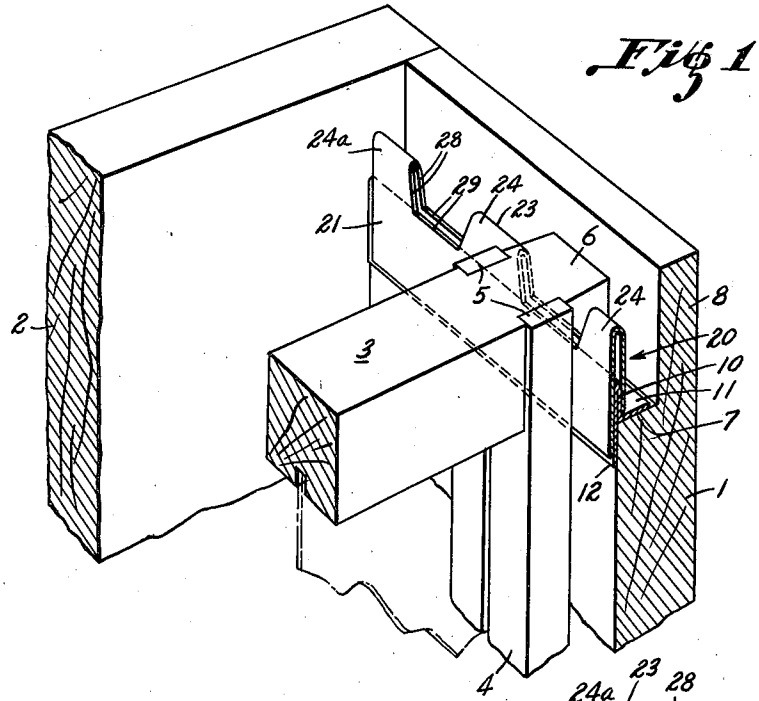
Aug. 3, 1948. I. A. STOLLER 2,446,346

HONEYCOMB FRAME SUPPORT AND SPACER

Filed Feb. 14, 1944

Fig. 1



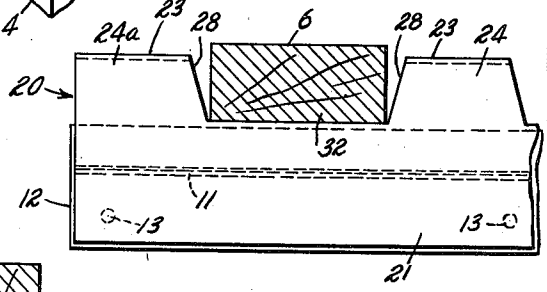


Fig. 3

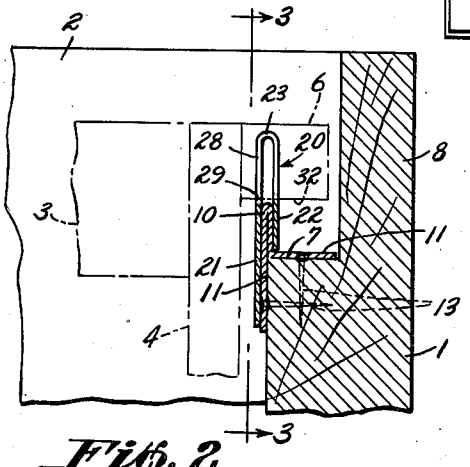


Fig. 2

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HONEYCOMB FRAME SUPPORT AND SPACER

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Application February 14, 1944, Serial No. 522,286

1 Claim. (Cl. 6—2)

1

The invention relates to a honeycomb frame supporting device having as its principal object provision of a strong, inexpensive and practical frame support and spacer for maintaining the desired number of frames properly spaced apart in the associated supers, and so supported that they can be easily removed and replaced accurately in position.

A further object is to provide such frame supporting device which may be inexpensively made from sheet metal presenting upwardly disposed frame centering and supporting edges of such character that the bees will be unlikely to fasten the frames thereto with wax or propolis in a manner to render removal of the frames from the supers difficult.

A further object is to provide a honeycomb frame spacer which can be readily demountably associated with known types of hive supers, in order to convert them quickly from effective brood supers to effective honey supers; and concomitantly to provide a slip-on spacer device for hive supers provided with fixed metal frame rests.

Other objects and features of the invention will become apparent from the following description.

In the drawing, Fig. 1 is a perspective view showing an upper corner portion of a super, an end portion of the preferred form of frame support and spacer device adapted for use in conjunction with a metal end frame rest of known form, shown mounted on the super.

Fig. 2 is a transverse fragmentary sectional view through a frame supporting upper portion of the super in accordance with Fig. 1.

Fig. 3 is a side view of an end portion of said device in mounted position on a metal frame rest, the view being taken as indicated at 3—3 in Fig. 2.

The invention as illustrated herewith is adapted for so-called honey supers of bee hives having the usual arrangement of end and side walls. A portion of one such end wall is shown at 1 and a portion of an adjoining side wall at 2. The end wall as usual near its upper margin is cut away to provide a horizontal relatively narrow step 7 upwardly beyond which the reduced thickness flange portion 8 extends flush with the top surface of the side wall 2.

The portion of a honeycomb frame illustrated in Fig. 1 comprises a short section of the top frame bar 3 and a portion of an end frame 4 fitted to the top frame bar at 5 in the usual manner, and beyond which the usual reduced width projection 6 extends for supporting contact with the step or ledge 7 or a frame rest member associated

2

therewith. As a common example of a frame rest, a generally T-shaped sheet metal strip is shown having an upright portion 10, vertical attaching flange portion 12, and a horizontal attaching flange portion 11. The marginal flanges 11 and 12 are secured to the adjacent portions of the end wall 1 by suitable fasteners as indicated at 13. One such metal frame rest would, of course, be provided at each end of the super. The reduced extensions 6 of the top frame bars 3 would ordinarily rest on the rounded upwardly disposed top surfaces presented by the doubled portions 10 of the frame rests, so that the projections 6 are spaced above the ledges or steps 7 for enabling the frames to be easily picked up.

When using such frame rests, it is difficult to place the comb frames uniform distances apart in the super and even when carefully placed they frequently get out of position through handling of the supers.

The larger spacing distance required in the case of honey supers as compared to brood supers makes proper spacing by hand unusually difficult in honey supers. In the honey supers the frames should be positioned a greater distance apart as by using eight frames per super instead of the nine or ten frames customarily used for brood. With such wider but uniform spacing the bees build the honey storage cells of uniform length and approximately balanced on each side of the comb foundation because of having more adequate room in which to work. In addition to the danger of displacing the frames by handling of the supers, there is also the likelihood of moving them out of place along the rest portions 10 by burr comb remnants on the under sides of the lids during application thereof to the supers. The rounded ledges provided by the doubled portions 10 of the frame rests, in addition to affording skidding surfaces on which the frames are apt to move out of place crosswise of the super, also enhance movement of the frames lengthwise thereof, so that the projections 6 frequently abut one or the other of the inner walls of the flange portions 8. If the super becomes jogged endwise of the frames after placement of the frames on the metal end rests and closing the cover, the bees are apt to fasten all of the projections 6 at one end of the super to the inner faces of the super wall portions 8, making the frames difficult to remove.

The frame rest spacers 20 hereof in the particular form shown fit tightly over the upstanding doubled portions 10 of the conventional frame spacer strips and not only provide for easy place-

ment of the frames with absolute accuracy and in parallel arrangement, but additionally provide non-skidding surfaces for the top bar extensions 6, preventing accidental movement of the frames in their principal planes out of position toward or against the end walls of the supers. The slip-on form of device 20 can be made of very light gauge metal since the metal rests 10—12 have sufficient rigidity for supporting the frames.

The spacer shown comprises generally parallel side portions 21 and 22 joined together by spaced portions of an open connecting fold 23 at the top to provide uniformly spaced trapezial projections 24, the endmost ones of which (24*a*, one shown) are of somewhat different form. The notches for receiving the top bar extensions 6 as illustrated particularly by Fig. 3 are cut from the sheet metal blank before it is folded into the form shown, providing spaced apart narrow horizontal edges 29 for engagement with the under surfaces 32 of the extensions 6 and upwardly diverging paired side edges 28 for guiding the frame bar extensions into place. The paired ledge surfaces 29 are preferably at a slightly higher elevation than the top folded edge of the associated metal rest as exhibited in Fig. 2.

The device constitutes a slip-on spacer arrangement for extractor type honeycomb frames by which hive boxes ordinarily used as brood supers can be converted almost instantly into honey supers with provision for definitely maintaining proper spacing and maintenance of the frames in position against being shifted out of place either crosswise or lengthwise.

Reference is directed to my co-pending application Serial No. 657,999 filed March 29, 1946, as a continuation hereof showing another but similar form of spacer and the preferred method of making it.

I claim:

The combination with a honey super having an inner step and a narrow flange projecting upwardly from the horizontal surface of the step to space the overhanging end portions of a plurality of upper frame bars from said horizontal surface, of a spacer device having upwardly facing notches for engaging the sides of respective frame bars and downwardly extending generally parallel spring flanges adapted to slip over the upwardly projecting flange to hold the spacer device in position by frictional contact with said flange.

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