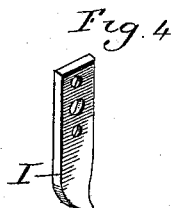
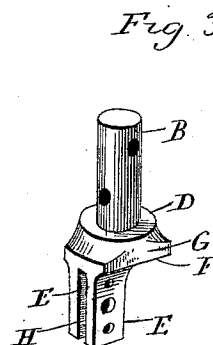
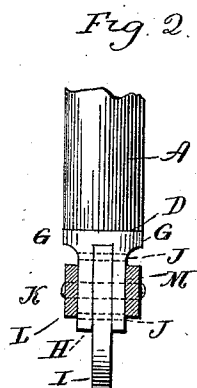
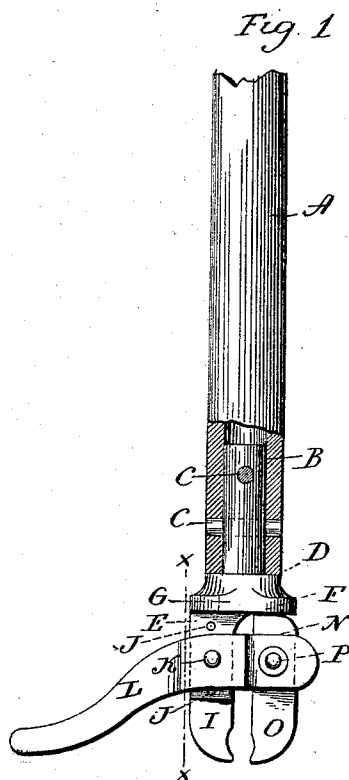


(No Model.)

R. C. ELLRICH.
NAIL EXTRACTOR.

No. 474,594.

Patented May 10, 1892.



Witnesses.
J. H. Shumway
Lillian D. Kelley

Robert C. Ellrich
Inventor
By atty
Edwin Seymour

UNITED STATES PATENT OFFICE.

ROBERT C. ELLRICH, OF PLANTSVILLE, CONNECTICUT.

NAIL-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 474,594, dated May 10, 1892.

Application filed June 29, 1891. Serial No. 397,878. (No model.)

To all whom it may concern:

Be it known that I, ROBERT C. ELLRICH, of Plantsville, in the county of Hartford and State of Connecticut, have invented a new Improvement in Nail-Extractors; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view, partly in side elevation and partly in vertical section, of a nail-extractor constructed in accordance with my invention; Fig. 2, a broken view showing the lower end of the device, partly in elevation and partly in section, on line *xx* of Fig. 1; Fig. 3, a detached perspective view of the head; Fig. 4, a similar view of the primary jaw.

My invention relates to an improvement in nail-extractors, the object being to produce a simple, strong, compact, convenient, and effective device.

With these ends in view my invention consists in a nail-extractor having certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

The handle of my device consists of a simple heavy tube A, the upper end whereof is left open to receive a rammer, (not shown,) but consisting of a simple rod or the handle of a hammer. A head attached to the lower end of the tube is provided with a long cylindrical plug B, closely fitting into the same, and secured in place by friction and by pins C C, the said head being constructed to form an annular shoulder D, conforming to the diameter of the tube, which abuts against it, a depending offsetting finger E, located to one side of the longitudinal axis of the plug, and hence of the tube, and a shoulder F, located opposite the said finger. The opposite sides of the head are flattened, as at G G, to bring them down flush with the lines of the tube. Preferably, and as shown, the said head is formed solid or in one piece of cast metal. The said finger E has an open longitudinal slot H formed in it, preferably by milling it, to receive the upper end of the fixed or primary jaw I, which is rigidly secured in place by

pins J J. A pivot K, passing transversely through the said finger and jaw at a point between the pins J J, carries the curved shoe L, which has an opening M formed in it to adapt it to fit over the said finger and rock on its pivot. The short upper end of this shoe has an opening N formed in it to receive the upper end of the secondary jaw O, which is rigidly secured in place by a pin P, the upper end of this jaw being in position to impinge against the shoulder F of the head. Both of these two jaws stand in about the same relation to the longitudinal axis of the tube, which is the line on which the driving force of the rammer impacting on the inner end of the plug is exerted. The said shoe and secondary jaws are constructed so that when the device is held in its vertical position, as shown by Fig. 1 of the drawings, the weight of the outer end of the shoe will lift the secondary jaw until its upper end engages with the shoulder F of the head, at which time the lower ends of the two jaws will be properly separated for driving. By adapting the secondary jaw to be normally held away from the primary jaw, as described, the primary jaw may be first started into the wood without manually holding the secondary jaw out of the way, as has been necessary in prior devices of the same type. In case the two jaws have to be driven into the wood in order to get at the nail, the bearing of the secondary jaw on the shoulder F of the head takes the strain almost entirely from the pivot of the shoe and from the pin holding the secondary jaw in place. By offsetting the primary jaw from the central line of the device I am enabled to drive the jaw straight or at any inclination demanded by the circumstances attending each use of the device. Furthermore, by inserting the primary jaw into an open slot formed in the head, I am enabled to replace that jaw very readily in case it becomes broken or worn by simply driving out the pins which hold it in place, and then knocking it laterally out of the open slot. In this way I am enabled to interchange this jaw.

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, with a tube, of a head having a plug fitted into the

lower end of the tube and also having an offsetting finger and a shoulder located opposite to the same, a primary jaw rigidly secured to the said finger, a pivotal shoe pivoted to the finger, and a secondary jaw mounted in the said shoe so as to have its upper end stand under the said shoulder of the said head, substantially as set forth.

2. In a nail-extractor, the combination, with a tube, of a head having a plug entering the lower end of the said tube and formed with an annular shoulder against which the tube abuts, with an offsetting finger, and with a shoulder located opposite the same, a pri-

mary jaw secured in an open slot formed in the said finger, a curved shoe pivoted to the finger, and a secondary jaw secured in the upper end of the shoe and standing under the last-mentioned shoulder, substantially as described.

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

ROBERT C. ELLRICH.

Witnesses:

T. ATTWATER BARNES,
J. M. SHARP.