

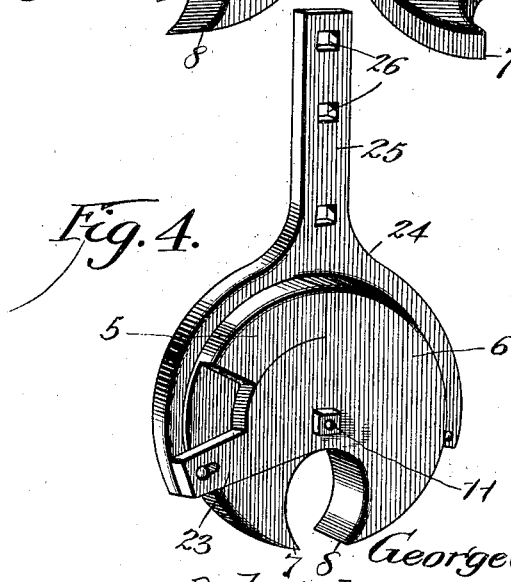
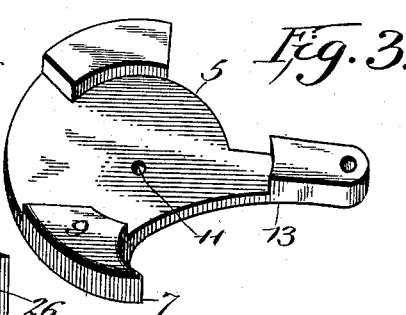
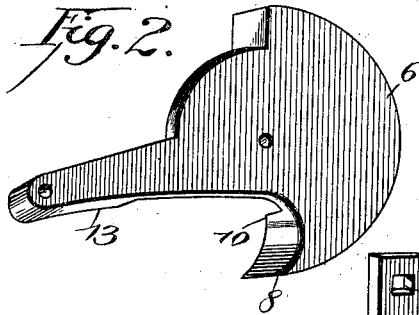
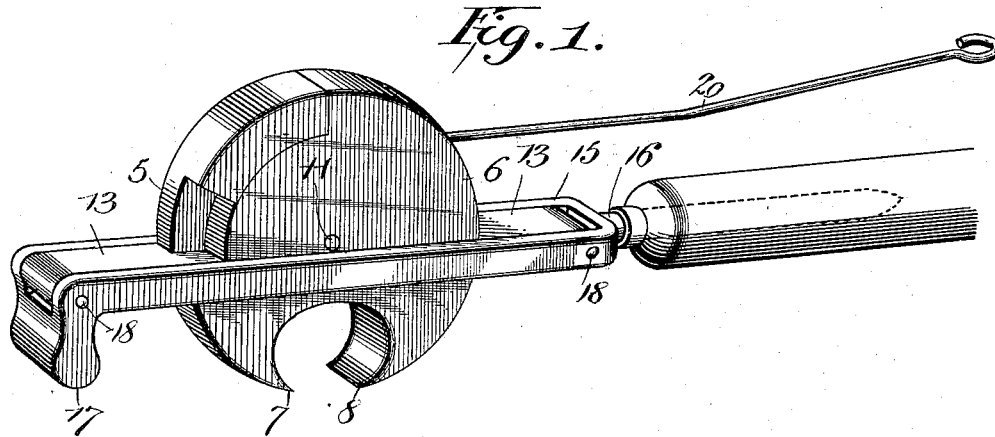
No. 647,226.

Patented Apr. 10, 1900.

G. GUINThER.  
NAIL EXTRACTOR.

(Application filed July 20, 1899.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

GEORGE GUINThER, OF COVINA, CALIFORNIA.

## NAIL-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 647,226, dated April 10, 1900.

Application filed July 20, 1899. Serial No. 724,531. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE GUINThER, a citizen of the United States, residing at Covina, in the county of Los Angeles and State of California, have invented a new and useful Nail-Extractor, of which the following is a specification.

This invention relates to nail-extractors; and it has for its object to provide a construction adapted for the extraction of nails and spikes, one embodiment of the invention being provided with a handle in the form of a lever for operating it, while the second construction has a carrier for the movable parts adapted for engagement by a crowbar to manipulate it in the drawing of spikes.

In the drawings forming a portion of this specification, and in which like numerals of reference designate corresponding parts in the several views, Figure 1 is a perspective view showing the nail-pulling form of the invention. Fig. 2 is a perspective view of one of the jaws. Fig. 3 is a reverse perspective of a cooperating jaw. Fig. 4 is a perspective view of a second embodiment of the invention adapted for the drawing of spikes.

Referring now to the drawings, and more particularly to Fig. 1, the invention comprises two similar jaws 5 and 6, each of which is of arc shape, and which jaws are similarly recessed to receive each the corresponding lugs of the opposite jaw, and when thus assembled to outline a disk, in one edge of which is an arc-shaped opening formed by a circle lying within the outline of the jaws in part and projecting slightly therebeyond and resulting in the formation of gripping edges 7 and 8. The lugs 9 and 10 of each jaw, which are upon the mutually-adjacent faces of the jaws, are themselves arc-shaped and are of a length somewhat less than the intervening recesses which receive the opposing lugs. This permits the rotation of one jaw with respect to the other upon a common pivot 11, arranged coaxially with the jaws. Each jaw has extended therefrom a projection 13, the outer end of which is of a thickness equal to the thickness of the body portion of the jaw, taken through one of the lugs, the inner end of the thickened portion being curved to coincide with the curvature of the periphery of the jaw, and thus when the jaws are assem-

bled, as shown in Fig. 1 of the drawings, this curved inner end of the thickened portion of the extension lies against the outer periphery of the opposing jaw. Thus it will be seen, as shown in Fig. 1 of the drawings, that when the gripping edges 7 and 8 of the jaws are opened to their farthest extent the diametrically-opposite lugs of each jaw will be in mutual engagement and will form a stop in that direction of movement of the jaws; also, when the jaws are in this position the projections of the jaws will lie in a common line diametrically of the circular outline of the jaws. The opposite lugs of the jaws are adjacent the gripping edges 7 and 8, and said edges include portions of these lugs, the degree of extension of said lugs being such that when the gripping edges are separated, as shown in Fig. 1, the opposite end face of each lug will engage the extension 13 of the opposing jaw. Thus by manipulation of the jaws upon their pivots 11 the gripping edges may be caused to open and close, the mutual engagement of certain of the lugs of the jaws and the engagement of certain other lugs with the extensions of the opposing jaws forming stops to limit the outward movement of the gripping edges, while the engagement of the said mutually-engaging lugs with the extensions of the opposing jaws will act to limit the inward movement of the edges 7 and 8 in the act of gripping.

In practice the jaws are mounted in a single carrier, and in Fig. 1 of the drawings this carrier is in the form of a rectangular frame 15, from one end of which extends a spindle 16, adapted for the attachment of a handle, the opposite end of the frame having a fulcrum-block 17 formed thereon, the jaws in their mutually-pivoted arrangement being placed within the inclosure of the frame and with their extensions 13 pivoted to the frame through the medium of transverse bolts 18, as shown.

In order to manipulate the jaws to separate the gripping edges, a pull-rod 20 is pivoted to the outer face of one of the jaws and extends rearwardly and parallel with the handle, and thus by reciprocation of this rod the jaw with which it is connected may be moved, as also the opposing jaw.

In practice the jaws are so arranged within

the frame that the gripping edges thereof will lie on the same side with the fulcrum-block 17 and that when the gripping edges are separated the extensions 13 will lie in the plane of the frame. Thus the downward movement of the jaws with respect to the frame will act to bring the gripping edges together, and if the jaws be held and the frame be raised the same result will ensue. In the operation of the device the fulcrum-block 17 is brought to bear upon the body in which the nail to be drawn is seated, and by means of the rod 20 the gripping edges are entered beneath the head and in engagement with the shank of the nail. Through the medium of the handle the frame 15 is then raised, rotating the jaws upon their pivot and causing a further and more intimate engagement of the gripping edges with the nail. Further upward movement of the handle will act to draw the nail.

In Fig. 4 of the drawings is shown a construction in which the projections 23 of the jaws, corresponding to the projections 13 above referred to, are not thickened at their outer ends, but are of a thickness equal to the body portions of their respective jaws. A spanner-frame 24 is substituted for the frame 15, said spanner-frame being of arc shape and adapted to receive the jaws when in their open position and from which the jaws are moved to bring the gripping edges together. The spanner 24 in its adjusted position lies intermediate the outer faces of the assembled jaws, the extensions 23 of the jaws being pivoted to the extremities of the spanner on opposite faces thereof. The spanner 24 has an outwardly-extending stem 25, provided with a plurality of transverse openings 26, adapted for the reception of a lever in the operation of drawing a spike.

In the operation of the device the jaws are moved to the upward limit of their motion, as shown in Fig. 4, and the gripping edges thereof are manipulated to lie at opposite sides of the upper end of the spike. The jaws are held down and the spanner is moved upwardly until the gripping edges enter beneath the head of the spike and are held thereby against upward movement, when a crowbar or other form of lever is passed through one of the openings 26 and is then manipulated upon a suitable fulcrum to raise the spanner. This upward movement of the spanner will cause the gripping edges to

tightly engage the spike and by further upward movement of the spanner the spike is withdrawn.

It will be readily understood that in practice the outlines of the jaws may be varied, they may be supported in any suitable style of frame, and that any desired material may be used without departing from the spirit of the invention.

Having thus described the invention, what is claimed is—

1. A nail-extractor comprising a frame including parallel members separated by an interspace, a fulcrum-block at one end of the frame, a handle connected with the opposite end of the frame, gripping-jaws mutually pivoted and mounted in the frame between the parallel portions thereof, a radial extension upon each jaw, and pivotal connections between said extensions and the ends of the frame.

2. A nail-extractor comprising two gripping-jaws mutually pivoted, and each having lugs corresponding in form and arrangement to the lugs of the opposing jaw, the lugs of each jaw being separated by recesses adapted to receive the lugs of the opposing jaw, radial extensions upon the jaws, a frame pivotally connected with the extensions and movable transversely of the jaws to actuate them and separate means connected with one of said jaws for moving it with respect to the other jaw.

3. In a nail extractor, the combination with a frame, of mutually-pivoted jaws having gripping edges, extensions upon the jaws pivoted in the frame, and separate means connected with one of said jaws for moving it with respect to the other jaw.

4. In a nail-extractor, the combination with a frame having a block extending at an angle thereto, of jaws mutually pivoted and having gripping edges extending on the same side of the frame with said block, extensions upon the jaws pivoted in the frame and separate means connected with one of the jaws for moving it with respect to the other jaw.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE GUINTHER.

Witnesses:

L. H. SOUTHER,  
G. O. SHOUP.