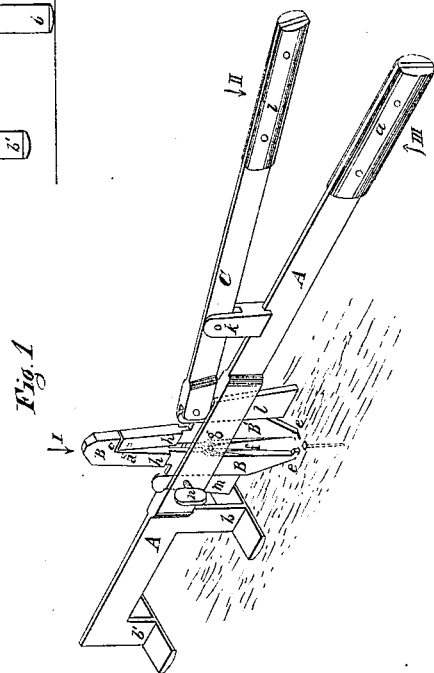
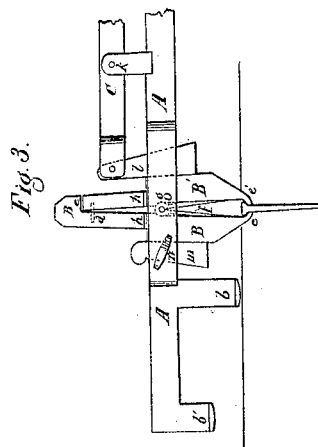
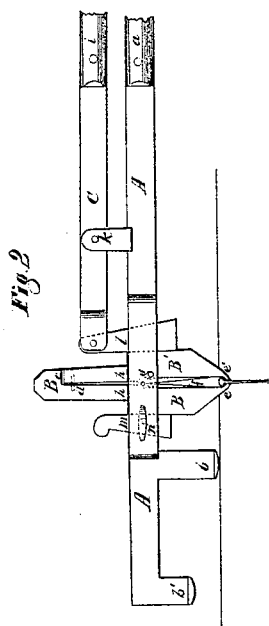


R. Mc Connell,

Nail Extractor,

No 50,834,

Patented Nov. 7, 1865.



Witnesses
A. Schickel
Henry Brown

Inventor
Robert Mc Connell

UNITED STATES PATENT OFFICE.

ROBERT McCONNELL, OF LAWRENCEVILLE, PENNSYLVANIA.

IMPROVED INSTRUMENT FOR EXTRACTING NAILS.

Specification forming part of Letters Patent No. 50,834, dated November 7, 1865.

To all whom it may concern:

Be it known that I, ROBERT McCONNELL, of Lawrenceville, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Instruments for Extracting Nails and Spikes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view; Figs. 2 and 3, side views of the same.

Before proceeding to describe the construction and arrangement of my improved instrument, I wish to state that the same is designed for the purpose of extracting spikes, nails, or sprigs when the same are completely driven or punched into the wood, in which case an ordinary pair of pinchers, claw, or other instrument could not be applied, on account of the difficulty or impossibility of taking a hold at them with the said instruments.

The nature of my improved nail-extractor consists in the arrangement of a pair of pinchers made at their lower end in a pointed or wedge shape, so that the two parts thereof may be driven into the wood on both sides of the nail to be extracted, and attached to a lever in such a manner as to allow them some play independent of the lever, there being, further, another lever provided operating a wedge, by means of which the two parts of the pinchers can be firmly pressed together, taking thereby a firm hold of the nail-head and enabling thus to extract the nail by raising the lever to which the pinchers are attached, as will be more fully set forth in the following specific description.

In all the figures of the drawings the same letters of reference are marked on like parts.

A is the main lever, provided with a handle, *a*, and two legs, *b b'*, forming the fulcrums of the lever when the nail is being extracted.

B B' are the pinchers, of a flat shape, and passing through a corresponding opening in the lever A, the part B' butting with its upper end against a shoulder, C, of the part B. The two parts are held in position in relation to each other by a small pin, *d*, (indicated by dotted lines.) The lower ends or bits of the pinchers *e e'* are made as shown in drawings—viz., pointed and hook-shaped.

f is a spring held by the pin *g*, and having a tendency of keeping the bits *e e'* apart. The pinchers are allowed to slide a small distance up or down in their opening in the lever, the distance being limited downward by the shoulders *h h* when coming in contact with the body of the lever, and upward by the spring *f* when butting with the lower ends of its prongs against the hook-projections of the bits *e e'*.

C C is a lever provided with a handle, *i i*, and having its fulcrum at *k*; *l*, a wedge attached to the lever C by a pin, and passing through the main lever A, in which the opening for the reception of the bits is extended for it. *m* is another wedge, on the opposite side of the pinchers, kept in position by a set-screw, *n*, by means of which the same may be set higher or lower.

The manner in which the described instrument is used, and in which the different parts constituting the same act, is as follows: The instrument is held, as shown in Fig. 1, so that the head of the nail to be extracted is between the bit ends of the pinchers. By striking then with a hammer on the head of the pinchers, as indicated by arrow I, the bit ends are driven into the wood from which the nail is to be extracted sufficiently to allow them to take a hold under the head of the nail, as shown in Figs. 2 and 3. Pressing down now the lever C causes the wedge *l* to ascend, and thereby forces the bit ends of the pinchers together, which take thus a firm hold under the nail-head. By raising the lever A the nail can now be readily pulled out, in which operation the leg *b* forms the fulcrum of the lever at the starting of the nail and the leg *b'* for the completion of the extraction.

The wedge *m* is for the purpose of adjusting the instrument for different sizes of nails. Thus, if the wedge (by means of the set-screws *n*) is set as shown in Fig. 2, the pinchers are partially pressed together thereby, and the instrument is set to suit small-sized nails. If the wedge, however, is set as shown in Fig. 3, the pinchers are wider apart, and thus adapted for the extraction of larger-sized nails.

The arrangement of the pinchers of being allowed to slide to a certain degree in their opening through the lever A, as has been described, is for the purpose of obviating vibrations in the lever, which would be caused by

the striking with a hammer on the head of the pinchers, if the same were in a firm connection with the lever.

Having thus fully described my improved nail-extractor, what I claim herein as new, and desire to secure by Letters Patent, is—

The lever A, with the pinchers B and B', in

combination with the lever C and wedges *l* and *m*, when constructed and arranged as and for the purpose set forth.

ROBERT McCONNELL.

Witnesses:

A. S. NICHOLSON,
HENRY MOSER.