Jan. 25, 1944. K. HAWKINS 2,340,219

BEEHIVE

Filed Oct. 26, 1942

Fig. 1.

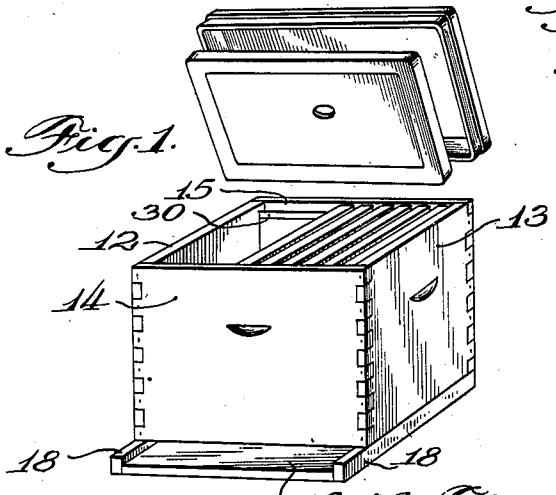


Fig. 2.

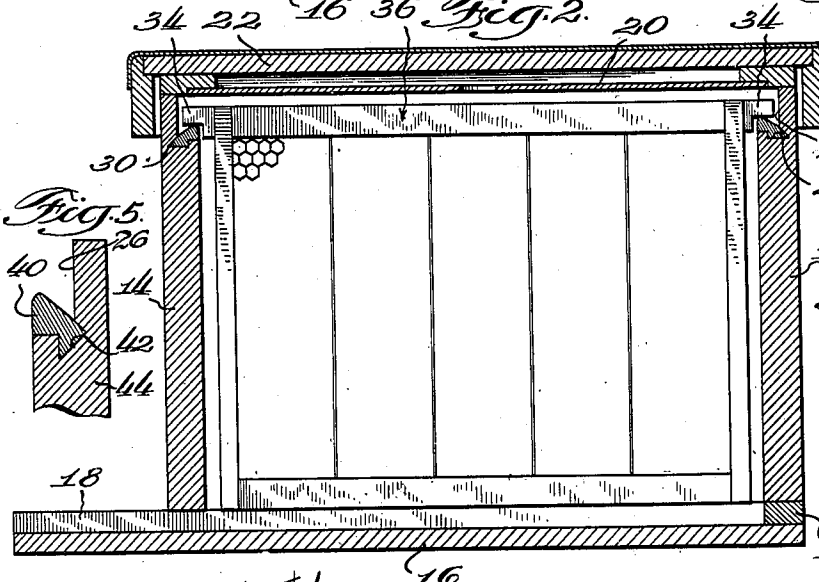


Fig. 3.

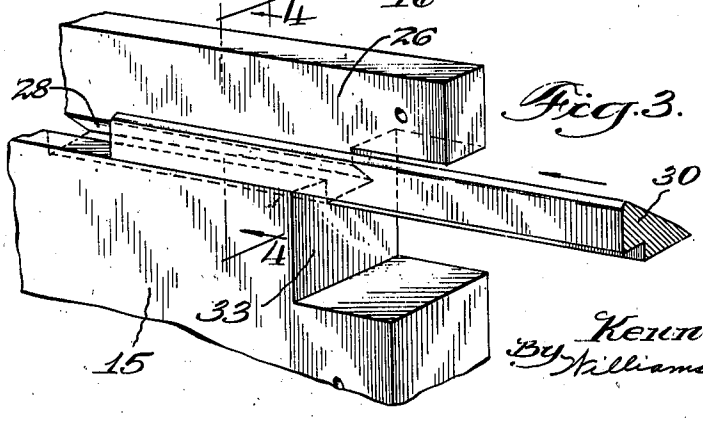


Fig. 4.

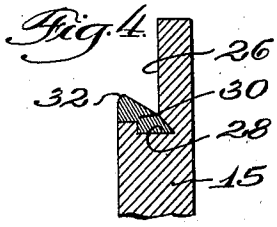


Fig. 5.

Fig. 6.

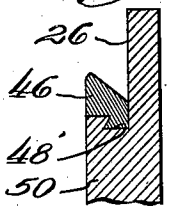


Fig. 7.

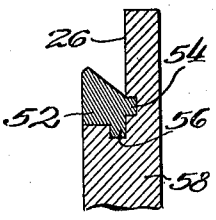


Fig. 8.

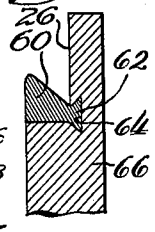


Fig. 9.

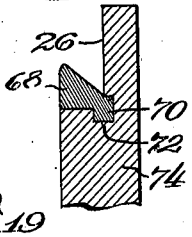
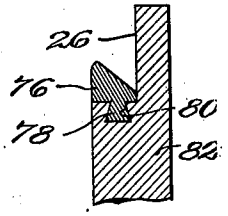


Fig. 10.



Inventor:
Kennith Hawkins.
By Williams, Bradbury & Hinkle
Attorneys

Patented Jan. 25, 1944

2,340,219

UNITED STATES PATENT OFFICE

2,340,219

BEEHIVE

Kennith Hawkins, Watertown, Wis., assignor to G. B. Lewis Company, Watertown, Wis., a corporation of Wisconsin

Application October 26, 1942, Serial No. 463,366

3 Claims. (Cl. 6—2)

My invention relates generally to beehives, and more particularly to beehives of generally conventional construction having improved rests or frame supporting members.

Beehives are generally constructed in a box-like shape having ledges near the upper inner edges of their end walls forming supports or rests for the frames. It has recently become common practice to transport beehives from place to place by truck, often over rough roads, in order to follow the flowering season in different parts of the country. Such frequent transportation of beehives results in pounding of the projecting ends of the frames against the frame rests, with consequent gradual damage and deterioration of the rests. Similarly, merely the necessary removal and replacement of the frames is likely, unless the frames are replaced very carefully, to result in some damage to the frame rests.

A number of expedients have been proposed and used with more or less success to provide a durable rest for the frames. Such rests have ordinarily been formed of steel. The result has been that while the frame rests may not as easily be damaged and indented by the frames pounding against them, the metal has tended to wear into the supporting ends of the frames. When subjected to very rough usage, the metal has been pounded out of shape. Furthermore, such frame rests require a non-oxidizing coating or finish to prevent rusting and corrosion, and such coating frequently cracks or chafes from the frame rest, with the result that the rests begin to rust and deteriorate.

To overcome these disadvantages, and to reduce the cost of manufacture, I have provided a novel form of beehive construction, in which there are provided frame rests of hard wood which are secured to the soft wood end walls of the beehive. These hard wood rests are sufficiently resiliently yielding that they do not cut into and damage the projecting ends of the frames resting thereupon, and yet are sufficiently hard that they will have a long useful life even though the beehives are frequently subjected to rough handling or vibration incident to transportation by truck.

It is thus an object of my invention to provide a beehive having improved frame rests.

A further object is to provide a beehive having removable and replaceable frame rests.

A further object is to provide an improved beehive having hard wood frame rests.

Other objects of the invention will appear from the following description, reference being had to the accompanying drawing, in which:

Fig. 1 is a perspective view of the improved beehive having its inner and outer cover in raised position;

Fig. 2 is a longitudinal vertical sectional view of the beehive;

Fig. 3 is a fragmentary perspective view illustrating the manner in which the frame rests are inserted in the end walls;

Fig. 4 is an enlarged fragmentary sectional view of the frame rest and adjacent portion of the end wall; and,

Figs. 5 to 10, inclusive, are views similar to Fig. 4 showing modified forms of the invention.

The beehive comprises side walls 12 and 13 and end walls 14 and 15 joined together in the usual manner to form the hive box, the box being secured to a spaced bottom 16 by spacing stringers 18 and end wall insert 19. An inner cover 20 rests upon the top edges of the side and end walls and a flanged metallic sheet protected outer cover 22 fits over the top of the hive. The upper inner edges of the end walls 14 and 15 have rabbets 26 formed therein, these rabbets including dovetail grooves 28. The side and end walls, principally for reasons of economy, are made of soft wood, such as white pine or Western pine.

As best shown in Fig. 4, a frame rest 30 has a key portion fitting in the half dovetail groove 28 and is conformed to provide a slightly rounded upper edge 32 upon which the projecting end portions 34 of frames 36 may rest. The frame rests 30 are formed of strips of a hard wood, such as birch, and are fitted in the grooves 28 of the end walls 14, 15, prior to the attachment of the side walls 12, 13 thereto. Such assembly is indicated in Fig. 3, from which it will be apparent that the frame rest 30 is pushed longitudinally into the groove 28. The strip 30 is sufficiently shorter than the end wall that its ends lie flush with the inner surfaces 33 of the mortises in the end edges of the end walls 14, 15, so that after the side walls 12 and 13 are secured to the end walls, the rests 30 are held against longitudinal movement. The cross-sectional shape of the frame rest 30 is complemental to the groove 28 so that the rest is interlockingly secured to the end wall and can be removed only after one of the side walls 12 or 13 has been removed. Occasionally, it may be economical to replace the rests in this manner, although ordinarily the rests will outlast the remaining parts of the beehive.

The form of the rest shown in Figs. 1 to 4 is representative of a variety of forms in which the rest may be made. Figs. 5 to 10, inclusive, il-

lustrate a number of the various shapes which the rest may assume.

In Fig. 5, the rest **40** fits in a half dovetail groove **42** formed in the wall **44**, the base of the groove **42** being at an angle of approximately 45° with respect to the vertical.

In Fig. 6, the rest **46** is complemental to a groove **48** in the end wall **50**, this groove having its dovetail portion projecting inwardly, and as compared with the construction of Fig. 4, does not require reduction in the cross-section of the portion of the end wall **50** adjacent the rabbet **26**.

In Fig. 7, the rest **52** has a sidewardly projecting ridge **54** and a downwardly projecting ridge **56** fitting in complemental grooves of rectangular cross-section formed in the end wall **58**, the rest **52** being thus interlocked with the end wall.

In Fig. 8, the rest **60** is provided with a dovetail projection **62** fitting into a complemental groove **64** formed in the end wall **66**, this interlocking of the dovetail portion with the groove preventing removal of the rest except by sliding it longitudinally with respect to the end wall **66**.

In Fig. 9, the rest **68** has an interlocking projection **70** fitting in a complemental groove **72** formed in the end wall **74**, the rest being thus secured to the end wall without requiring the use of any adhesive or fastening means.

In Fig. 10, the rest **76** is provided with a downwardly projecting dovetail portion **78** fitting in a complemental dovetail groove **80** formed in the end wall **82**, the dovetail portion thus forming a firm anchorage for the frame rest in the end wall and preventing its removal except upon disassembly of the beehive box.

It will be noted that in each of the embodiments of the invention, the frame rest is made of a strip of hard wood, such, for example, as birch, and that it is interlocked with the end wall so as in effect to form an integral part of the latter. The frame rest is thus capable of withstanding the vibration of the frames without being damaged, since the hard wood, while sufficiently hard and tough to withstand the blows of the frame rest end portions **34** upon it, is nevertheless somewhat pliant, and thus absorbs the shock of such blows and does not tend to cut into and damage the projecting portions **34** of the frames.

While I have shown and described particular forms of the invention, it will be apparent to those skilled in the art that numerous variations and modifications may be made therein without departing from the underlying principles of the invention. I therefore desire, by the following claims, to include within the scope of my invention all such variations and modifications by which substantially the results thereof may be obtained by the use of the same or equivalent means.

I claim:

1. In a beehive having rabbeted end walls and side walls of relatively soft wood which in part overlap the vertical edges of the end walls, and in which the end walls provided with grooves extending longitudinally thereof, frame rests of hard wood having portions formed complementally to said grooves and fitting therein, said rests being confined against appreciable longitudinal movement by the side walls of the hive.

2. In a beehive having end walls each provided with a rabbet extending longitudinally of the upper inner edge of the wall and having a groove adjacent the bottom of the rabbet and likewise extending longitudinally of the end wall, said end wall being made of a relatively soft wood, and a frame rest of relatively hard wood, said frame rest being in the form of a strip having a portion thereof complemental to said groove and fitting therein, said frame rest having a vertical surface substantially flush with the inner surface of the end wall and having a surface sloping away from the vertical surface thereof, whereby said rest will present an acute angle edge for contact with and for support of the frames.

3. In a beehive having soft wood end walls and side walls, said end walls being each provided with a groove of the interlocking type, and a pair of frame rests, each having a portion fitted in one of said end wall grooves, said frame rests being of hard wood and providing a generally line contact support for the frames.

KENNITH HAWKINS.