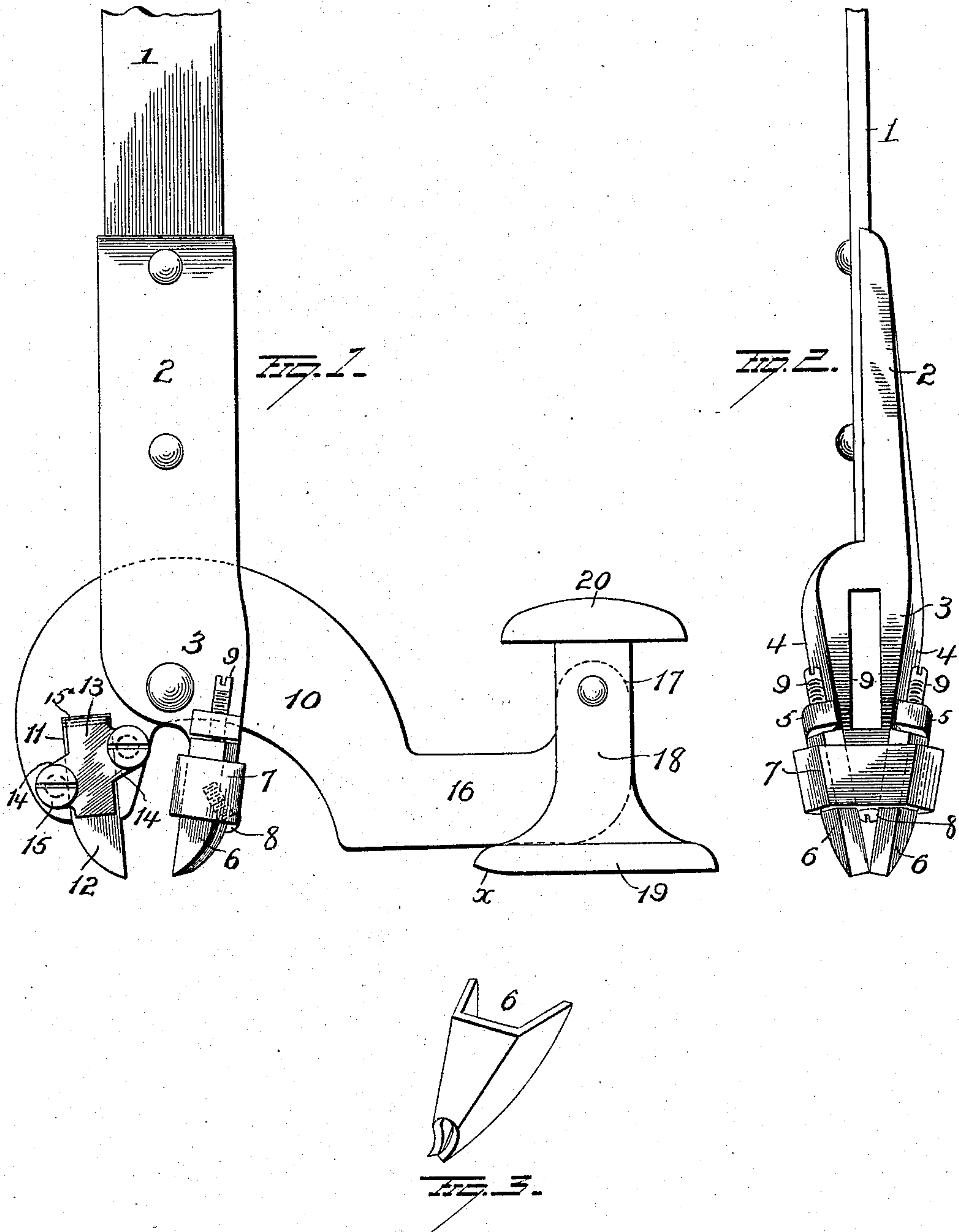


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NAIL EXTRACTOR.
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911,098.

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NAIL-EXTRACTOR.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, MILTON WENGER, of New Holland, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Nail-Extractors; 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.

My invention relates to improvements in nail drawing implements of the type in which a longitudinally movable part or anvil is employed for driving the jaws into the wood to enable them to grasp the head of a nail,—the object of the invention being to so construct the device that the effectual grasping of the head of a nail by the jaws will be insured and so that the nail will be engaged at more than two points, whereby slipping of the jaws in a lateral direction from the nail will be avoided.

A further object is to so construct the device that the jaws can be removed and new ones inserted and also so that the jaws can be readily adjusted.

With these objects in view the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a nail extracting implement embodying my improvements. Fig. 2 is an edge view of that part of the device which carries two jaws, and Fig. 3 is a view of a modification.

1 represents the handle portion of the device which is adapted to receive the usual anvil, not shown, the operation of which in devices of this character is well understood.

To the lower end of the stem or handle portion 1, the shank 2 of an arm 3 is securely bolted. The arm 3 is made tapering in form, having two inclined faces 4, 4, disposed at an angle both longitudinally and transversely, with relation to each other and from each of these faces a lug 5 having a threaded hole, projects. Against each incline and beveled face 4, a jaw 6 is disposed and the lower portion of these jaws cooperate, in open-V formation to engage a nail at two points which are not diametrically opposite each other. The jaws 6 are held in place by means of a sleeve 7 which embraces

them and the sleeve 7 is removably secured to the lower end of the tapering arm 3 by means of a screw 8. The jaws 6 can be adjusted longitudinally by means of set screws 9 passing through the lugs 5 and engaging the upper ends of said jaws,—said set screws also serving to normally prevent longitudinal displacement or backward movement of said jaws.

The arm 3 is provided with a vertical elongated slot 9 through which a curved lever 10 passes and in which said lever is pivotally supported at a point between its ends. The lever 10 is provided at one end with a socket or recess 11 for the reception of a jaw 12, the latter being thus so disposed that it will be opposite the two jaws 6 and cooperate therewith to grasp the nail,—the three jaws thus provided being adapted to engage a nail at a plurality of points, no two of which are diametrically opposite each other. The jaw 12 is held in place by means of a cap-plate 13 having lugs 14 secured to the face of the lever by means of screw 15. This cap-plate also serves to prevent the escape or displacement of adjusting liners 15^a which may be inserted into the recess 11 above the upper end of the jaw 12,—these liners being for the purpose of adjusting the jaw 12 longitudinally.

The lever 10 is provided with a laterally projecting arm 16 having an upwardly projecting portion 17 at its free end. The free end of the arm 16 enters a recess in a post 18 and the upper end of the portion 17 of said arm is pivotally connected with the upper portion of said post. The lower end of the post is provided with a comparatively broad base 19 and the upper end of said post is provided with a head 20.

In the operation of the device, the jaws will be driven into the wood in the usual way and as they enter the wood, the device will be tilted somewhat, the point *x* on the base 19 of the post 18 constituting the fulcrum on which the device thus tilts. The operator will now move the handle portion in a manner to cause the jaws to grasp the nail and with his hand upon the head 20 of the post 18, continue to pull on the handle portion of the implement and cause the arm 16 of the lever 10 to turn on its pivotal support in the post 18 and thus effect the withdrawal of the nail. By pivotally connecting the lever 10 with the post 18, in the manner shown and described, the jaws will be caused to move in an ap-

proximately vertical direction when the device is operated, and hence a nail can be extracted without bending the same.

Instead of constructing the jaws 6 separately, they may be formed of a single piece of metal having a general triangular shape and bent so that the upper end will present an approximately U-shape, as shown in Fig. 3.

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

1. In a nail extractor, the combination of two members pivotally connected together, two separated jaws having their nail engaging faces disposed at an angle to each other at the free end of one of said members, and a jaw at the free end of the other member cooperating with said first-mentioned separated jaws.

2. In a nail extractor, the combination with two members pivotally connected together, of a plurality of jaws adjustably secured to one member and disposed at an angle to each other, and a single jaw carried by the other member.

3. In a nail extractor, the combination with two members pivotally connected together, of a plurality of jaws carried by one member and disposed at an angle to each other, means for removably and adjustably securing said plurality of jaws in place on one of said members, a single jaw carried by the other member, and means for removably securing said single jaw in place.

4. In a nail extractor, the combination with two members pivotally connected together, of a plurality of jaws disposed at different angles and adjustably attached to one of said members and a jaw adjustably attached to the other member.

5. In a nail extractor, the combination with two members pivotally connected together, of a jaw on one of said members and

a plurality of jaws disposed at different angles and removably attached to the other member and cooperating with said first mentioned jaw.

6. In a nail extractor, the combination with two members pivotally connected together, one of said members having two inclined and beveled faces, of jaws engaging said faces, a sleeve secured to said member for holding said jaws in place, set screws engaging the upper ends of said jaws, and a jaw attached to the other member.

7. In a nail extractor, the combination with two members pivotally connected together, one of said members having a socket or recess, of a jaw mounted in said socket or recess, a cap-plate for securing said jaw in place, means for adjusting said jaw held in place by said cap plate, and a jaw carried by the other member.

8. In a nail extractor, the combination with two members disposed approximately at right angles to each other and pivotally connected together, and jaws carried by said members, of a post to which the horizontal member is pivotally connected, said post having a base projecting under said horizontal member and adapted to be engaged by the latter, whereby, after the jaws have been caused to grasp a nail below the head thereof, the entire device including the post can be tilted simultaneously for a limited distance before the horizontal member will turn on its pivotal connection with the post during the operation of withdrawing a nail.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

MILTON WENGER.

Witnesses:

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