Dec. 2, 1924. 1,518,004

W. SEBELIN

REENFORCING SPLINT FOR WAX FOUNDATIONS

Filed March 31, 1924

Fig. 1.

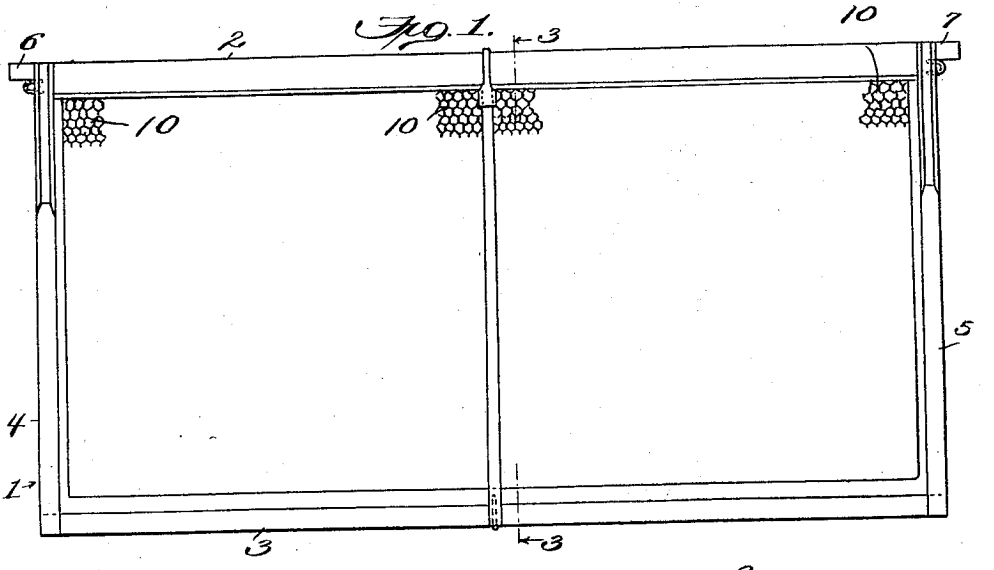


Fig. 2.

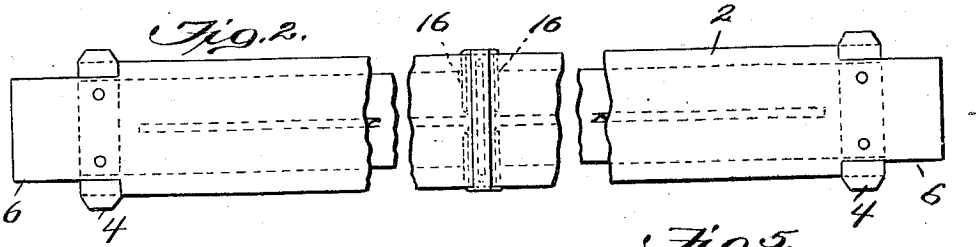


Fig. 3.

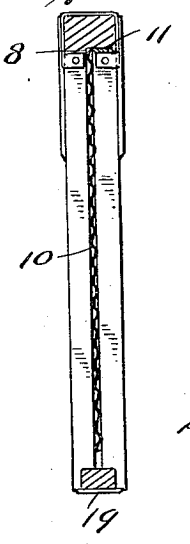


Fig. 4.

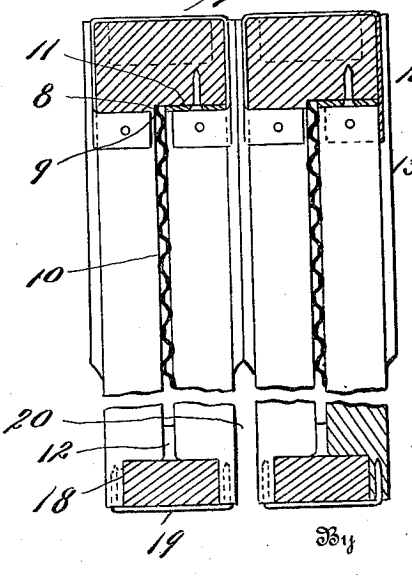
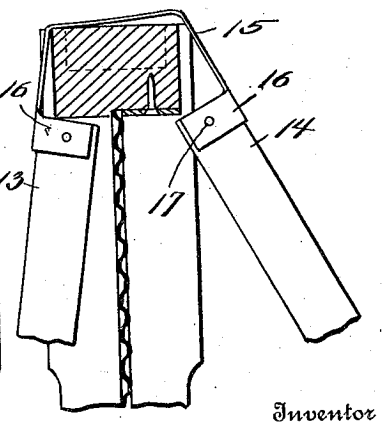


Fig. 5.



Inventor

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By

Attorney

Patented Dec. 2, 1924. 1,518,004

UNITED STATES PATENT OFFICE.

WILLIAM SEBELIN, OF CAMAS, MONTANA.

REENFORCING SPLINT FOR WAX FOUNDATIONS.

Application filed March 31, 1924. Serial No. 703,255.

To all whom it may concern:

Be it known that I, WILLIAM SEBELIN, a citizen of the United States, residing at Camas, in the county of Sanders and State of Montana, have invented new and useful Improvements in Reenforcing Splints for Wax Foundations, of which the following is a specification.

This invention relates to novel means for supporting the wax foundation in the brood frames of bee hives.

The need for such a provision arises from the fact that the foundation is quite plastic at the hive temperature and apt to sag when unsupported, particularly near the top, when weighted down with a mass of bees engaged in drawing the comb. The result of this sagging or stretching is to enlarge or deform the cells of the hexagonal pattern stamped upon the foundation, rendering them unfit for worker brood, so that disproportionate areas of the comb become unproductive, being left vacant by the queen or given over to the rearing of drone brood.

Many expedients have been tried to prevent stretching of the foundation, the most widely practiced being the reenforcing of the foundation by horizontal wires laced from one side of the frame to the other and embedded in the foundation. This is not an ideal expedient, however, because the wiring and embedding is a tedious undertaking and the foundation is inevitably weakened on the lines where the wires are embedded and the wires have a tendency to cut through the ribs which form the peripheral walls of the hexagonal cells, thus reducing the effective thickness of the foundation merely to that of the bottom wall of the cells. Moreover, after a frame has been properly wired the act of positioning it in the hive sometimes requires considerable forcing upon the top bar which is apt to twist the frame somewhat from its true rectangular shape and to loosen the wiring and cause bulging of the foundation. Already-wired foundation has also been tried but this requires especially constructed frames with means for clamping the ends of the wires at both sides or both ends of the frames according to whether the wires run horizontally or vertically. In all cases where several strands of wires are used the cells intersected by the wires are likely to be rejected by the bees, reducing to an appreciable extent the brood rearing area of the frame.

Vertical splints also have been tried, but so far these have been for the most part impractical make-shifts and their use has been abandoned as not producing satisfactory results.

The object of the present invention is to provide means cooperating with the top and bottom bars of the brood frame for supporting the foundation, said means clampingly engaging the foundation at opposite sides and in the same plane without cutting through the ribs which form the walls between adjacent cells and therefore maintaining the full strength of the foundation.

Another object of the invention is to provide said means of considerable width, yet not exceeding the width of the top bar of the frame, so that, when the comb is built in adherence to said means, it will be firmly supported in a direction at right angles to the plane of the foundation. Still another object of the invention is the provision of foundation supporting means which can be applied to a frame without any disfigurement or alteration of the latter, it not being necessary to even subject the frame to the driving of nail-holes therein.

A further object of the invention is to provide foundation supporting means comprising a pair of splints co-acting to engage the foundation between them in clamping relation, said splints being secured by a bendable member adapted to encompass the top bar of the frame, the lower ends of said splints being rabbeted for engagement with the sides of the bottom bar and the ends of said splints being held together by means bridging said bottom bar.

With the above and other objects in view, my invention consists in the improved reenforcing splints for wax foundation illustrated in the accompanying drawings, described in the following specification, and particularly claimed, and in such variations and modifications thereof as will be obvious to those skilled in the art to which my invention relates.

In the drawings accompanying and forming a part of this specification, and wherein the preferred embodiment of my invention is illustrated:

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This invention relates to novel means for supporting the wax foundation in the brood frames of bee hives.

The need for such a provision arises from the fact that the foundation is quite plastic at the hive temperature and apt to sag when unsupported, particularly near the top, when weighted down with a mass of bees engaged in drawing the comb. The result of this sagging or stretching is to enlarge or deform the cells of the hexagonal pattern stamped upon the foundation, rendering them unfit for worker brood, so that disproportionate areas of the comb become unproductive, being left vacant by the queen or given over to the rearing of drone brood.

Many expedients have been tried to prevent stretching of the foundation, the most widely practiced being the reenforcing of the foundation by horizontal wires laced from one side of the frame to the other and embedded in the foundation. This is not an ideal expedient, however, because the wiring and embedding is a tedious undertaking and the foundation is inevitably weakened on the lines where the wires are embedded and the wires have a tendency to cut through the ribs which form the peripheral walls of the hexagonal cells, thus reducing the effective thickness of the foundation merely to that of the bottom wall of the cells. Moreover, after a frame has been properly wired the act of positioning it in the hive sometimes requires considerable forcing upon the top bar which is apt to twist the frame somewhat from its true rectangular shape and to loosen the wiring and cause bulging of the foundation. Already-wired foundation has also been tried but this requires especially constructed frames with means for clamping the ends of the wires at both sides or both ends of the frames according to whether the wires run horizontally or vertically. In all cases where several strands of wires are used the cells intersected by the wires are likely to be rejected by the bees, reducing to an appreciable extent the brood rearing area of the frame.

Vertical splints also have been tried, but so far these have been for the most part impractical make-shifts and their use has been abandoned as not producing satisfactory results.

The object of the present invention is to provide means cooperating with the top and bottom bars of the brood frame for supporting the foundation, said means clampingly engaging the foundation at opposite sides and in the same plane without cutting through the ribs which form the walls between adjacent cells and therefore maintaining the full strength of the foundation.

Another object of the invention is to provide said means of considerable width, yet not exceeding the width of the top bar of the frame, so that, when the comb is built in adherence to said means, it will be firmly supported in a direction at right angles to the plane of the foundation. Still another object of the invention is the provision of foundation supporting means which can be applied to a frame without any disfigurement or alteration of the latter, it not being necessary to even subject the frame to the driving of nail-holes therein.

A further object of the invention is to provide foundation supporting means comprising a pair of splints co-acting to engage the foundation between them in clamping relation, said splints being secured by a bendable member adapted to encompass the top bar of the frame, the lower ends of said splints being rabbeted for engagement with the sides of the bottom bar and the ends of said splints being held together by means bridging said bottom bar.

With the above and other objects in view, my invention consists in the improved reenforcing splints for wax foundation illustrated in the accompanying drawings, described in the following specification, and particularly claimed, and in such variations and modifications thereof as will be obvious to those skilled in the art to which my invention relates.

In the drawings accompanying and forming a part of this specification, and wherein the preferred embodiment of my invention is illustrated:

the plane of the foundation thus affording a support which cannot be furnished by a wire or other reenforcing means which lies entirely within the foundation. Moreover, when the splints are positioned in clamped relation against the foundation they merely press it frictionally without severing or otherwise destroying the ribs or walls between the adjacent cells, thereby avoiding the weakening of the foundation which, as stated hereinbefore is a defect of all wiring arrangements.

While I have here shown my invention as constituted in part by a flat sheet metal bendable member, it is well within the spirit of the invention to substitute other bendable means such as a round wire for holding the splints together. When sold as an article of manufacture the splints may occupy the position shown in Figure 4 with the bendable member already bent to conform with the shape of the cross section of the frame or if desired said bendable member may be shipped unbent and afterwards made to conform to the cross section of the top bar when applied to the frame.

It is to be understood that the use of my reenforcing splints is not confined to frames for the brood chamber but that they are equally well adapted to reenforce the comb in those frames which are to be used for the production of extracted honey. It is a matter of common knowledge that such combs are subjected to strain in the centrifugal extractor which sometimes stresses them to the breaking point. The use of the rigid vertical splints of my invention affords adequate support for the combs during the extracting process.

While I have above described what I have found to be a very practical embodiment of my invention, it is nevertheless to be understood that the reenforcing splints for wax foundation may also be exemplified in numerous other alternative constructions and I accordingly reserve the right of adopting all such legitimate changes as may be fairly embodied within the spirit and scope of the invention as claimed.

Having described my invention what I claim as new and desire to secure by Letters Patent, is:—

1. A foundation support for use in a frame for holding honey-comb comprising a pair of splints adapted to engage the opposite sides of a sheet of foundation in said frame and means embracing the top and sides of the top bar of said frame and connected at its opposite ends to said splints.

2. A foundation support for use in a frame for holding honey-comb comprising a pair of splints adapted to engage the opposite sides of a sheet of foundation in said frame and bendable means embracing the top and sides of the top bar of said frame and connected at its opposite ends to said splints.

3. A foundation support for use in a frame for holding honey-comb comprising a pair of splints adapted to engage the opposite sides of a sheet of foundation in said frame and flat bendable means embracing the top and sides of the top bar of said frame and connected at its opposite ends to said splints.

4. A foundation support for use in a frame for holding honey-comb, comprising a pair of splints adapted to be positioned between the top and bottom bars of said frame to engage the opposite sides of a sheet of foundation held therein, means for embracing the top and sides of said top bar and connected at its opposite ends to the upper ends of said splints, and means for bridging said bottom bar and engaging the lower ends of said splints to hold them together.

5. A foundation support for use in a frame for holding honey-comb, comprising a pair of splints adapted to be positioned between the top and bottom bars of said frame to engage the opposite sides of a sheet of foundation held therein, bendable means for embracing the top and sides of said top bar and connected at its opposite ends to the upper ends of said splints, and means for bridging said bottom bar and engaging the lower ends of said splints to hold them together.

6. A foundation support for use in a frame for holding honey-comb, comprising a pair of splints adapted to be positioned between the top and bottom bars of the frame and to engage the opposite sides of a sheet of foundation held therein, the lower ends of said splints being rabbeted to overhang the sides of said bottom bar, means for embracing the top and sides of the top bar and connected at its opposite ends to the upper ends of said splints, and a staple for bridging the bottom bar and adapted to be driven into the overhanging portions of said splints to hold them together.

7. A foundation support for use in a frame for holding honey-comb, comprising a pair of splints adapted to be positioned between the top and bottom bars of the frame and to engage the opposite sides of a sheet of foundation held therein, the lower ends of said splints being rabbeted to overhang the sides of said bottom bar, bendable means for embracing the top and sides of said top bar and connected at its opposite ends to the upper ends of said splints, and a staple for bridging the bottom bar and adapted to be driven into the overhanging portions of said splints to hold them together.

8. A foundation support for use in a

frame for holding honey-comb, comprising a pair of splints adapted to be positioned between the top and bottom bars of the frame and to engage the opposite sides of a sheet of foundation held therein, the lower ends of said splints being rabbeted to overhang the sides of said bottom bar, flat bendable means for embracing the top and sides of the top bar and connected at its opposite ends to the upper ends of said splints, and a staple for bridging the bottom bar and adapted to be driven into the overhanging portions of said splints to hold them together.

In testimony whereof I have hereunto set my hand.

WILLIAM SEBELIN.