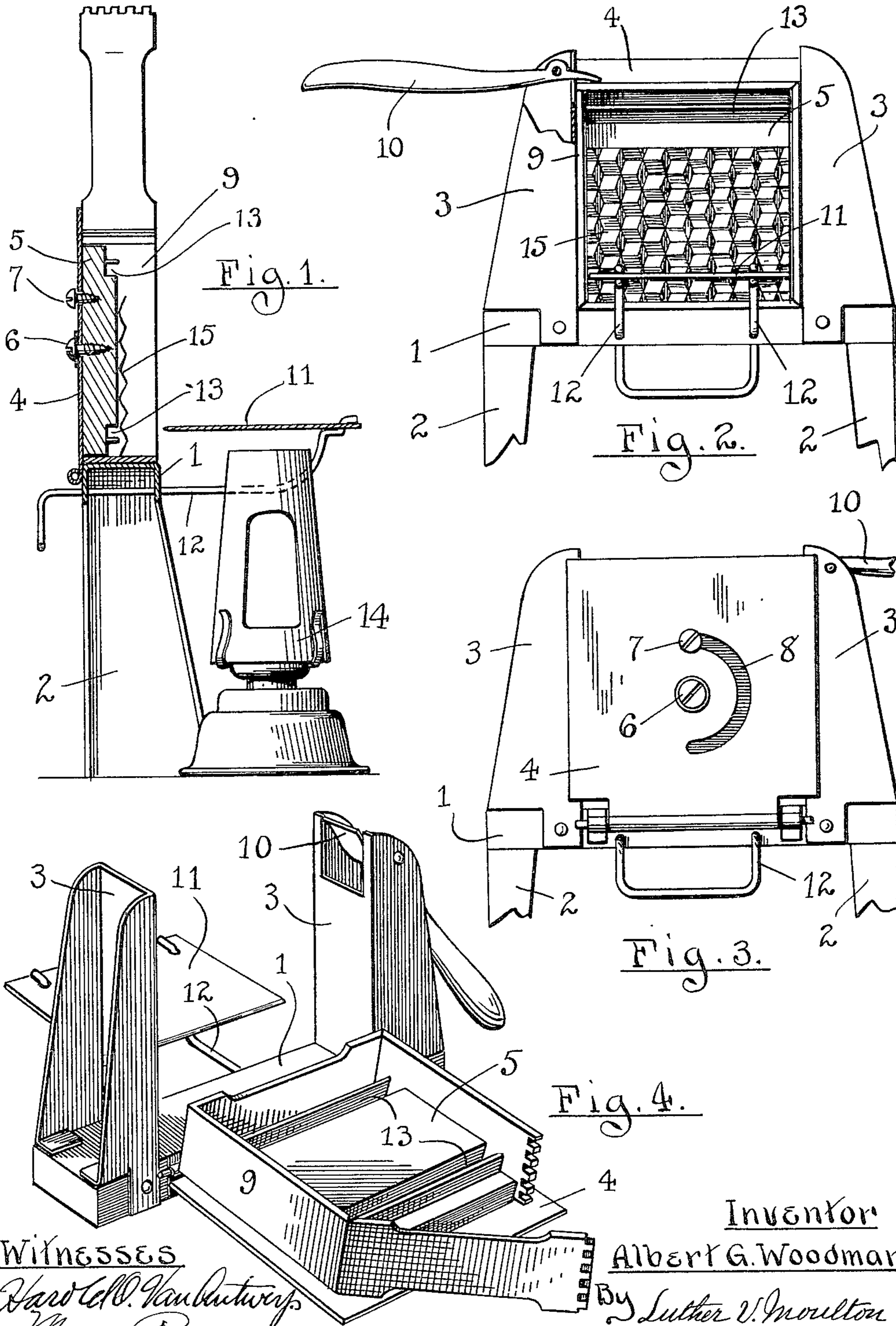


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 HONEY SECTION FORMER AND COMB FOUNDATION FASTENER.  
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Patented Feb. 9, 1915.



WITNESSES

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# UNITED STATES PATENT OFFICE.

ALBERT G. WOODMAN, OF GRAND RAPIDS, MICHIGAN.

HONEY-SECTION FORMER AND COMB-FOUNDATION FASTENER.

1,127,568.

Specification of Letters Patent.

Patented Feb. 9, 1915.

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*To all whom it may concern:*

Be it known that I, ALBERT G. WOODMAN, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Honey Section Formers and Comb Foundation Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in honey section formers and comb foundation fasteners, and its object is to provide a device simple and cheap in construction, which will effectually perform both functions of forming the honey section and attaching the comb foundation therein, and to provide the device with various new and useful features hereinafter more fully described, and particularly pointed out in the claims.

The bee keeper commonly receives the so called honey sections or square frames, in which the honey comb is to be formed, from the manufacturer in knock down condition, *i. e.*, each frame comprises a single strip of wood scored so that it may be bent to form the corners and having its respective ends tenoned so that when brought together they may be readily joined. After the frame has thus been formed it is customary to place therein a bee comb foundation which comprises an artificially formed foundation or base of beeswax which aids the bees in building a perfectly formed honey comb within the section. It is desirable to attach a strip of this foundation at opposite sides of the section so that the bees will build the comb clear across the same, leaving no open space where the comb is unattached to the section.

This invention provides a device by which both the forming of the section and attaching the comb foundation thereon at opposite sides may be readily performed, and the device also embodies various other novel features of construction and arrangement as will more fully appear by reference to the accompanying drawings, in which:

Figure 1 is a sectional elevation of a device embodying this invention; Fig. 2 is a front elevation of the upper part of the same; Fig. 3 is a rear view of the same part shown in Fig. 2; and Fig. 4 is a per-

spective view of the upper part of the device illustrating the first step of the operation of forming the section.

Like numbers refer to like parts in all of the figures.

1 represents the base of the device supported upon suitable legs 2 and provided with upwardly extending side members 3 spaced apart sufficiently to permit a honey section to be inserted between them. A back 4 is hinged to the base and a forming block 5 is mounted thereon, the said block being rotatably attached to the back by a centrally located screw 6. The rotary movement of said block is limited to a half revolution by the stop screw 7 which traverses a semi-circular slot 8 in the said back. The block 5 is rectangular and of the proper dimensions around which to bend the section 9. One of the upright side members 3 is provided near its upper end with a manually operated lever 10 adapted to engage one end of the honey section to press the tenon joint thereof together.

A plate 11 is supported in a horizontal plane by a slide 12 passing through the base 1. The plate 11 is located above the lower edge of the honey section when the same is in position between the side members of the device, and its width is equal to the internal width of said section. The forming block 5, the thickness of which is approximately equal to half the depth of the honey section is provided on opposite sides with recesses 13 which extend across the whole width of the said block and are so located that either one of them by rotating the block to opposite positions may be brought directly opposite the edge of the plate 11. The said plate is adapted to be heated by a lamp 14 or any suitable heating device placed beneath it.

In using this device the first operation consists in bending the honey section around the forming block 5 when the back 4 is in lowered position as illustrated in Fig. 4, the tenon joint being arranged so that it will come under the lever 10 when the back is raised and the section brought between the side members 3. The back is then raised and the tenon joint of the section may then be pressed together, as illustrated in Fig. 2, but this operation is preferably delayed until the comb foundation 15 has been attached to the lower edge of the section, as with the upper side raised as shown

in Fig. 1, the interior of the section is more readily accessible. To fasten the comb foundation in the section the plate 11 which is heated by the lamp 14 is first moved inward until it enters the lower recess or groove 13 and the wax foundation is then lowered against it and is softened by the heat. The plate is then moved outward and the softened edge of the foundation is lowered against the lower side of the section where it is held an instant until the wax congeals and adheres thereto. The plate is then again moved inward and by its combined shearing and melting action severs the wax foundation at the proper height, leaving a narrow strip affixed to the lower side of the section. Unless the operation of pressing the tenon joint and the section together has been performed previous to the setting of the foundation, this is now done and the back 4, together with the section is then turned down until the section is free of the side members 3, whereupon it is rotated a half revolution and turned back to upright position the opposite side up. The plate 11 is again moved inward into the recess 13 which is now opposite it and the operation of attaching a strip of comb foundation to the now lower side of the section, is repeated. This completes the operation, after which the back is turned downward and the section removed from the forming block, it having been formed, its tenon joint pressed together and a strip of comb foundation attached to opposite sides of its interior.

What I claim is:

1. A comb foundation fastener, comprising a rotatable form to hold a honey section, and means for fastening strips of comb foundation to different sides of said section as it is rotated.

2. A comb foundation fastener, comprising a rotatable form to hold a honey section, and means for attaching strips of comb foundation to different sides of said section as it is rotated and for severing said strips from a larger piece of foundation.

3. A comb foundation fastener, comprising a rotatable rectangular form to hold a honey section by being inserted therein approximately half the depth of said section, a plate parallel with and above the lower side of the section and adapted to be moved into engagement with the said form, and means for heating said plate.

4. A comb foundation fastener, comprising a rotatable rectangular form to hold a honey section by being inserted therein approximately half the depth of the section, said form being provided with recesses in its vertical surface extending parallel with its edges, a horizontal slidable plate adapted to be moved into the section and to separately enter the respective recesses when

the form is rotated, and means for heating said plate.

5. A comb foundation fastener, comprising a base having upright members spaced apart to receive a honey section therebetween, a back hinged to the base, a rectangular form pivotally attached to said back and adapted to hold a honey section, and means for attaching strips of comb foundation to different sides of the section as it is rotated.

6. A comb foundation fastener, comprising a base having upright members adapted to receive a honey section therebetween, a back hinged to the base, a rectangular form pivoted on said back and adapted to hold a honey section, said form being provided with recesses in its vertical surface parallel with opposite edges thereof, means to limit the rotation of said form to a half revolution, a horizontally slidable plate adapted to move into the section and enter the respective recesses in the block, and means for heating said plate.

7. A honey section former, comprising a base having upright side members spaced apart to admit a section therebetween, a back hinged to the base and adapted to swing from vertical to horizontal position, a forming block on said back around which the section may be bent, and means for joining the ends of the section at one corner thereof.

8. A honey comb section former, comprising a base having upright side members spaced apart to admit a section therebetween, a back hinged to the base and adapted to swing to and from between the side members, a forming block on said back around which the section may be bent and a clamping lever near the top of one side member to engage the section and press its tenon joint together.

9. A honey comb section former and comb foundation fastener, comprising a base having upright side members spaced apart to admit a section therebetween, a back hinged to the base and adapted to swing from a vertical position between said members to a horizontal position, a forming block on said back around which a section may be formed, means for joining the ends of a section, and means for attaching a strip of comb foundation to one side of said section.

10. A honey section former and comb foundation fastener, comprising a base, upright sides spaced apart to admit a section between them, a back hinged to said base, a forming block pivoted on said back, means for joining the ends of the section, means for attaching strips of comb foundation to different sides of the section, and means for rotating the section and block.

11. A honey section former and comb foundation fastener, comprising a base, up-

right members spaced apart to admit a section between them, a back hinged to the base and adapted to swing from a vertical position between said members to a horizontal position, a forming block pivoted to the back around which the section may be formed, said block being approximately one half the thickness of said section, means for joining the ends of the section at one corner thereof, a horizontally slidable plate adapted to move into the section and engage the said block above its lower edge, and means for heating said plate.

12. A honey section former and comb foundation fastener, comprising a base, upright side members on the base spaced apart to admit a section therebetween, a back hinged to said base, a rectangular forming

block substantially half the thickness of the section pivoted to said back and provided with recesses parallel with opposite edges thereof, means for limiting the rotation of said block to a half revolution, a lever near the top of one of said sides to engage the section to press its tenon joint together, a horizontally slidable plate adapted to enter the section and also the respective recesses in the block, and a lamp beneath said plate to heat the same.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT G. WOODMAN.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."