April 29, 1924. 1,491,868

V. V. KUNKEL

COMB BASKET FOR HONEY EXTRACTORS

Original Filed May 26. 1921 2 Sheets-Sheet 1

Fig. 1.

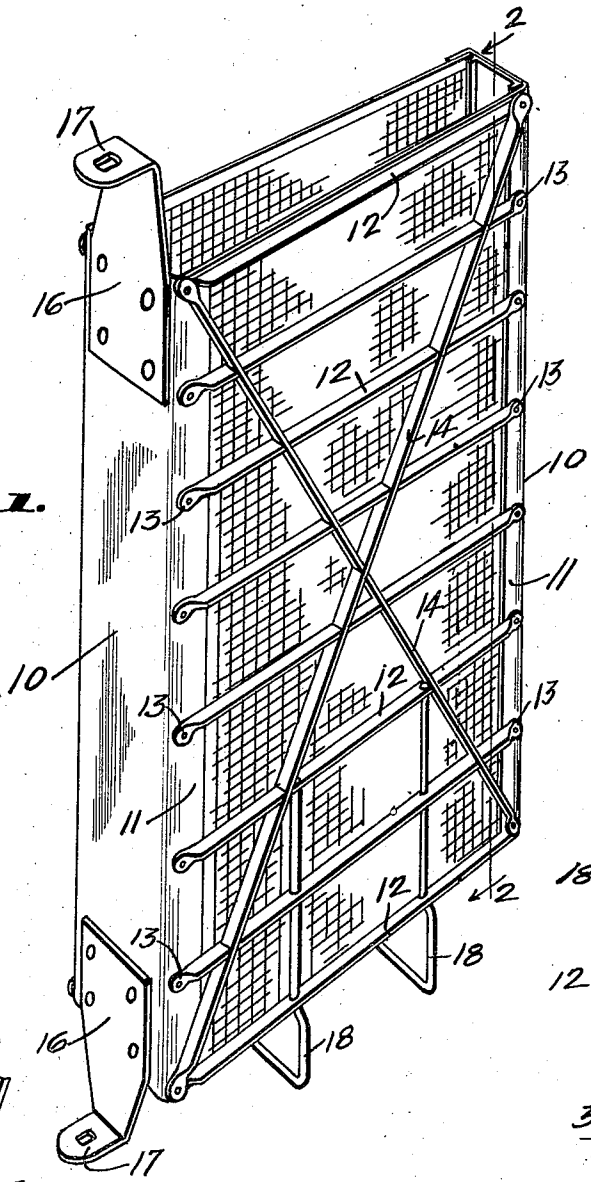
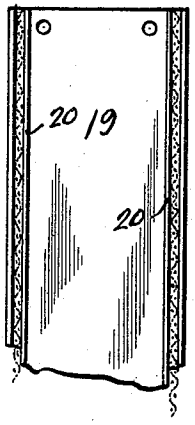


Fig. 2.



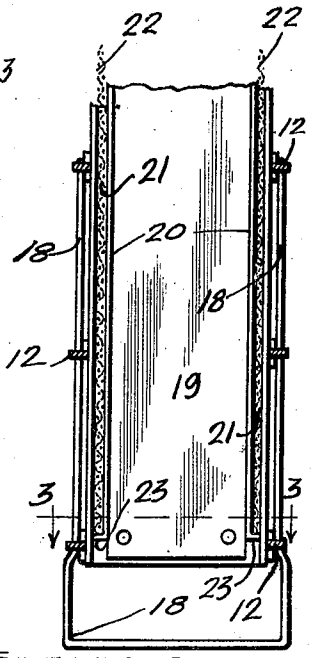


Fig. 4.

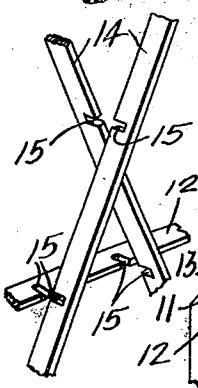


Fig. 3.

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Fig. 5.

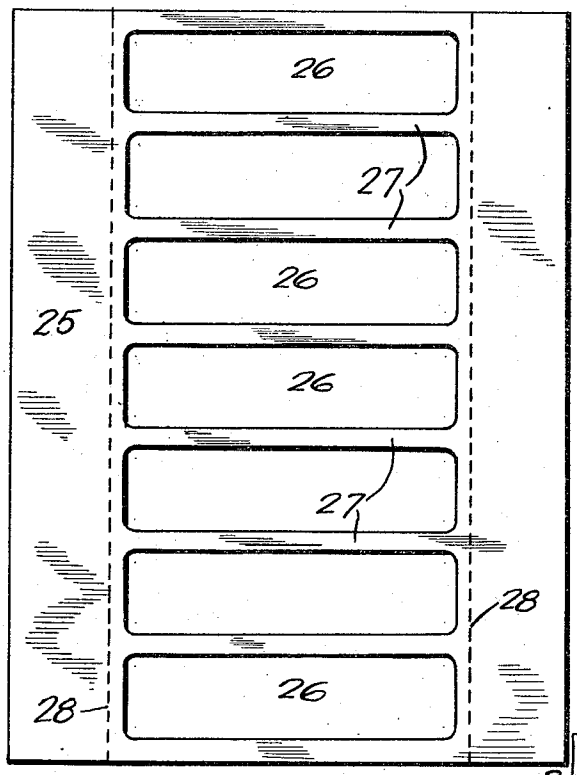


Fig. 6.

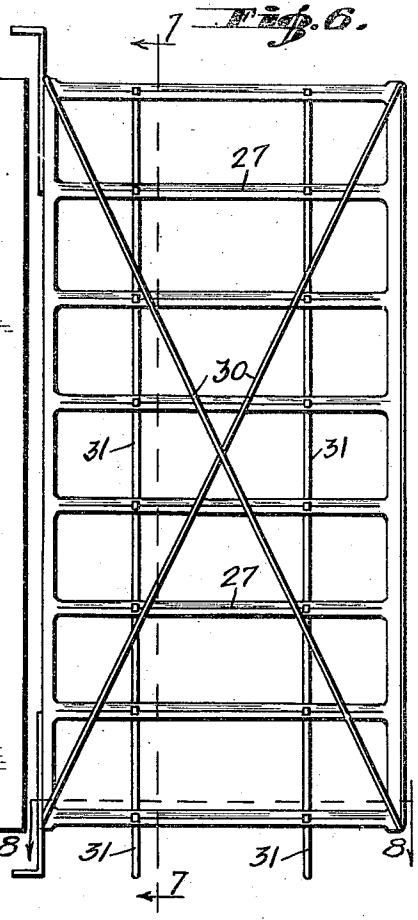


Fig. 7.

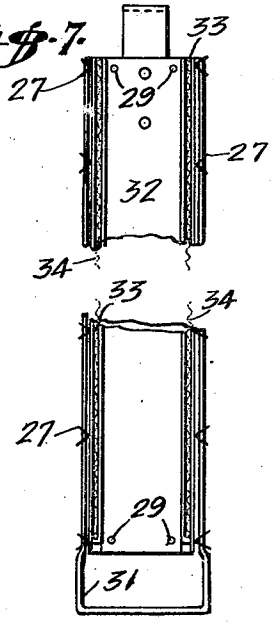


Fig. 8.

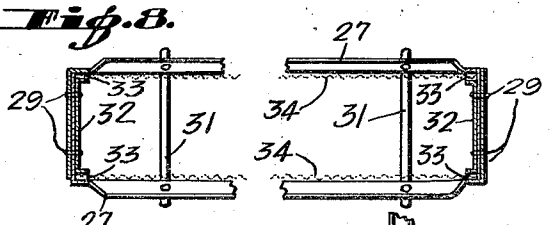
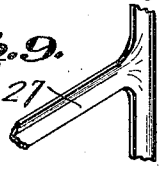


Fig. 9.



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Patented Apr. 29, 1924. 1,491,868

UNITED STATES PATENT OFFICE.

VICTOR V. KUNKEL, OF LOS ANGELES, CALIFORNIA.

COMB BASKET FOR HONEY EXTRACTORS.

Application filed May 26, 1921, Serial No. 472,929. Renewed March 24, 1924.

To all whom it may concern:

Be it known that I, VICTOR V. KUNKEL, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Comb Baskets for Honey Extractors, of which the following is a specification.

My invention relates generally to machines that are utilized for the centrifugal extraction of honey, and more particularly, to a carrier in the nature of a basket that is adapted to receive the honeycomb sections while the liquid honey is being extracted therefrom, the principal objects of my invention being to generally improve upon and simplify the existing forms of honeycomb baskets, to provide a basket having great strength and rigidity so that it will withstand the strains and stresses to which it is ordinarily subjected while in service, to provide a construction that will enable the baskets to be easily and cheaply produced, to provide the baskets with reticulated side walls that are readily removable in order to facilitate cleansing operations, and to provide simple and efficient means for supporting the reticulated side walls in position upon the frame of the basket.

With the foregoing and other objects in view, my invention consists in certain novel features of construction and arrangement of parts that will be hereinafter more fully described and claimed, and illustrated in the accompanying drawings, in which—

Fig. 1 is a perspective view of a comb receiving basket of my improved construction.

Fig. 2 is a vertical section taken approximately on the line 2—2 of Fig. 1.

Fig. 3 is an enlarged horizontal section taken approximately on the line 3—3 of Fig. 2.

Fig. 4 is a detail perspective view of parts of the frame members that enter into the construction of the basket.

Fig. 5 is an elevational view of a blank that is utilized in the formation of a modified form of the basket.

Fig. 6 is an elevational view of a modified form of the basket.

Fig. 7 is a vertical section taken on the line 7—7 of Fig. 6.

Fig. 8 is a cross section taken on the line 8—8 of Fig. 6.

Fig. 9 is a perspective view of a portion of one of the side frames of the modified form of the basket.

Referring by numerals to the accompanying drawings, which illustrate a practical embodiment of my invention, 10—10 designate the upright end walls of the basket, which end walls are preferably formed of sheet metal and their side edges being bent inwardly at right angles to form vertically disposed side flanges 11.

These end members are framed together by relatively narrow rails or cross bars 12, the ends 13 of which are flattened and rigidly fixed to the side flanges 11 in any suitable manner, preferably by rivets as illustrated, or by being spot welded.

In order to reinforce the skeleton frame of the basket, diagonally disposed braces 14, preferably thin metal bars, extend from the upper corners of the frame to the lower corners thereof, said rails crossing each other at a central point on the side of the frame and the ends of said reinforcing member being secured to the end portions of the side flanges 11 in any suitable manner, preferably by being spot welded.

The diagonally disposed braces 14 have interlocking connection with the horizontally disposed bars 12 and with each other by the formation of notches such as 15 in said braces and bars, which notches extend approximately half-way through the braces and bars as illustrated in Fig. 4, thereby enabling the parts to be fitted together and provide strong, substantial and compact joints.

Fixed in any suitable manner to the upper and lower ends of one of the end members 10, are plates 16 having their outer ends bent laterally to form ears 17 and which latter may be perforated or provided with bearings whereby the basket may be pivotally mounted in the reel or rotating carrier of the honey extractor.

Secured in any suitable manner to the lower cross bars or rails 12 on both sides of the basket, are the upper portions of the vertically disposed legs of U-shaped supporting members 18, preferably formed of heavy wire and the lower portions thereof, or those portions which extend below the bottom of the basket, being substantially wider than the width of the space within the frame of the basket, and such increased width being for the purpose of accommodating the widened lower end portions of the

honeycomb sections that are positioned in the basket.

Fixed in any suitable manner to the inner faces of the end members 10 of the basket, are vertically disposed plates 19, preferably of thin sheet metal, the side edges of which are bent inwardly at right angles to form vertically disposed side flanges 20 that occupy positions spaced apart from and parallel with, the side flanges 11, and, as a result of such construction, relatively narrow channels or guideways such as 21 are formed between the flanges 11 and 20 and which channels are adapted to be occupied by the side edges of the removable side walls of the cage. These side walls, which are designated by the numeral 22, are formed of suitable reticulated material, such as wire netting, the edges thereof being, preferably, bound with strips of metal and said reticulated walls are removably positioned in the frame of the basket with their side edges positioned in the channels or guideways 21 between the flanges 11 and 20.

The lower ends of the side flanges 20 are bent outwardly into horizontal planes as designated by 23, and said outwardly bent portions extend across the channels or guideways 21, thereby forming stops or shoulders upon which the lower corners of the reticulated side walls 22 rest when the same are properly positioned within the cage.

In the modified form of the cage illustrated in Figs. 5–9 inclusive, the sides of the frame of the cage are constructed from substantially rectangular sheets 25 of metal, in which is formed a vertical row of horizontally disposed openings 26 and the narrow strips of material 27 between said openings being bent along their longitudinally disposed medial lines to form channel-shaped members that are substantially V-shaped in cross section, with the legs or flanges outwardly presented. (See Figs. 7 and 9.)

The end portions of each section of material, or those portions beyond the openings 26, are bent along the dotted lines 28 into positions at right angles to the plane occupied by the main body portion of the side frame, and these bent end portions are secured to the corresponding end portions of an oppositely disposed side piece by means of rivets 29 or like fastening devices, thereby forming a skeleton cage that is composed of but two main parts.

The sides of this cage may be reinforced by diagonally disposed members 30 the ends of which are secured to the upper and lower corners of the side frame members, and, to support the comb while in the cage, relatively heavy wires are bent to form U-shaped members 31, the vertical legs of which are secured to the transversely disposed cross pieces 27 in any suitable manner, preferably by being passed through suitably located apertures that are formed in said cross pieces.

Secured to the inner faces of the end walls of the cage thus constructed, are channel-shaped members 32, the flanges on the ends of which are spaced apart from the adjacent portions of the side frame members, thereby forming vertical channels 33 that accommodate the edges of the sections 34 of wire netting that are removably positioned within the cage, adjacent to the side walls thereof.

Thus it will be seen that I have provided a relatively strong and durable cage for honeycomb sections while the same are being acted upon within a centrifugal honey extractor, and said cage being provided with reticulated side walls that may be easily and quickly removed when it becomes necessary to clean the cage.

The relatively simple structure of the cage permits it to be easily and cheaply produced and the arrangement of the transverse and diagonal bars 12 and 14 on the sides of the framework of the cage provides a very strong and substantial structure that is well able to withstand the strains produced by the pressure of the honeycomb sections during the centrifugal extracting operations.

The skeleton frame of the cage is preferably galvanized or tinned after being properly assembled, thus materially increasing its strength and stability, and at the same time filling all interstices which might otherwise provide collecting places for liquid honey.

It will be readily understood that minor changes in the size, form and construction of the various parts of my improved honeycomb receiving basket may be made and substituted for those herein shown and described, without departing from the spirit of my invention, the scope of which is set forth in the appended claims.

I claim as my invention:

1. In a honeycomb basket, a skeleton frame having channel-shaped end walls, channel members arranged on the inner faces of said channel-shaped end walls, the flanges of said channel-shaped members being spaced apart from the flanges on the channel-shaped end walls, and reticulated side walls removably positioned in said skeleton frame with their side edges positioned between the flanges on said channel-shaped members and channel-shaped end walls.

2. In a honeycomb basket, a skeleton frame having channel-shaped end walls, channel members arranged on the inner faces of said channel-shaped end walls, the flanges of said channel-shaped members being spaced apart from the flanges on the channel-shaped end walls, reticulated side walls removably positioned in said skeleton frame with their side edges positioned be-

tween the flanges on said channel-shaped members and channel-shaped end walls, and portions of the flanges at the lower ends of said channel-shaped members being bent into horizontal planes to form shoulders upon which the lower corners of the reticulated side walls are adapted to rest.

3. A honeycomb basket comprising a pair of flanged end walls, cross rails connecting said end walls, flanged plates applied to the inner faces of said end walls, the flanges of which plates are spaced apart from the flanges of said end walls to form vertically disposed guideways, and reticulated side walls removably positioned in the frame of the cage with their side edges occupying the guideways between the flanges on said end walls and plates.

4. A honeycomb basket comprising a pair of flanged end walls, cross rails connecting said end walls, flanged plates applied to the inner faces of said end walls, the flanges of which plates are spaced apart from the flanges of said end walls to form vertically disposed guideways, reticulated side walls removably positioned in the frame of the cage with their side edges occupying the guideways between the flanges on said end walls and plates, and brackets on the ends of one of the flanged end walls.

5. A honeycomb basket comprising a pair of flanged end walls, cross rails connecting said end walls, flanged plates applied to the inner faces of said end walls, the flanges of which plates are spaced apart from the flanges of said end walls to form vertically disposed guideways, reticulated side walls removably positioned in the frame of the cage with their side edges occupying the guideways between the flanges on said end walls and plates, and U-shaped comb supports depending from the lower portion of the skeleton frame of the basket.

6. A honeycomb basket comprising a pair of flanged end walls, cross rails connecting said end walls, flanged plates applied to the inner faces of said end walls, the flanges of which plates are spaced apart from the flanges of said end walls to form vertically disposed guideways, reticulated side walls removably positioned in the frame of the cage with their side edges occupying the guideways, between the flanges on said end walls and the plates, and stops in the lower portions of said guideways which stops serve as supports for said reticulated side walls.

7. A honeycomb basket constructed from connected metal plates in each of which is formed a vertical row of horizontally disposed openings, the strips of metal between said openings being bent so that they are substantially V-shaped in cross section, and U-shaped comb-supporting members having their vertical legs passed through openings formed in said V-shaped metal strips.

8. The combination with a honeycomb basket having transversely disposed members arranged at the lower portions of its sides, of honeycomb supports comprising U-shaped members having their vertical legs passed through said transversely disposed members.

9. In a honeycomb basket, a skeleton frame having overlapping members that constitute end walls, and transversely disposed rail members formed integral with and connecting said overlapping members.

10. In a honeycomb basket, a skeleton frame having overlapping members that constitute end walls, transversely disposed rail members formed integral with and connecting said overlapping members, and U-shaped comb-supporting members having their vertical legs passed through said transversely disposed rail members.

In testimony whereof I have signed my name to this specification.

VICTOR V. KUNKEL.