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Goff

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[54] **HONEYCOMB FOUNDATION INSTALLING DEVICE**

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[52] **U.S. Cl.** **6/10**
[51] **Int. Cl.** **A01k 47/02**
[58] **Field of Search** 6/10, 11

[56] **References Cited**

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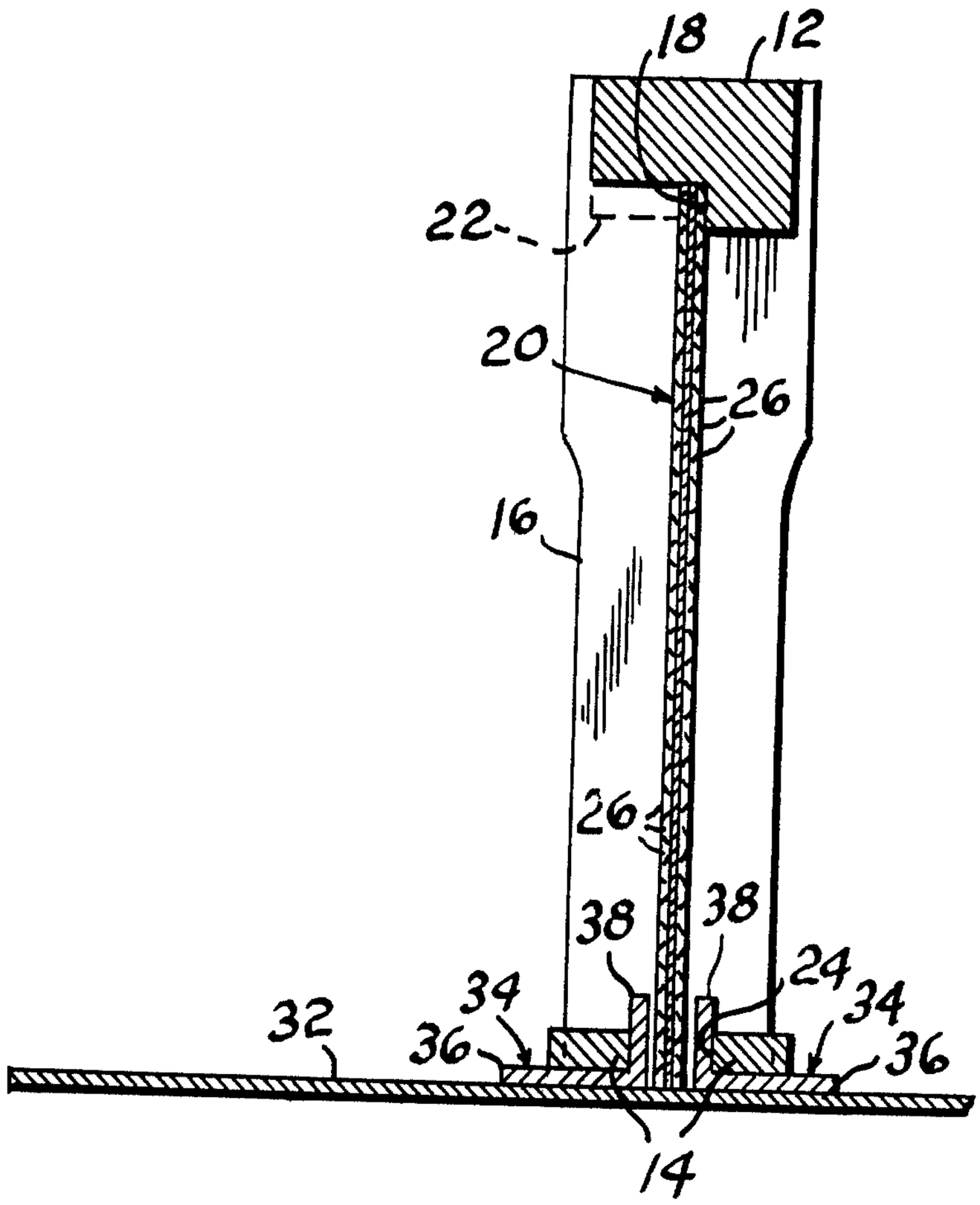
[57] **ABSTRACT**

A pair of upstanding guides, secured in parallel spaced-apart relation to a horizontal base, are interposed between horizontal side members forming a honeycomb frame bottom rail for forcing the side members apart and loosely disposing a longitudinal edge portion of a honeycomb foundation therebetween.

2 Claims, 3 Drawing Figures



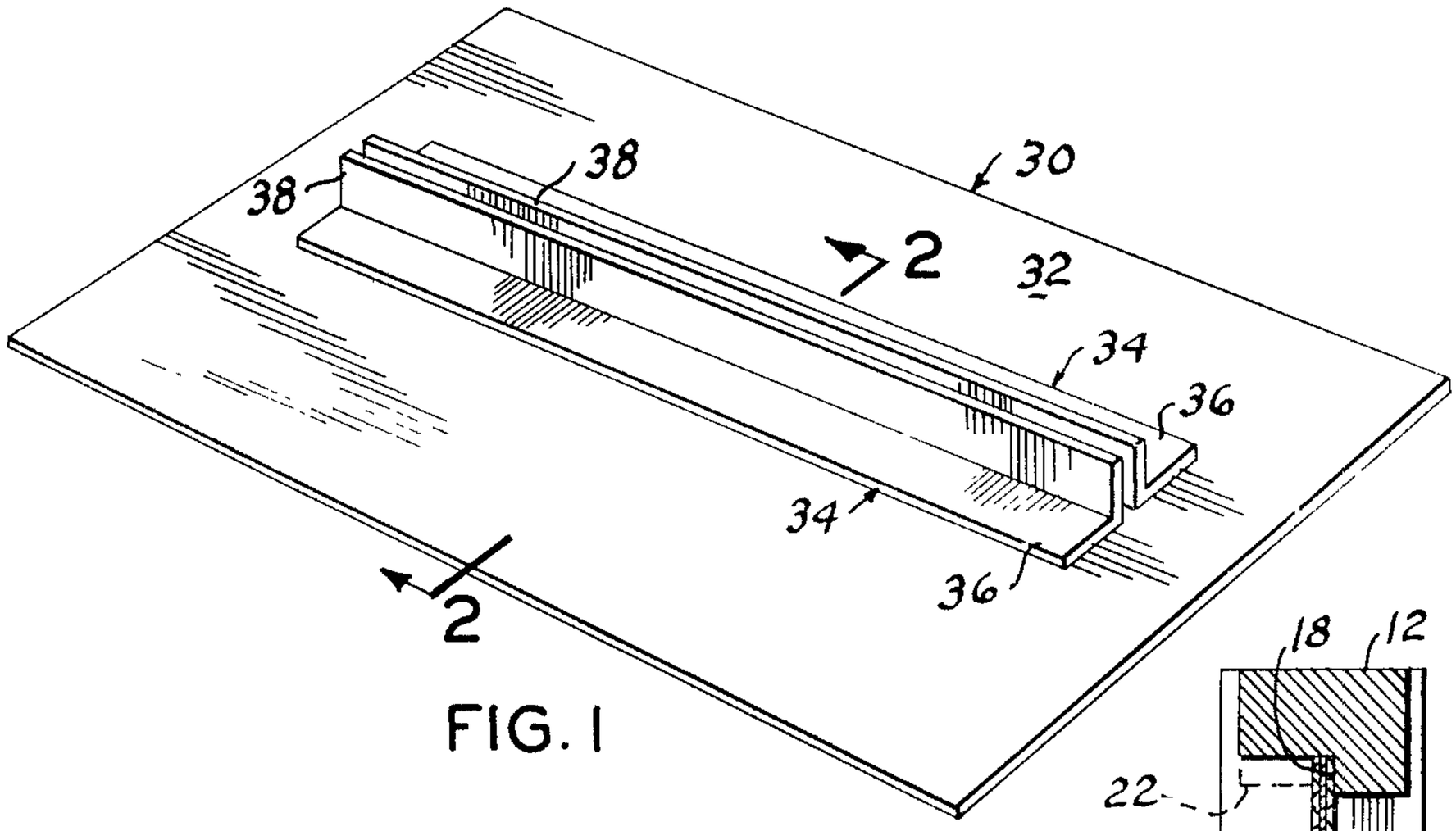


FIG. 1

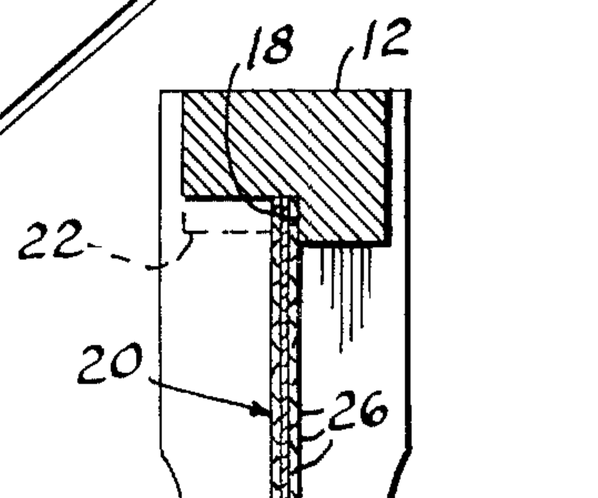


FIG. 2

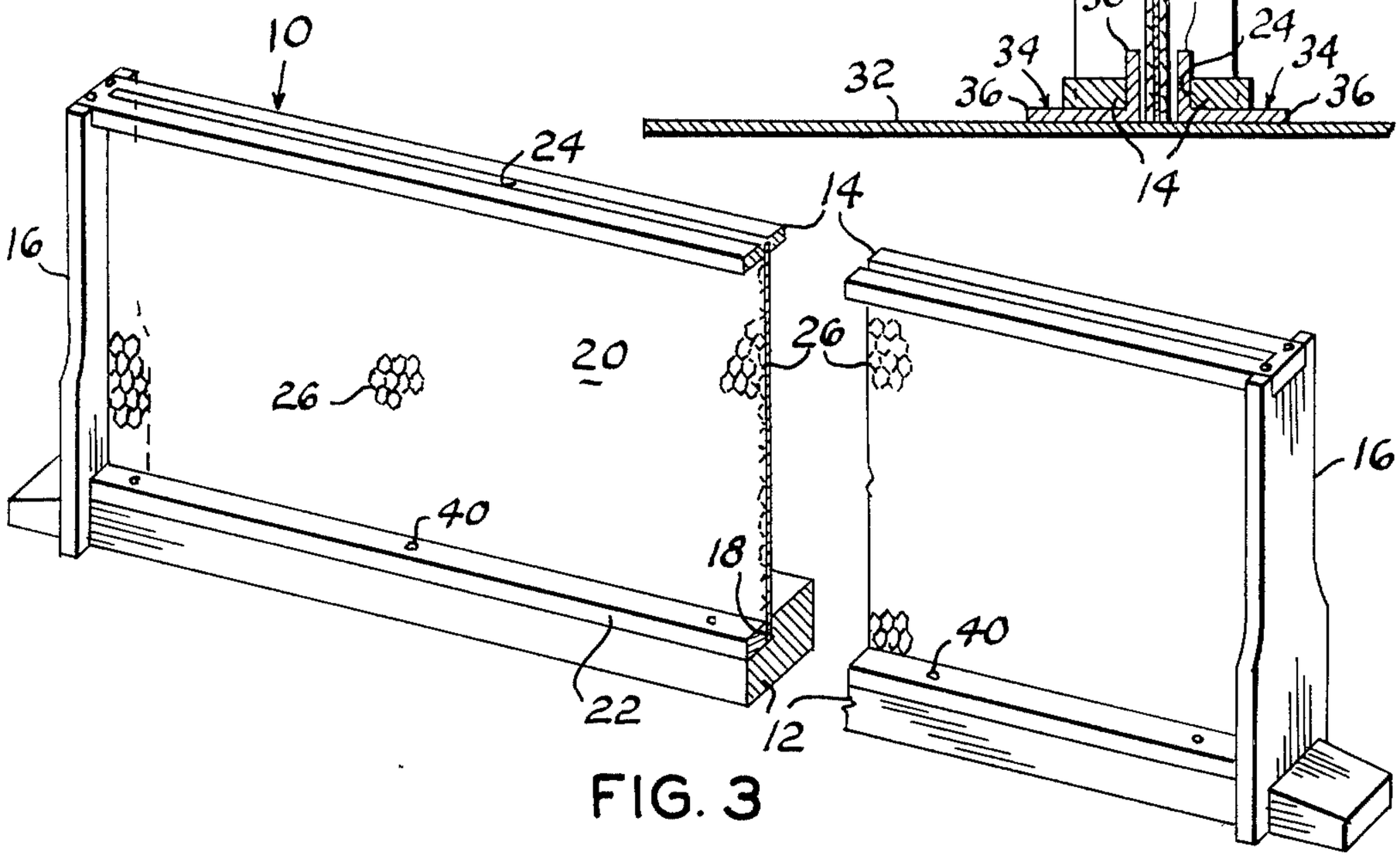


FIG. 3

HONEYCOMB FOUNDATION INSTALLING DEVICE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to beehives and more particularly to a honeycomb frame holding device for inserting a longitudinal edge portion of a honeycomb foundation within the depending horizontal bottom rail slot of a honeycomb frame.

Conventional rectangular beehives usually comprises a lower or brooder section, having honeycomb frames therein, which the bees fill with honeycomb cells and provide other honeycomb cells for raising their young and propagating their hive. An additional honeycomb area must be provided, preferably on top of this lower section, for obtaining honey produced and stored by the bees and usually comprises a rectangular section having side and end walls coinciding with the dimensions of the brooder section and characterized by an open top and bottom and is commonly referred to as "super." The top of the super is usually provided with a lid or top covering the topmost one of the one or more supers vertically positioned above the brooder section. Each of these supers are normally provided with a plurality of rectangular honeycomb frames disposed in vertical edgewise juxtaposed relation between parallel side walls of the super and supported thereby. These honeycomb frames are normally provided with a central planar section or sheet formed from beeswax and provided on its opposing flat surfaces with juxtaposed hexagonal recesses or indentations forming a base or foundation on which the bees build their hexagonal prismatic honey containing cells. This honeycomb foundation section or sheet is usually removed by the beekeeper with the honey during the processing or extracting the honey for sale, therefore, even when using a previously assembled honeycomb frame a new preformed honeycomb foundation sheet is installed in the previously used honeycomb frame. These honeycomb frames may be purchased in knock-down or ready to assemble fashion on the open market. Similarly the honeycomb foundation sheet is a purchase item. One longitudinal edge portion of a honeycomb foundation must be inserted within a slot formed in the depending rail of the honeycomb frame which is a tedious and time consuming function for the reason the transverse width of the slot is dimensioned to prevent lateral movement of the honeycomb foundation with respect to the frame.

This invention simplifies the installation of the longitudinal side edge portion of the honeycomb foundation into the honeycomb frame slot.

2. Description of the Prior Art

I do not know of any patents disclosing a device for installing a honeycomb foundation in a honeycomb frame.

SUMMARY OF THE INVENTION

A pair of elongated right angular members, in transverse cross section, are flatly secured, by one leg portion to a horizontal base disposing the respective other leg portions of the members in parallel upstanding spaced-apart guide forming relation. The longitudinally slotted bottom rail of the honeycomb frame is manually spread apart so that each longitudinal side member of the bottom rail contacts the respective outwardly disposed side surface of the upstanding legs of the angular members intermediate the ends of the bottom rail. A honeycomb foundation has one longitudinal side edge manually positioned between the guides. A foundation impinging strip is manually positioned against the oppositely disposed longitudinal edge of the honeycomb foundation and the depending surface of the honeycomb frame top rail. The honeycomb frame is then manually lifted off the guides and inverted for nailing the foundation impinging strip to the honeycomb frame top rail.

The principal object of this invention is to provide an apparatus for separating honeycomb frame bottom rail side members for placing a longitudinal edge portion of a honeycomb foundation therebetween and simultaneously placing the remaining portion of the honeycomb foundation between the inner limits of the remainder of the frame.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of the apparatus;

FIG. **2** is a fragmentary vertical cross-sectional view taken substantially along the line **2—2** of FIG. **1** and illustrating, in vertical cross-section, a honeycomb frame when positioned thereon and the relative position of the honeycomb foundation; and,

FIG. **3** is a fragmentary perspective view, partially in section, of an inverted honeycomb frame illustrating the manner in which the honeycomb foundation is secured within the honeycomb frame.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Like characters of reference designate like parts in those figures of the drawings in which they occur.

In the drawings:

The reference numeral **10** indicates a conventional honeycomb frame comprising an elongated top rail **12** and a bottom rail **14** joined in parallel spaced-apart relation by parallel end members **16.** The top rail **12** is characterized by a longitudinally extending recess or rabbeted surface **18** which receives one longitudinal edge portion of a honeycomb foundation **20.** This longitudinal edge portion of the honeycomb foundation is impinged against the rabbeted edge by a longitudinal strip **22** by nailing the latter to the top rail **12.** The bottom rail **14** is characterized by a longitudinally extending slot **24,** medially its width, open to the top and bottom surface of the rail and coextensive with respect to the spacing between the end members **16.** This bottom rail slot **24** receives the longitudinal edge portion of the honeycomb foundation opposite the top rail **12.**

The honeycomb foundation **20** is rectangular sheet-like in general configuration having a transverse width substantially equal to the distance between the bottom surface of the frame bottom rail **14** and the rabbeted surface **18** of the top rail with the length of the foundation **20** substantially equal to the spacing between the frame end members **16.** The respective opposing flat faces or surfaces of the foundation **20** are provided with hexagonal-shaped recesses or indentations **26** upon which bees build their honey receiving hexagonal cells which project horizontally outward from the respective generally vertical faces of the foundation **20.**

The reference numeral **30** indicates the foundation installation device, as a whole, comprising a planar base **32** and a pair of guides **34.** The guides **34** are

formed from an elongated length of right angular material, in transverse cross section, having a length substantially less than the length of the honeycomb frame rail **14.** One leg **36** of each guide **34** is flatly secured to the upper surface of the base **32** thus disposing the plane of the other leg normal to the upper surface of the base **32** and in spaced-apart relation with respect to each other to form a pair of upstanding guide strips **38.** The spacing between the strips **38** is slightly greater than the transverse width of the honeycomb frame bottom rail slot **24** for freely receiving a longitudinal edge portion of the honeycomb foundation **20** therebetween. The vertical dimension of the strips **38** is at least equal to and preferably greater than the thickness of the frame bottom rail **14.**

The honeycomb frame is manually positioned on the foundation installer **30** manually spreading the respective side members of the frame bottom rail **14** apart so that its slot **24** receives the guides or strips **38** therebetween. The honeycomb foundation **20** is manually positioned between the frame ends **16** with its depending edge portion disposed between the strips **38** and its upper longitudinal edge in contact with the rabbeted surface **18.** The gripping strip **22** is manually positioned in the rabbeted edge recess of the frame top rail **12** and held in frictional contact with the upper longitudinal edge portion of the honeycomb foundation while manually lifting the frame off the foundation installer **30.** The frame is then inverted (FIG. **3**) and the gripper strip **22** secured within the rabbeted recess of the frame top rail **12** as by nails **40** thus impinging one longitudinal edge portion of the honeycomb foundation.

Obviously the invention is susceptible to changes or alterations without defeating its practicability, therefore, I do not wish to be confined to the preferred embodiment shown in the drwwings and described herein.

I claim:

1. In combination with a honeycomb foundation sheet and a honeycomb frame having a bottom rail provided with a longitudinal honeycomb foundation sheet receiving slot defining separable side members for said frame bottom rail, the improvement comprising:

a planar base; and,

guide means secured to said base in parallel spaced-apart relation,

said guide means comprising a pair of elongated upstanding strips each having a vertical dimension at least equal to the thickness of said honeycomb frame bottom rail and having a length substantially less than the lenth of said honeycomb frame,

the spacing between the strips forming said guide means being greater than the transverse width of the frame bottom rail slot and less than the transverse dimension of the frame bottom rail,

whereby said guide means increases the transverse width of the slot between the frame bottom rail side members when the guide means is temporarily interposed between the frame bottom rail side members.

2. The combination according to claim **1** in which said guide means comprises:

a pair of elongated right angular members each having one leg contiguously contacting the upper surface of said base and each having its other leg vertically disposed,

the vertical dimension of said legs being at least equal to the thickness of the honeycomb frame bottom rail,

the length of said vertical legs being substantially less then the length of said honeycomb frame.

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