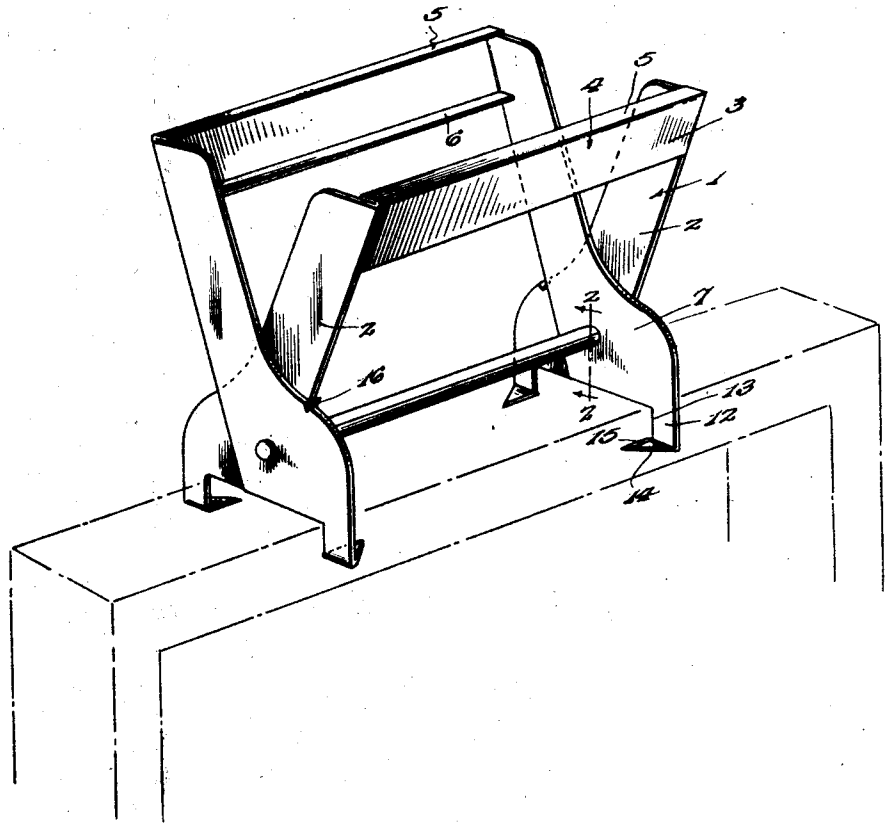
Sept. 15, 1925. 1,553,734

P. L. WILSON

TOOL FOR EXTRACTING FRAMES FROM BEEHIVES

Filed June 28, 1924

Fig. 1.



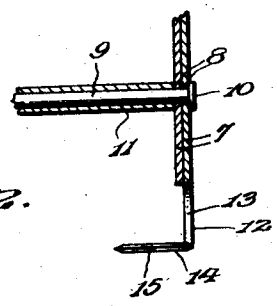


Fig. 2.

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Patented Sept. 15, 1925. 1,553,734

UNITED STATES PATENT OFFICE.

PAYTON L. WILSON, OF SANTA CRUZ, CALIFORNIA.

TOOL FOR EXTRACTING FRAMES FROM BEEHIVES.

Application filed June 28, 1924. Serial No. 722,924.

To all whom it may concern:

Be it known that I, PAYTON L. WILSON, a citizen of the United States, residing at Santa Cruz, in the county of Santa Cruz and State of California, have invented certain new and useful Improvements in Tools for Extracting Frames from Beehives, of which the following is a specification.

This invention relates to a tool for extracting brood frames from bee hives.

In a bee hive, the brood frames are spaced apart usually not more than three-eighths of an inch, and as a consequence, in removing the frames, it is necessary to pry them upwardly until they can be grasped by the fingers, as the space between the frames is too small to admit the fingers. This is not only an inconvenient way of extracting the frames from the hive, but the frames are liable to slip from the fingers, and if a sharp instrument is employed in prying the frames upwardly, the top bars of the frames are liable to become mutilated. Therefore, it is the primary object of the present invention to provide a tool which may be readily applied to the top bar of a brood frame and conveniently grasped to not only extract the frame from the hive but also permit of the frame being carried to any desired point after its extraction.

Another object of the invention is to provide a tool for the purpose above outlined which, while it will securely and firmly grip the top bar of the frame to be lifted out of the hive, will not damage the frame in any way and will not be liable to release the frame so long as the tool is held in the hand.

Another object of the invention is to provide a tool for the purpose stated which will be simple and durable in construction and inexpensive to manufacture and which will likewise comprise a minimum number of parts so connected as to obviate any likelihood of relative displacement.

In the accompanying drawings:

Figure 1 is a perspective view of the tool embodying the invention, the brood frame to be lifted by the tool being shown in dot and dash lines.

Figure 2 is a detail vertical sectional view taken substantially on the line 2—2 of Figure 1, looking in the direction indicated by the arrows.

The tool embodying the invention comprises a pair of counterpart gripping members indicated in general by the numeral 1 and each formed from an integral sheet metal blank. Each of the gripping members comprises a pair of side members indicated by the numeral 2 which are integrally connected at their upper ends by a cross piece 3 which constitutes a portion of the hand grip of each member, which grip is indicated in general by the numeral 4. The grip portion 4 includes not only the connecting cross member 3 but also upper and lower flanges 5 and 6 which are located at and extend along the upper and lower edges of the said connecting portion 3 and are folded over to extend inwardly, the flange 5 overlying the upper ends of the side members 2, and the ends of the flange 6 engaging against the inner sides or faces of the said side members 2. These handle members, therefore, constitute means whereby the tool may be conveniently grasped and manipulated and, by the provision of the said flanges 5 and 6, no sharp edges will be presented to the hand. The side members 2 near their lower ends are somewhat widened, as indicated by the numeral 7, and their said widened portions are disposed in overlapping and intersecting relationship, as illustrated in Figure 1, the two gripping members 1 being, as previously stated, of counterpart form and being assembled in the manner shown in the said figure. The overlapping and intersecting portions 7 of the members at each side of the tool are formed with registering openings, indicated by the numeral 8, and a pivot rod 9 extends between the said portions of the members and has its ends fitted loosely through the said openings 8 and riveted down as indicated by the numeral 10, a sleeve 11 being fitted onto the pivot rod 9 and engaging at its ends against the inner or opposing faces of the portions 7 of the members 1, and the said members being in this manner connected for relative pivotal movement about the ends of the said pivot rod 9.

The portion 7 of each side member 2 is formed at its lower outer corner with a depending extension 12, the inner edge of which, indicated by the numeral 13, is perpendicular and straight, and at the lower end of the extension 12 there is formed a laterally inwardly projecting, horizontally disposed

gripping prong 14 having a beveled biting edge 15 which projects inwardly a short distance beyond the vertical line of the edge 13 of the respective extension 12. It will be evident by reference to Figure 1, that the biting edges 15 of the prongs 14 at each side of the tool are presented toward each other so that when the gripping members are swung together about the pivot rod 9, the said biting edges 15 will bite into the opposite sides of the top bar of the brood frame to be lifted from the hive, and it will be understood, of course, that the parts will be so proportioned that the tool may be readily disposed to straddle the said top bar of the frame with the extensions 12 and prongs 14 engaging between the top bar of the frame to be extracted and the top bars of the next adjacent frames. Inasmuch as the edges 13 of the extensions 12 are vertically disposed and straight and the biting edges 15 of the prongs 14 project only a short distance beyond the vertical line of the said edges 13, the said biting edges are permitted to enter the wood frames to a limited distance only and just sufficiently far to insure of a firm purchase being obtained and, therefore, not to an extent which would result in mutilation of the frame.

In order to limit the swinging movement of the members 1 to open position and thus maintain the members in such relative position that the handle members 4 thereof may be conveniently grasped by not being too widely separated at any time, small stop lugs 16 are punched out from the upper edge of one portion 7 of each of the members 1 and are engageable by the corresponding side 2 of the other member 1.

Having thus described the invention, what I claim is:

1. A gripping tool comprising cooperating members of a duplicate construction and each formed from a blank of sheet metal including a cross bar and arms at the ends of said cross bar, the free end portions of said arms being extended outwardly to provide widened end portions and having depending fingers at their outer lower corners, said arms being bent to extend from one side of said cross bar and said fingers having their lower end portions bent inwardly and sharpened to provide penetrating prongs, said members disposed with the side faces of their arms in contacting relation, and pivot means passing through said arms to mount the arms for swinging movement into and out of a gripping position.

2. A gripping tool for the purpose stated comprising a pair of counterpart members, each including spaced sides, and a hand grip connecting the upper ends of the sides, the said members being formed from sheet metal as also the said hand grips and the said grips and sides being in one piece, the hand grip of each member having flanges extending along its upper and lower edges and directed inwardly whereby the outer sides of the hand grips are devoid of sharp edges, the members being assembled with their respective sides in crossed relation, means pivotally connecting the said crossed sides, each of said sides having a laterally inwardly directed prong provided with a biting edge.

3. A gripping tool for the purpose stated comprising a pair of counterpart members, each including spaced sides formed as flat strips, and a hand grip connecting the upper ends of the sides, the members being assembled with their respective sides in crossed relation, means pivotally connecting said crossed sides adjacent their lower ends, each of said sides having its lower end portion extended outwardly and at its outer lower corner provided with a depending arm, and teeth carried by the lower ends of said arms for biting into opposite side faces of an article gripped between said members.

In testimony whereof I affix my signature.

PAYTON L. WILSON. [L. S.]