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A. I. ROOT

1,943,773

BEEHIVE FRAME SPACER

Filed March 22, 1933

FIG. 1.

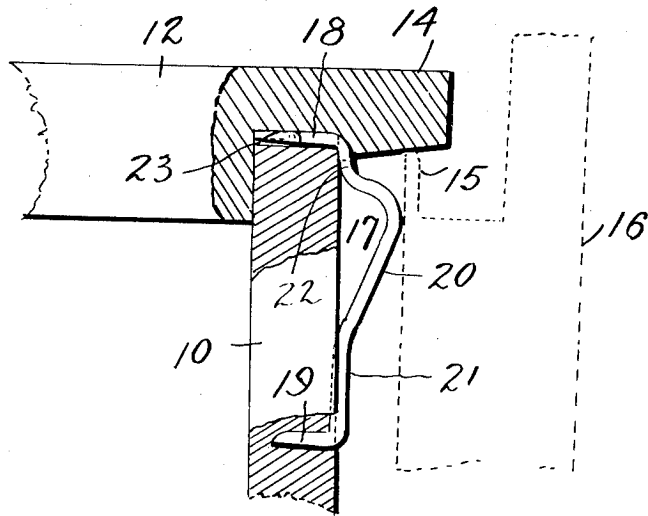
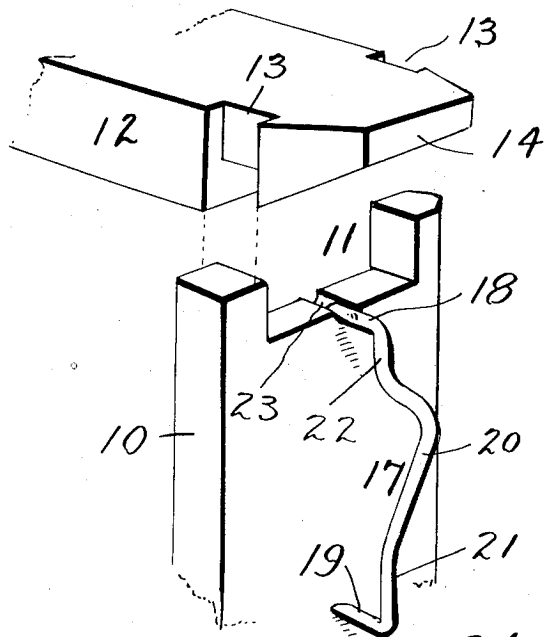


FIG. 2



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1,943,773

BEEHIVE FRAME SPACER

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5 Claims. (Cl. 6—2)

My invention relates to beehive construction and in particular to means for spacing the frame end bars from the inner walls of the hive body. Wire staples are commonly used for this purpose which are driven into the end bars of the frames so that a portion of the staple projects therefrom to contact with the adjacent inner wall of the hive. It is important that the spacing should be a certain or exact distance so that if the staple legs are not driven an accurate distance into the end bars, the desired accurate space between the end bars and the hive wall will not be secured. Again, since the staples are driven close to the upper ends of the end bars, there is danger that the two legs, one of which is driven quite close to the top of the end bar, will, because of the direction of the grain of wood, result in splitting the wood. By my invention, I provide a staple which, as will appear from the description hereinafter, overcomes the objections just stated, and gives other advantages such as greater ease and greater speed in attaching the staples to the end bars.

My invention consists in whatever is described by or is included within the terms or scope of the appended claims.

In the drawing:

Fig. 1 is a vertical section of a portion of a beehive illustrating an embodiment of my invention;

Fig. 2 is a perspective view showing parts of an end bar and a top bar of a frame during assembly of the parts.

The construction of frame shown in the drawing is one where the end bar 10 has a rectangular notch 11, cut in its top and the top bar 12, has notches 13 in opposite sides to interlock with the legs or prongs, at the top of the end bar produced by the notch, and the top bar has an extension 14, that reaches beyond the outer side of the end bar that rests upon the top edge of a metal rabbet 15, secured to the hive wall 16, and situated in a groove, or channel, on the inner side thereof, and thereby the frames are supported within the hive side by side.

My spacer staple 17, as shown in the drawing, has at opposite ends parallel or substantially parallel legs, an upper one 18 and a lower one 19, a little shorter than the upper leg, and between the two legs is an outwardly bent or curved section 20, to locate the point of contact with the hive wall, preferably a substantial distance away from the lower leg and which is a continuation of a straight portion 21, that is

substantially at right angles to the lower leg and attached thereto and which affords an extended bearing to receive blows of a driving hammer on the outer side and to contact with the adjacent vertical side of the end bar. There is thus no danger of the driving hammer striking the outwardly arched or curved bearing portion of the staple and deforming it so as to shorten the distance of its projection from the outer side of the end bar which would, of course, destroy the accurate spacing that is so desirable. Between the upper part of the outwardly bent portion 20 and the upper leg 18, is a short end bar side contacting portion 22, to afford bearing contact at that point between staple and end bar.

In assembling the frame bar parts and a staple, the upper leg 18 is placed against the bottom of the end bar notch 11, and preferably in a shallow groove 23, at the middle thereof transversely, and held in place by the forefinger with the bearing 22, in contact with the end bar outer side, the lower leg 19, is driven into the end bar by hammer blows until the bearing 21, seats against the outer side of the end bar. It will thus be seen that the accurate projection of the hive wall engaging portion is assured, first, because no hammer blows are required to drive the upper leg, and, second, because of the ease with which the distance the lower leg should be driven can be determined. But even if the lower leg should be driven into too far or not far enough, that would result in no substantial error in spacing the hive wall engaging projection because of the short radius from the fulcrum point of the upper leg to the hive contacting point of the projection compared with the distance from that point to the lower leg where the error in driving would occur.

Since the upper leg 18, is not driven in the original assembly or making of new frame bars, its end need not be sharp, but preferably, such end is sharpened as shown on order to enable my spacer staples to be applied to frame bars where the top and end bars are already assembled, or which have a construction that does not permit the laying of the top leg in its final position at the outset. It will be seen that there is a special advantage and co-action in applying my spacer staples to end bars of the construction shown in the drawing.

What I claim is:

1. As an improvement in beehive spacing devices, the combination of a frame composed of

top and end bars and a spacer having top and bottom horizontal legs and an outwardly offset hive wall engaging portion between the legs, the lower leg being driven horizontally into the end bar and the upper leg lying between overlapping portions of top and end bars that provide a space that receives such leg.

2. As an improvement in beehive spacing devices, the combination of a frame composed of top and end bars and a spacer having top and bottom horizontal legs and an outwardly offset hive wall engaging portion between the legs, the lower leg being driven horizontally into the end bar and the upper leg lying between overlapping portions of top and end bars that provide a space that receives such leg, one of such portions having a horizontal leg-receiving groove.

3. As an improvement in beehive spacing devices, the combination of a frame composed of top and end bars and a spacer having top and bottom horizontal legs and an outwardly offset hive wall engaging portion between the legs, the lower leg being driven horizontally into the end bar and the upper leg lying between overlapping portions of top and end bars that provide a space that receives such leg, the hive wall engaging point of said portion being substantially nearer the upper leg than the lower leg.

4. As an improvement in beehive spacing de-

vices, the combination of a frame composed of top and end bars and a spacer having top and bottom horizontal legs and an outwardly offset hive wall engaging portion between the legs, the lower leg being driven horizontally into the end bar and the upper leg lying between overlapping portions of top and end bars that provide a space that receives such leg, and the spacer having a substantially straight portion lying parallel with the outer surface of the end bar and constituting a blow-receiving member for driving the lower leg into the end bar while the upper leg is in its final position.

5. As an improvement in beehive spacing devices, the combination of a frame composed of top and end bars and a spacer having top and bottom horizontal legs and an outwardly offset hive wall engaging portion between the legs, the lower leg being driven horizontally into the end bar and the upper leg lying between overlapping portions of top and end bars that provide a space that receives such leg, the end bar having a notch in its upper end providing a horizontal surface against which the upper leg lies and the top bar having an extension at the end that fits said notch and projects therefrom to provide frame-supporting means.

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30	105
35	110
40	115
45	120
50	125
55	130
60	135
65	140
70	145
75	150