Feb. 26, 1935. W. C. HANSON 1,992,664

SECTION HONEY BOX AND METHOD FOR SECURING FOUNDATION THEREIN

Filed Aug. 3, 1933

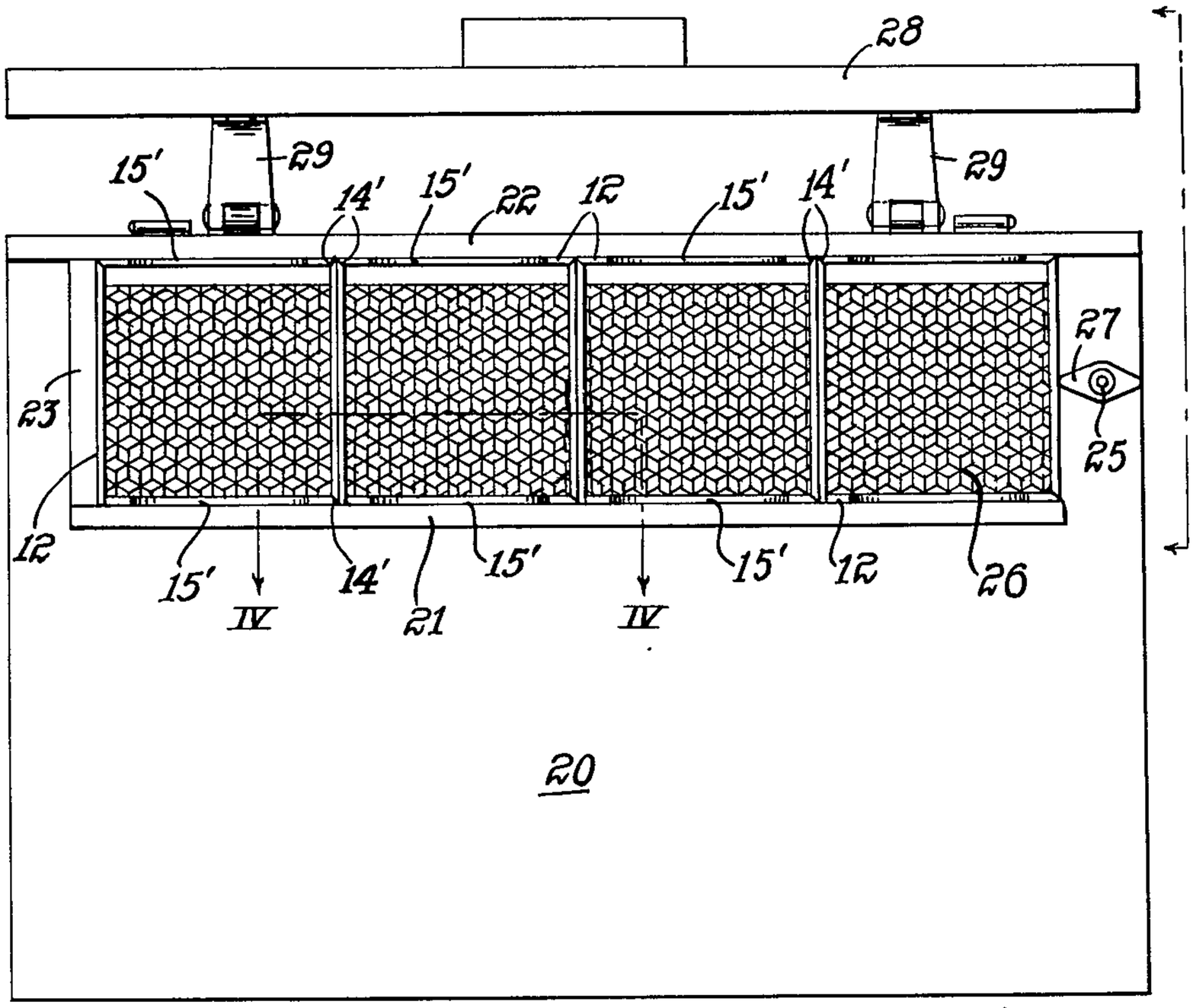

Fig. 2.

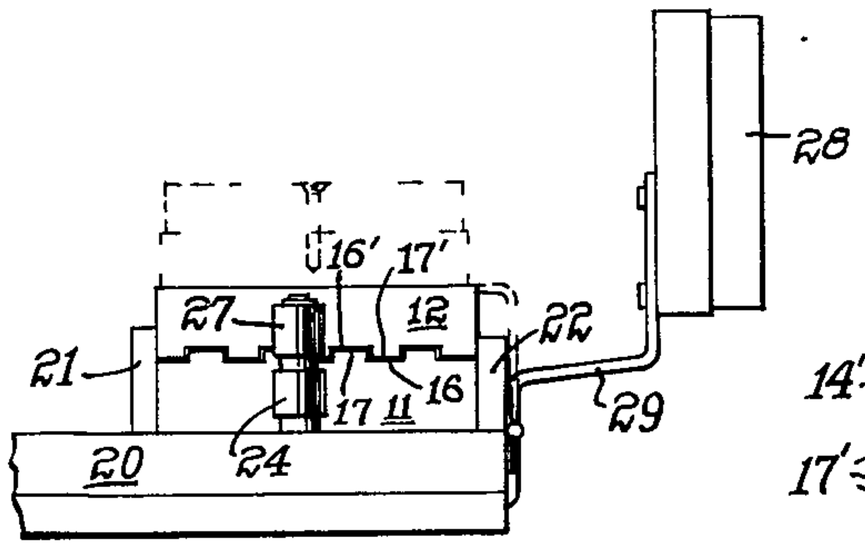

Fig. 3.

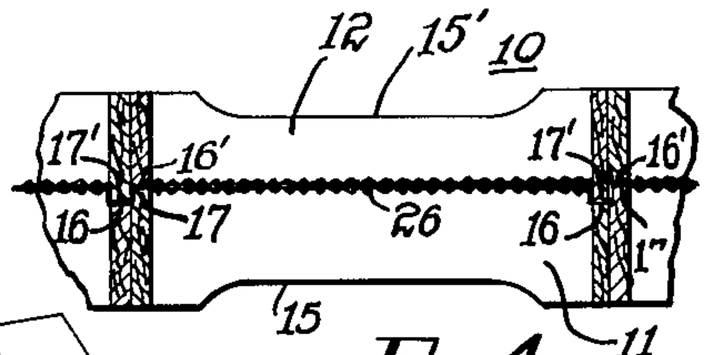

Fig. 4.

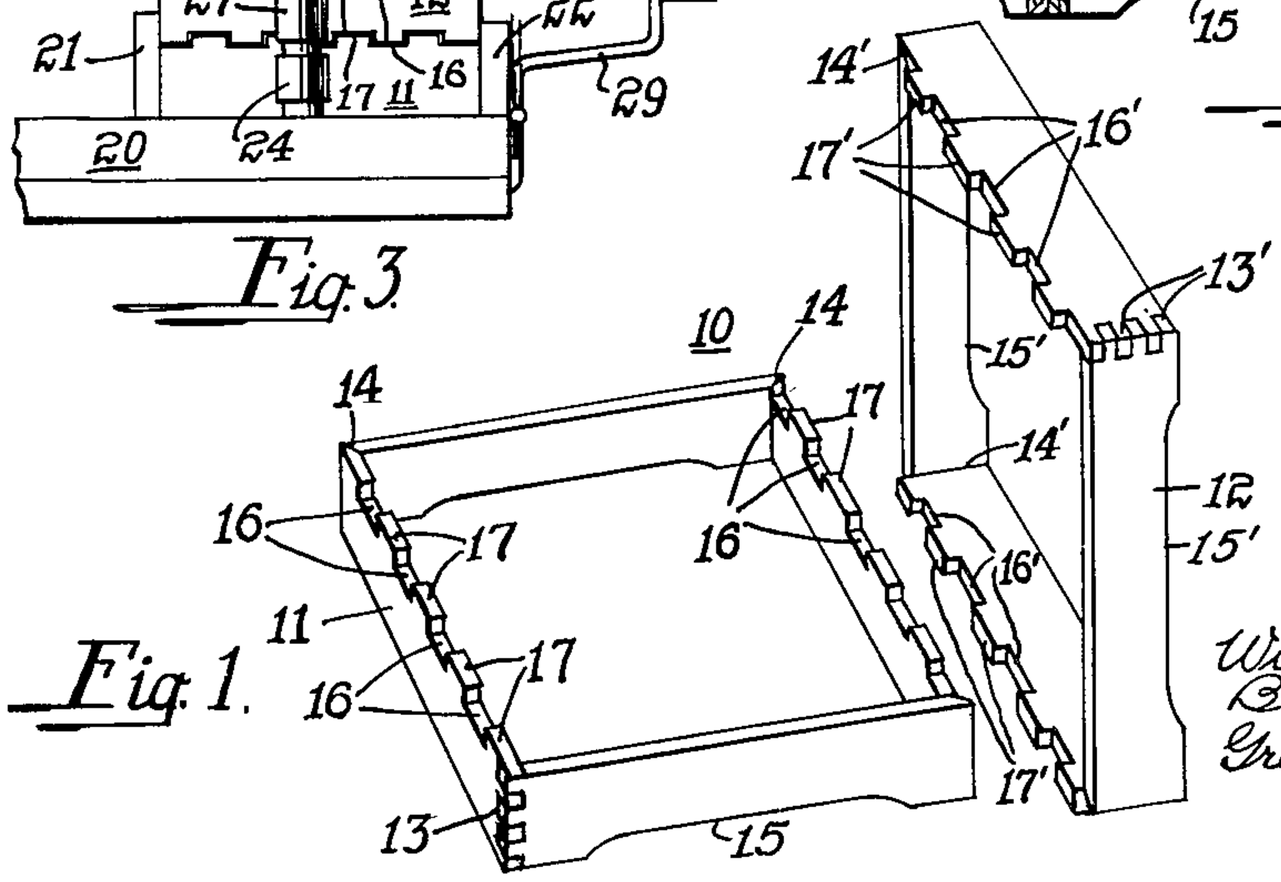

Fig. 1.

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Patented Feb. 26, 1935

1,992,664

UNITED STATES PATENT OFFICE

1,992,664

SECTION HONEY BOX AND METHOD FOR SECURING FOUNDATION THEREIN

William C. Hanson, Pittsburgh, Pa.

Application August 3, 1933, Serial No. 683,444

3 Claims. (Cl. 6—10)

This invention relates to a section box for comb honey and more particularly to improvements in the construction thereof and to the method of securing a wax foundation therein.

In the production of comb honey, it is the customary practice for the bee raiser to place a series of wooden sections in the hive, each of which has a foundation of wax which the bees draw into cells forming the comb in which the honey is deposited.

These sections, commonly called pound sections, are manufactured of thin wood and sold to the beekeeper in strips adapted to be folded or assembled into substantially a hollow square. So that the strips may be readily folded, spaced transverse beveled grooves are provided on each strip intermediate of its length to form the corners of the section and the ends are dovetailed so that they may be readily secured together. The edges of two sides of the section, directly opposite each other, are beveled or cut away, and when the sections are placed in a super-section and set in the hive, these cut away portions form beeways between adjacent sections which extend vertically of the hive.

After the sections have been folded, the foundation is then secured in the center thereof, and the section is ready to be positioned in the hive. To secure the foundation in the section it has heretofore been the practice to cut the wax sheet to the desired size and fasten it to the section by pressure and by melted wax. The pressure method is little used at present because it takes longer and the wax is not so firmly secured to the sections. By far the most common plan of securing the foundation in the sections has been with melted wax, either by use of additional wax applied with a wax tube or by the hot plate and steam pencil methods which melt a small quantity of the wax on the edge of the foundation so that it adheres instantly to the wood.

These methods of fastening the foundation to the wooden part of the section are not only tedious and take considerable time, but also difficulty is encountered in keeping the wax flat as the least amount of pull on the foundation, or the section becoming oblique, causes the wax sheet to buckle or bulge to such an extent that the section is unfit for use.

Even after the foundation has been secured in the section, the section must be handled with care since slight jarring and the like will cause the foundation to pull away from the sides of the section.

Further, wax so secured to the wooden part of the section is very insecure, and it not infrequently happens that when the section is placed in the hive, the weight of the bees crawling over the wax will pull it from the section and cause it to fall into another section and as a result, a mass of honey is accumulated on the foundation which extends between two or more of the sections, instead of each section being filled.

It is an object of the present invention to provide a pound section constructed in such a manner as to hold the foundation rigidly in place in the section.

Another object of this invention is to provide a novel method for fastening the foundation in a pound section.

A further object is to provide a pound section having means intermediate of its height for holding the foundation in the section and which will withstand rough usage and will hold the weight of the bees without danger of the wax pulling away from the section.

A still further object is to provide a section for comb honey which is easy to assemble and in which the foundation is placed as it is being assembled.

These and other objects which will be hereinafter made apparent to those skilled in this particular art are accomplished by means of this invention, one embodiment of which is described in the following specification and illustrated in the accompanying drawing, wherein:—

Figure 1 is an exploded view in perspective of a pound section made in accordance with my invention;

Fig. 2 is a top plan view of the apparatus employed in assembling the sections and fastening the foundation therein, showing the manner in which the sections are arranged therein;

Fig. 3 is a view in end elevation of the apparatus for assembling the sections; and

Fig. 4 is a view taken on line IV—IV of Fig. 2.

In general, my invention resides in a pound section formed of two substantially square members adapted to be superimposed one over the other. One of the members has a series of projections on oppositely disposed sides thereof which when it is positioned on the other are received in recesses in the corresponding edges of the other member and the two members are interlocked together. When the members are to be assembled, a sheet of wax of sufficient size to cover three edges of the lower member is placed thereon which is engaged by the coaction of the projection with the recesses on the two members respectively and is firmly clamped therebetween.

To assemble the sections, I provide an apparatus comprising in general, a table having a portion adapted to receive a row of the lower members of the sections which are clamped in position thereon. After the lower members are in place on the table, the wax foundation in sheet form is placed thereon and the upper members are then arranged on the foundation with the projections in their lower edges over the recesses in the upper edges of the lower member.

To force the projections of one member into the recess of the other member and thus lock the two members together, a hinged cover is provided on the table which is brought down on the upper members and when pressure is applied thereto forces the projections thereof into the recesses of the lower member, and clamping the foundation therebetween. In order to sever the sheet into the proper lengths, the projections and recesses of the adjacent sections are arranged in staggered relation one to the other, so that a cutting action takes place therebetween and shears the wax between the sections.

Referring to the drawing in detail, I have disclosed a pound section 10, made in accordance with my invention, which comprises a lower member 11 and an upper member 12. The members 11 and 12 may be formed of wood or any other suitable material, and each is cut in the usual manner employed in forming the common section honey box. That is, each of the members 11 and 12 is formed in a flat strip having the ends thereof dovetailed as at 13 and 13′ respectively and having the usual beveled transverse grooves indicated at 14 and 14′ respectively, intermediate of their length to permit the strips to be readily folded into substantially square members and form the corners thereof. The lower edge of two of the opposed side walls of the member 11 and the upper edge of two of the opposed side walls of the member 12 are cut out or beveled as at 15 and 15′ respectively to form the beeways of the section.

The two members 11 and 12 are adapted to be superimposed one over the other and in order to join the two members together and fasten the foundation therein, the top edges of two opposed side walls of the member 11 are provided with a series of recesses 16 which are separated by projections 17, and the lower edges of two opposed sides of the upper member 12 are provided with a series of projections 17′ having recesses 16′ therebetween both of which are of the same width and depth as the recesses and projections on the lower member 11, so that when the upper member 12 is superimposed over the lower member 11, these recesses and projections will coact to join and interlock the members together and hold a sheet of foundation wax therebetween.

It will be observed that the projections and recesses provide laterally-facing, oppositely-facing vertical flat walls, and that these oppositely-facing flat walls, when the two sections of the box are pressed together to deform the wax sheet, laterally clamp the interposed parts of the sheet and thus provide sufficient friction to interlock or secure the two members together with sufficient tightness to prevent them being disconnected from each other by the usual amount of handling that these articles receive. In this way, I make the box virtually a unitary structure which will hold together under all the ordinary handling without the use of extraneous fastening devices. It will of course be observed that in order that there be a sort of wedging action when the projections are pressed into their companion recesses and exert the fullest possible clamping action on the squeezed or compressed wax body between them, it is desirable that these walls shall be vertical, i. e. at right angles to the bottom and top walls of the notches and projections.

The recesses 16 and 16′ and the projections 17 and 17′ on one side wall of the members 11 and 12 respectively are in staggered relation with the recesses and projections on the opposed side wall of each member, the purpose of which will be hereinafter described.

In order that the members 11 and 12 of the section may be readily assembled and the foundation wax positioned therein, I provide an assembling table 20 which is provided with spaced longitudinally extending upstanding members 21 and 22. These members 21 and 22 are spaced apart a sufficient distance to receive the members of the section therebetween and are of sufficient length to receive a plurality of the members at one time. Extending transversely of the table 20 is an upstanding member 23 which extends between the two members 21 and 22 and closes one end thereof. When the sections are to be assembled, a row of lower members 11 are placed between the projections on the table with the dovetails 13 joining the strip forming the member in the lower left-hand corner thereof and the cut out beeways 15 extending longitudinally of the table. With the members 11 so positioned on the table, the recesses 16 and projections 17 will extend transversely of the table, and the recesses and projections on adjoining members will be in staggered relation to each other.

The lower members of the sections are then locked in position on the table and are pressed firmly together by a locknut 24 pivotally mounted on rod 25 extending upwardly from the top of the table 20.

After the lower members have been so positioned and locked on the table, a sheet of wax 26 forming the foundation for the comb, is placed over these members and an upper member 12 is then positioned on the foundation 26 over each of the lower members 11 with the beeways 15′ of each section extending in the same direction as the beeways of the lower member. These upper members 12 are then locked in position over the lower members 11 by a locknut 27 mounted on the rod 25.

To force the projections 17′ on the upper members 12 into the recesses 16 on the lower member 11 and the projections 17 on the lower member into the recesses 16′ of the upper member, the table is provided with a cover 28 which is adapted to be brought down on the tops of the upper members 12 and struck to force the projections on the upper members into the recesses in lower members and thus lock the two members together. The cover 28 may be hinged as at 29 to the table 20 or secured thereto in any other suitable manner. These coacting recesses and projections of each member firmly join the members together and clamp the wax foundation therebetween. Since the projections and recesses on adjacent sections are arranged in staggered relation to each other, a cutting action takes place therebetween, which shears the sheet between each section.

After the cover 28 has been forcibly brought down on the tops of the members 12, it is removed and locknuts 27 and 24 are loosened and since the sheet of wax has been sheared between

the section, each section may be individually removed and assembled in a super section for use in the hive.

From the foregoing description, it is readily apparent that I have provided a pound section which is readily assembled and in which the foundation is securely held.

It is also apparent that a section so constructed will withstand rough usage, will not have a tendency to become oblique and when the section is positioned in the hive the foundation is so firmly held therein that the weight of the bees will not pull it loose from the wooden part of the section.

It is to be understood that certain modifications, changes, substitutions, and omissions may be made herein without departing from the spirit of my invention or the scope of the appended claims.

What I claim as new and desire to secure by Letters Patent is:—

1. A comb section box comprising a pair of rectangular complemental sections adapted to be arranged in edge to edge relationship with one superimposed over the other, the adjacent edges of said members being provided with interlocking projections and recesses, respectively, and a sheet of foundation wax interposed between said members and held in place therein by said interlocking projections and recesses, said projections and recesses having shoulders facing in opposite directions to thereby laterally clamp the interposed parts of the wax sheet and thus secure the sections together without the use of extraneous fastening devices.

2. A comb section box comprising a pair of rectangular complemental sections adapted to be arranged in edge to edge relationship with one superimposed over the other, the adjacent edges of said members being provided with interlocking projections and recesses, respectively, and a sheet of foundation wax interposed between said members and held in place therein by said interlocking projections and recesses, said projections and recesses having shoulders facing in opposite directions to thereby laterally clamp the interposed parts of the wax sheet and thus secure the sections together without the use of extraneous fastening devices, said shoulders lying at substantially right angles to the top and bottom edges of the sections.

3. A comb section box comprising a pair of rectangular complemental sections adapted to be arranged in edge to edge relationship with one superimposed over the other, the adjacent edges of said members being provided with interlocking projections and recesses, respectively, and a sheet of foundation wax interposed between said members and held in place therein by said interlocking projections and recesses, said projections and recesses having shoulders facing in opposite directions to thereby laterally clamp the interposed parts of the wax sheet and thus secure the sections together without the use of extraneous fastening devices, the projections and recesses at opposite sides of the sections being staggered with reference to each other, for the purpose set forth.

WILLIAM C. HANSON.

CERTIFICATE OF CORRECTION.

Patent No. 1,992,664. February 26, 1935.

WILLIAM C. HANSON.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 2, second column, after line 71, insert the following paragraph:

It is to be understood that no shearing action will take place if one box were assembled at a time. The shearing action is due entirely to the fact that a group of boxes having their adjacent walls closely abutting are pressed into interlocking relation at the same time. When the group of boxes is thus assembled simultaneously by the same pressure, the staggered arrangment of the boxes and projections permits the boxes to be so arranged with reference to each other that the projections, both upper and lower, of one box come opposite to the projections and notches of the adjacent box, so that when the top sections of the box are pressed down against the bottom sections there will be a true shearing action through the wax sheet from side to side of the box, thus making it possible to readily remove the completed boxes from the press one by one and ready to be placed in the hive.

And that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 9th day of April, A. D. 1935.

Leslie Frazer

(Seal) Acting Commissioner of Patents.