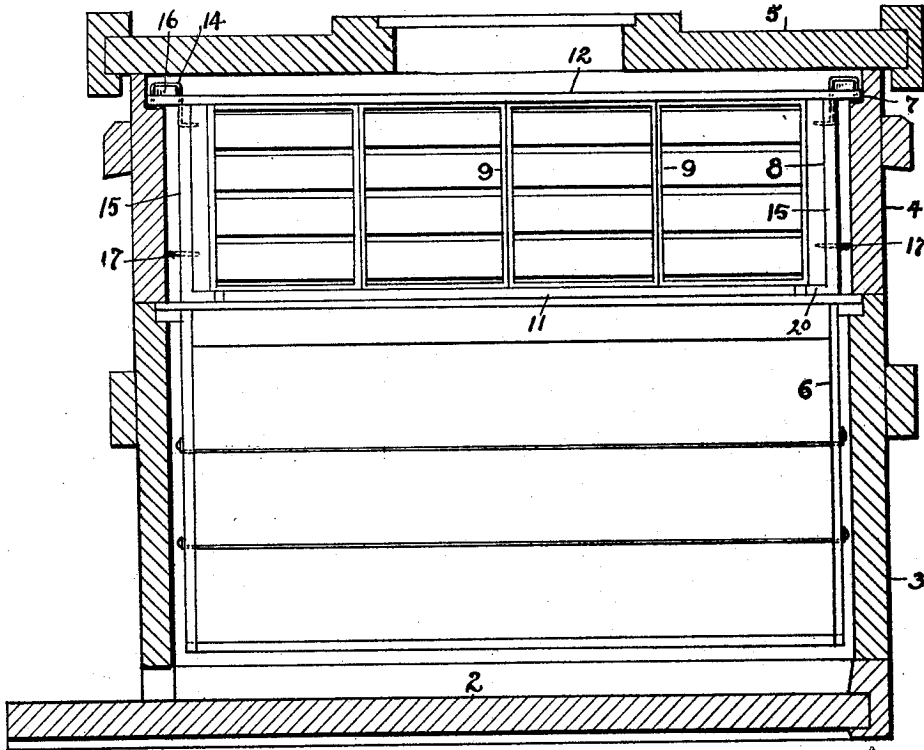
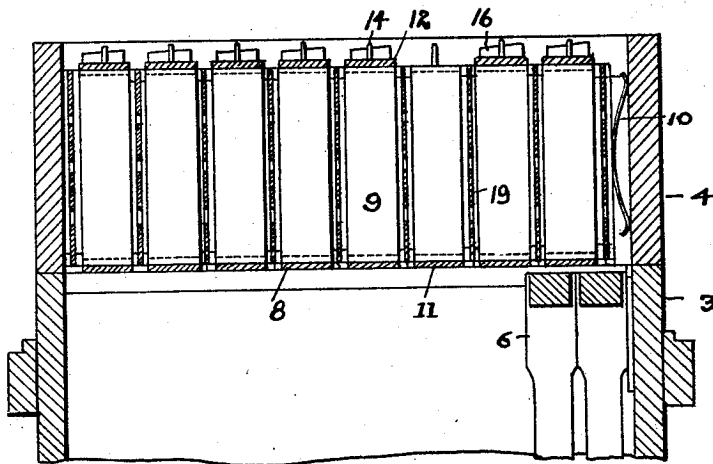


Fig. 2



ATTEST  
*Emtisher*  
*[Signature]*

INVENTOR  
*George C. Rahn*  
BY *Fisher & Moore* ATTYS.

G. C. RAHN.  
BEEHIVE.  
APPLICATION FILED JULY 21, 1913.

1,116,920.

Patented Nov. 10, 1914.

2 SHEETS—SHEET 2.

Fig. 3

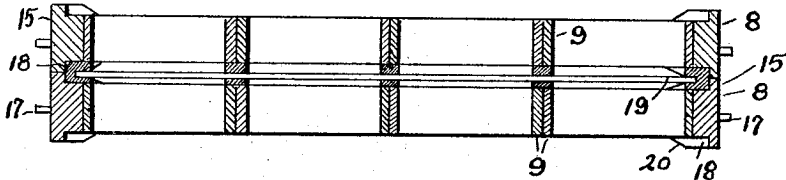


Fig. 4

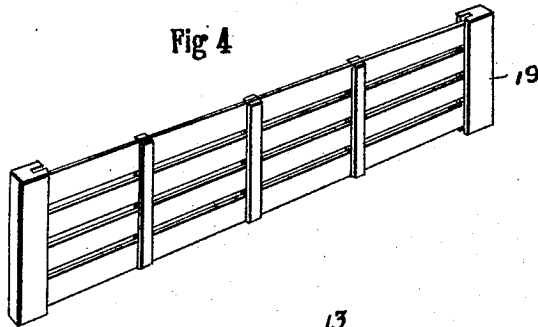


Fig. 5

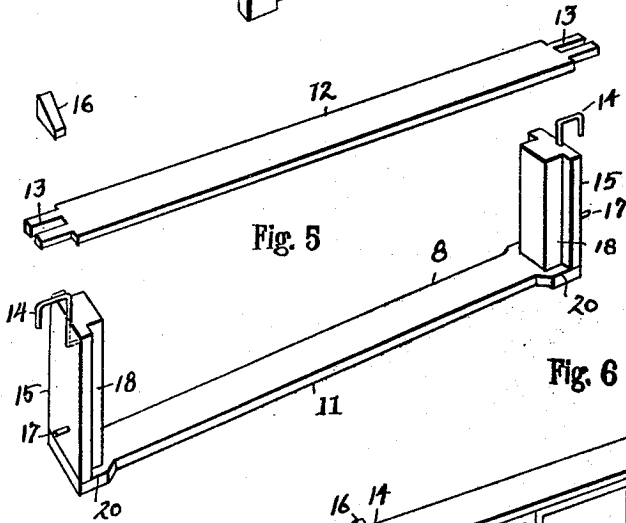
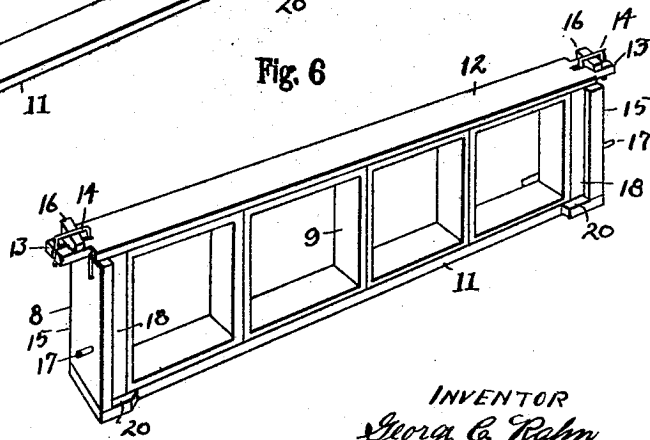


Fig. 6



ATTEST  
*Emtisher*  
*J. H. H.*

INVENTOR  
*George C. Rahn*  
BY *Fisher & Moore* ATTS.

# UNITED STATES PATENT OFFICE.

GEORGE C. RAHN, OF HAILEYBURY, ONTARIO, CANADA, ASSIGNOR OF ONE-HALF TO  
MARTIN J. O'DONNELL, OF CLEVELAND, OHIO.

## BEEHIVE.

1,116,920.

Specification of Letters Patent.

Patented Nov. 10, 1914.

Application filed July 21, 1913. Serial No. 780,378.

*To all whom it may concern:*

Be it known that I, GEORGE C. RAHN, citizen of the United States, residing at Haileybury, in the district of Nippising, Ontario, Canada, have invented certain new and useful Improvements in Beehives, of which the following is a specification.

This invention relates to bee-hives and is a division of my application filed January 23, 1913, Ser. No. 743,733, and the invention comprises improvements in super-boxes and super-frames substantially as herein shown and described and more particularly pointed out in the claims.

In general, the object of the invention is to provide the super or surplus box of a beehive with a knock-down super-frame to hold the honey-boxes and whereby said honey-boxes can be clamped tightly in place and prevented from warping or twisting.

A further object is to provide a super-frame with a separate top piece and with supports and fastening devices which will permit the said piece to be removed while the super-frame remains suspended in the super or surplus box, and a still further object is to construct the super-frames and box so that spaced and braced relations are obtained therebetween and whereby the bees are prevented from gluing the frame to the box, and permitting convenient placement and removability of the frames.

Another object is to construct the frames so that they may come into abutting relations and provide seats for removable fences between adjacent frames.

In the accompanying drawings, Figure 1 is a vertical section through a bee-hive showing my improved super-frame mounted therein, and Fig. 2 is a sectional view at right angles to Fig. 1 showing a set of super-frames, one of them being shown with its top piece removed. Fig. 3 is a sectional view in plan of two superframes in abutting relations and with a dividing fence between. Fig. 4 is a perspective view of the fence. Fig. 5 is a perspective view of the several parts which make the complete super-frame, and Fig. 6 is a perspective view of four honey-boxes clamped within my improved super-frame.

In Fig. 1 the bee-hive is represented by the bottom board 2, the brood box 3, the super or surplus box 4, and the cover 5. Said parts are separable as usual, and the

brood box is shown as having a wire-strung frame 6 suspended therein. The super or surplus box 4 is open top and bottom and has shouldered recesses 7 at the top of its end walls to removably seat the super-frames 8 which hold the honey boxes 9. A series of such super-frames are banked together in box 4 and held in place by bowsprings 10, see Fig. 2. Each super-frame comprises a body part 11 and a removable top bar 12 having slotted ends 13 adapted to slip over hooks 14 rigidly secured to the upright ends 15 of the body 11. Small wedges 16 are used to clamp the top-bar in place when inserted into hooks 14 over the bar, and therethrough one or more honey-boxes 9 also as the pressure derived from driving the wedges in place clamps the honey boxes in place. In fact such clamping assures tight joints, alines the honey-boxes, and prevents them from warping or twisting out of shape.

Ordinarily, the super-frames fit snugly against the walls of the super-box 4, and the bees fasten these parts together with bee-glue so that difficulty is experienced in removing the super-frames without jamming or breaking the honey-combs and thereby cause leakage and loss of honey. In my improved device, the body of the super-frame is spaced apart from the walls of the box and only supported by the hooks 14, the projecting pins 17 at the outside of the frame uprights 15 serving to guide, center and space the frame in respect to box 4. Each frame also has its upright ends 15 widened to come into abutting relations with the corresponding end of the next frame, see Fig. 3. As thus related the rabbeted edge portions 18 in adjacent frames combine to make a slide-groove or side support for a removable fence 19 to separate adjacent rows of honey-boxes 9, and ledges 20 at the bottom of each super-frame end support the said fences. Spaces are provided between the fences and the honey boxes for the travel of the bees.

The advantages of the foregoing construction are as follows: The top-bar of any single super-frame may be readily removed without breaking it and without disturbing others and it is not necessary to remove the super-frame from the super-box 4 to remove any one or all of the honey-boxes carried therein as the hooks 14 provide the support

for the super-frame. Obviously this is of great utility as one or more of the honey-boxes can be taken out or shifted to other places in the same or other super-frames to obtain more effective working results from the bees in the hive, and the bees can also be induced to work in more than one or two super-boxes high, a result heretofore difficult to obtain. The bees may also be prevented to some extent from swarming and caused to produce more comb-honey per colony than with the known super-box organizations. It also happens that some colonies in the swarming season leave many honey-boxes unfilled or incomplete, but with my invention these unfinished boxes can be transferred independently or in their frames to other colonies for completion. By means of the wedges it is possible to clamp the honey-boxes tightly in the super-frame, which saves the best time and labor in gluing them in place, and it also follows that such preventative of the sealing of the boxes to the frame by the bees makes it more convenient and easier to remove them when desired and especially without disturbing adjoining boxes. A tight clamping also prevents expansion or buckling of the honey-boxes and prevents the displacement or twisting out of shape of the wax comb-foundation which the bee-keeper fixes in the honey-boxes to properly start the bees in their cell-building operations. The wide spacing of the upright ends from the walls of the box also prevents the bees from gluing these parts together and permits the entire frame to be removed without trouble, and the abutting relations sustained by the frames at their upright ends with the fence seated therebetween contributes to the general object in view of providing an easily separated structure which aid the bees rather than hinder them in their work and at the same time provide a practical and efficient device for the bee-keeper.

What I claim is:

1. In a bee-hive, a surplus box and a super-frame for honey-boxes removably mounted in said box having a removable top bar, and clamping means to permit said

bar to be removed while the said super-frame sustains closely banked relations with other super-frames in the surplus box.

2. In a bee-hive, a super-frame having hanger members and a top bar having slotted ends to removably receive said members and means to clamp the said parts together.

3. In a bee-hive, a super-frame for honey-boxes, hooks for said super-frame, a slotted bar removably engaged with said hooks, and wedge members to secure said parts together with a clamping effect on the honey-boxes.

4. In a bee-hive, a super-frame having shouldered seats to slidably support dividing-fences between banked super-frames.

5. In a bee-hive, a set of super-frames having rabbeted ends, in combination with fences slidably supported by said rabbeted ends when the said super-frames are banked together.

6. In a bee-hive, a super-frame having widened ends provided with vertical grooves on opposite sides whereby a series of said super-frames may be banked in spaced relations to removably support dividing fences.

7. In a bee-hive, a super-frame having a top bar projected beyond either end thereof and provided with steadying projections on said ends, whereby the said super-frame may be supported within a super-box apart from the walls thereof.

8. In a bee-hive, a super-box, in combination with a super-frame having supporting hangers to rest upon the box and having a body spaced apart at its ends from the inner walls of said box.

9. In a bee-hive, a super-box, in combination with a set of super-frames having widened ends and narrowed connecting bars, means to hold said super-frames in tightly-banked relations, fences removably seated between adjacent super-frames, and pins to hold the ends of each frame apart from the inner walls of said super-box.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE C. RAHN.

Witnesses:

ALICE C. MCQUARRIE,

JAMES MCQUARRIE.