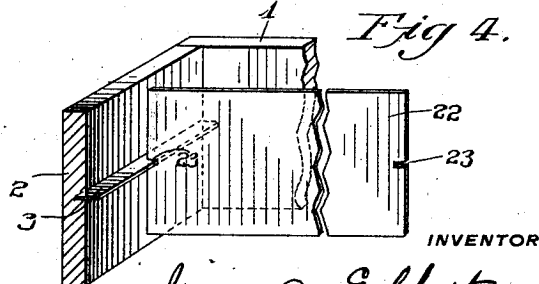
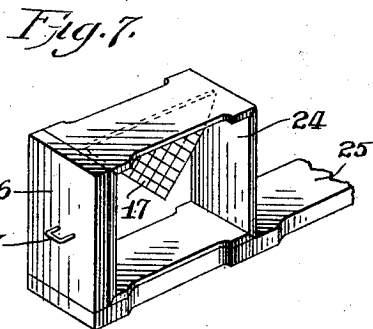
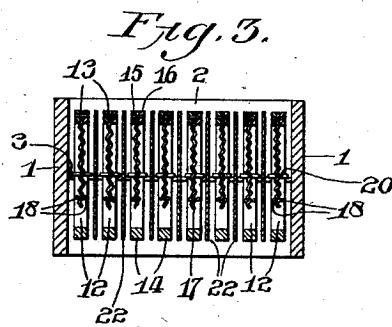
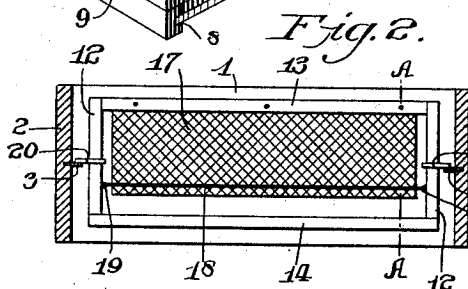
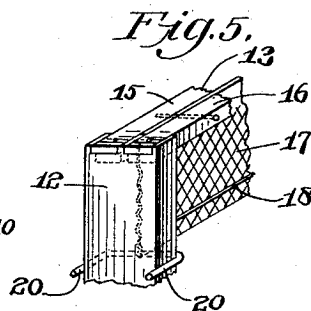
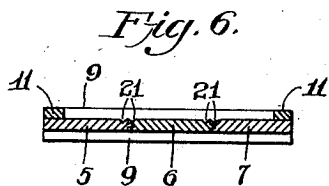
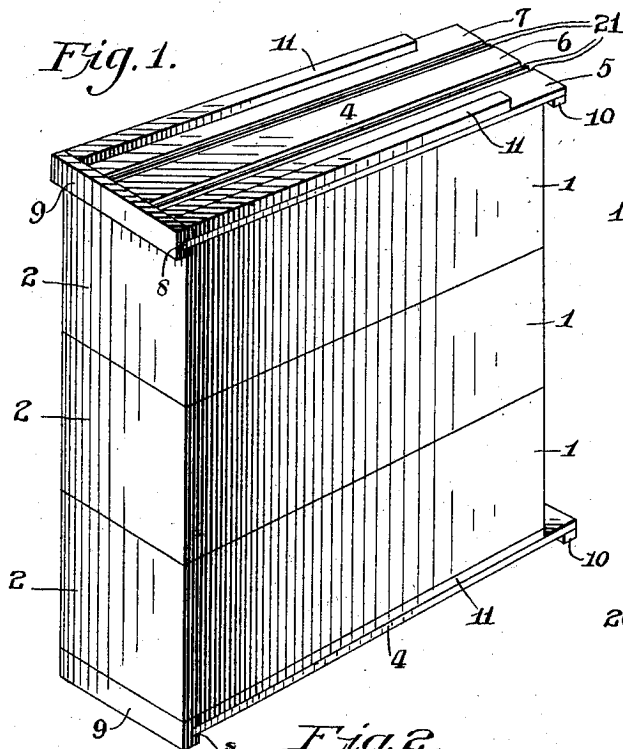


J. A. GEBHART.
BEEHIVE.
APPLICATION FILED MAR. 5, 1912.

1,042,907.

Patented Oct. 29, 1912.



WITNESSES

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BEEHIVE.

1,042,907.

Specification of Letters Patent.

Patented Oct. 29, 1912.

Application filed March 5, 1912. Serial No. 681,693.

To all whom it may concern:

Be it known that I, JAMES A. GEBHART, a citizen of the United States, and a resident of Wilmington, in the county of New-castle and State of Delaware, have invented certain new and useful Improvements in Beehives, of which the following is a specification.

My invention relates to improvements in bee-hives and the object of my invention is to furnish an inexpensive, simple and durable bee-hive which will possess certain distinct and valuable features not embodied in any article of this class at present in use.

In the accompanying drawings forming part of this specification and in which similar letters of reference indicate similar parts throughout the several views: Figure 1, is a perspective view of my improved bee-hive; Fig. 2, a central longitudinal sectional view of one of the cases for containing the brooding frames or section boxes; Fig. 3, a section of Fig. 2 on line A. A; Fig. 4, a perspective view of part of the interior of one of the cases showing metal shelf carried by ends and notched partition for separating brooding frames carried by shelf; Fig. 5, a perspective view of part of brooding frame showing improved construction of top rail for carrying comb foundation; Fig. 6, a transverse section across top or bottom board showing its preferred construction. Fig. 7, a perspective view of one end of rack for carrying section boxes showing one of the latter.

1 are the cases or sections forming the body of the hive; they are rectangular in construction, preferably somewhat longer than wide, and each one is an exact duplicate of another. The ends 2 of the cases are upon their inner sides, half way between their tops and bottoms, furnished with a saw-kerf, or slit, which carries a rail 3, preferably formed of sheet metal, the purpose of which will be presently described. The cases 1, being all precisely alike, can be indiscriminately used for the top, bottom or central part of the hive. In practice they are placed one on top of the other as shown in Fig. 1 and being of the same dimensions on top and bottom no care or time is necessary in selecting a particular case for any location when assembling the hive. The boards upon which the under side of the lower case rests and which forms the bot-

tom of the hive is precisely like the board which covers the top of the top section of the completed hive and these boards are so made that any one of them may be used for either of these purposes. In order to prevent warping these boards are preferably constructed of several separate pieces, 5, 6, 7, Figs. 1 and 6, which run lengthwise of the structure and these several pieces are tongued and grooved, as shown in Fig. 6, and upon their outer side are grooved at each side of the joint between them, as at 21, to prevent water from easily finding its way in between them. At the rear end the board 4 enters a groove 8 formed in a strip of wood 9 which extends from side to side of the board and which is suitably secured thereto, by nails for instance. When the board 4 is used as a bottom for the hive this strip 9 forms a leg or support for the rear end of the bottom and a strip 10, extending transversely across the under side of the other end, forms a leg or support for its front end. In addition these strips serve to assist in holding the several pieces of material forming the board 4 together and preventing them from warping.

It is of course, necessary that provision be made whereby the bees may have access to the hive and it is usual that the place of ingress and egress be at the bottom. For this purpose I secure upon one side of the board 4 strips 11, one upon each side of the top. These strips, when the board 4 is used as the bottom of the hive, support the sides of the lower section while the top of strips 9 supports the rear end of this section as shown in Fig. 1, and keep the lower side of the lower case some distance above the bottom board 4. It will be observed that the board 4 is somewhat longer than the cases 1. When this board is used as a bottom for the hive it projects out some distance beyond the front of the lower case to form an alighting place for the bees directly in front of the opening, which is between the lower end of the front side of the lower case and the bottom board, through which the bees have access to the hive, the strips 11 being high enough to sufficiently elevate the front end of the lower case above the board 4 for this purpose.

All joints between the several cases and between these cases and the top and bottom boards are immediately sealed with wax by

the bees when the hive is colonized and I use no cloth between the upper side of the upper case and the covering board as I find this unnecessary and productive of trouble in that the bees seal the cloth to the case with wax and water and air is then apt to enter between the top and cloth which is not possible when the case and top are sealed instead of the case and cloth as is usual.

The brood frames, Figs. 2, 3 and 5, have ends 12, top rails 13 and bottom rails 14. The top rails are divided longitudinally into two parts, 15—16 and are held in the notched tops of the ends 12 as shown in Fig. 5. The upper edge of the foundation comb 17 is placed between the two pieces 15—16 of the top rail and these pieces are secured together by nailing or otherwise thus saving the time, trouble, and annoyance of securing the foundation comb to the top rail by melted wax as is the usual method. The lower side of the foundation comb is preferably held between wires 18 which are suitably carried, by hooks 19 for instance, by the ends 12.

Midway between the tops and bottoms of the ends 12 are projecting supports 20, the ends of a U shaped wire passing around three sides of the ends 12 as shown in Fig. 5 for instance, which are adapted to rest upon the rails 3 carried by the ends 2 of the cases 1 midway between the top and bottom of these ends. These supports carry the frames properly no matter which side of the case may be uppermost and as the supports 20 at each end of the frames are at some distance apart they insure a vertical position of the frame and comb foundation carried thereby and prevent any rocking of the frame when the supports engage the rail 3.

There is sufficient space between the ends 12 of the frames and the ends 2 of the cases to permit the frames to be easily removed and the bees to pass but not enough space to make it likely that any comb will be formed therein.

The brood frames are placed in the lower section or case of the hive and are separated from one another by movable partitions 22 which are midway of their ends furnished with notches 23, Fig. 4, which are adapted to engage the rails 3 carried by the ends 2 of the cases 1 and which, as before described, carry the brooding frames. Both the top and bottom rails of the brooding frames are somewhat narrower than the end rails 12 in order to allow the bees to pass freely to all parts of the hive.

The partitions separating the brood frames permit any one frame to be removed for inspection without disturbing any of the other frames, or the bees collected upon them, and the considerable space between the ends of brood frames and the ends of the cases 1, about $\frac{3}{8}$ inch in practice, will prevent the

bees from waxing these frames to the ends of the cases as is often done in the usual construction of hive.

The section cases 24, Fig. 7, in which the commercial honey is made are of the usual square construction and are carried by a rack 25 which has vertically extending end pieces 26 which are furnished with stops 27 which rest upon the rails 3 of the case 1 which incloses these racks and section cases.

Upon the approach of cold weather bees are apt to devote their energies to the brood frames rather than to the making and filling of comb in the section boxes. If the section boxes be not completely filled at this time one or more brood frames may be removed from their cases 1 and their space filled by racks 25 and the section boxes, a procedure which will usually insure the immediate and complete filling of these boxes.

I prefer to make the cases 1 of such dimensions that when filled they will weigh 40 or 50 pounds but the actual dimensions of these cases, so far as my invention is concerned, is immaterial.

Having thus described my invention I claim as new and desire to secure by Letters Patent:

1. In a bee-hive, in combination, two or more rectangular cases of the same dimensions open at the top and bottom and adapted to be stacked one on the other, metallic rails carried in slots or kerfs midway between the tops and bottoms of the ends of said cases, a frame for comb, and stops carried by the end pieces of said frames adapted to rest upon said metallic rails.

2. In a bee-hive, in combination, a case rectangular in plan and open at the top and bottom, a metallic rail carried in a slot or kerf midway between the top and bottom of the ends of said case, a frame for comb consisting of end pieces, a two part top rail for carrying the upper edge of the comb foundation, and a bottom rail, said top and bottom rails being narrower than said end pieces, a U shaped wire carried by said end pieces the ends of which are adapted to rest upon said metallic rail, and partitions, furnished at their ends with notches, adapted to engage said metallic rail, for separating said frames.

3. An interchangeable top or bottom for bee-hives, consisting of a board one end of which enters a groove in a transverse strip, the under side of the other end of said board being secured to a transverse strip and the top of said board being at its sides furnished with longitudinal strips, the tops of said latter strips and of said grooved strip being in the same plane.

4. An interchangeable top or bottom for bee-hives consisting of several tongued and grooved boards disposed lengthwise of the hive and furnished upon their upper sides

with grooves parallel and adjacent to their meeting edges, a grooved transverse strip carried by the rear end of said boards, a transverse strip secured to the under side of the front end of said boards, and longitudinally disposed strips secured to the top of said structure, at its sides, the tops of

said latter strips and of said grooved end strip being all in the same plane.

JAMES A. GEBHART.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
