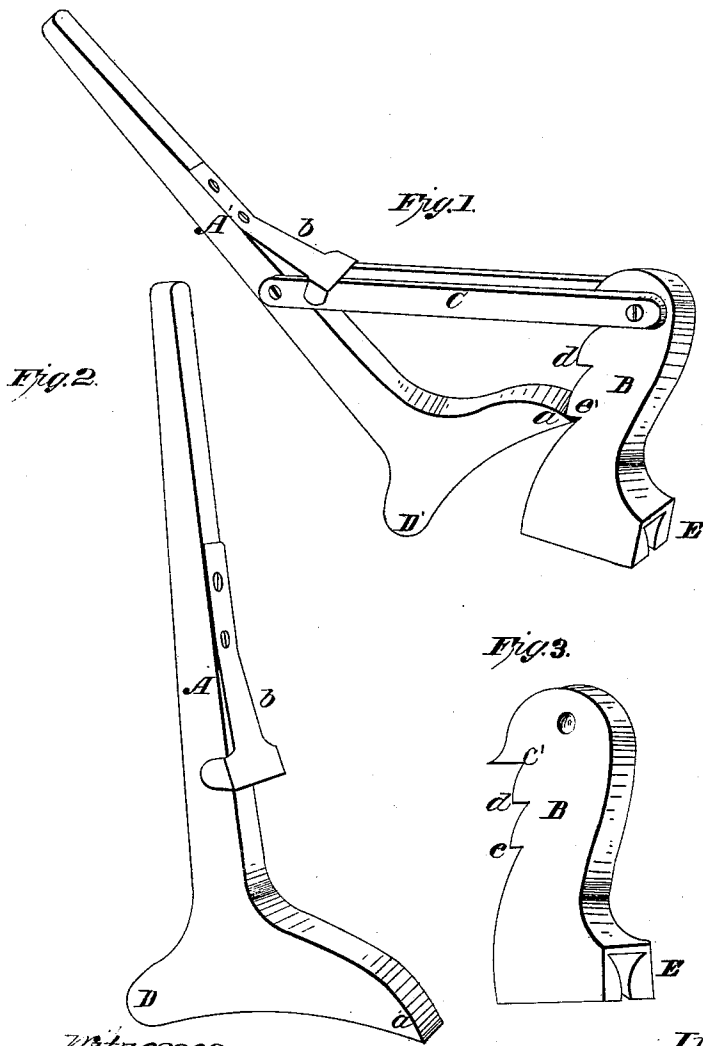


I. W. Mead,

Nail Extractor,

No 79,587.

Patented June 7, 1868.



Witnesses:  
Elymas L. Spina.  
R. Fitzgould.

Inventor:  
Ira W. Mead.

# United States Patent Office.

IRA W. MEAD, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO HIMSELF AND  
EDWIN W. HANFORD, OF SAME PLACE.

Letters Patent No. 79,587, dated July 7, 1868.

## IMPROVEMENT IN SPIKE-DRAWERS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, IRA W. MEAD, of the city of Bridgeport, in the county of Fairfield, and State of Connecticut, have invented a new and useful Improvement in Apparatus for Drawing Spikes, &c.; and I do hereby declare that the following is a full, clear, and exact description of the construction, character, and operation of the same, reference being had to the accompanying drawings, which make part of this specification, in which—

Figure 1 is a perspective view of the apparatus, as in the third position for drawing the spike.

Figure 2 is a perspective view of the main lever end-spring.

Figure 3 is a perspective view of the pinch or lifting-bar, which receives and grasps the spike.

My improvement consists in making a pair of levers, C, which connect the main lever A with the pinch or lifting-bar or stock B, which lever A and lifting-bar B have two or more adjustments, to suit the height of the head of the spike at any given time, so that by the position and shape of the fulcrum I can at any and all times draw the spike so nearly in a vertical line that the spike will remain straight, and in a condition to be driven again.

I make the lever A substantially in the form and shape shown in figs. 1 and 2, and of wrought iron or any other suitable material, with a point, *a*, to operate as a dog for holding, staying, or stopping the upright or lifter B, and the part D, fitted to serve as a fulcrum on which the lever works, and with a spring, as *b*, to throw down the lever C, and consequently the lifting-bar B, so that the point *a* of the lever A may work in either of the notches in the lifter B.

I make the clasp-ing-instrument or lifting-bar B of cast iron or any other suitable material, substantially in the form or shape shown in fig. 3, and at B, fig. 1, with two or more notches or teeth in its side or edge, as shown at *c d e*, figs. 1 and 3, in which, or against which, the point *a* of the main lever A works to draw the spike.

By the operation of this apparatus the spike can be started by a force equal to any claw-bar, or any other means heretofore used; and by the changes in the notches *c d e* in the lifting-bar B, the operation will cause the spike to be drawn nearly in a vertical direction, so as to prevent bending the spike.

In using this apparatus, I pass the space shown at E, figs. 1 and 3, on to the head of the spike, so as to entirely secure and embrace it while it is in any of the different positions.

Then, with the point *a* of the lever A resting in the notch *c*, fig. 3, and the fulcrum D resting on the tie or any other proper support, I pass the claws, as represented at E, figs. 1 and 3, on to the head of the spike, so as to grasp it firmly, and press down the outer end of the lever A, when the lifter B will start the spike and carry it up vertically for a short distance. I then change the point *a* to the notch *d*, and operate the lever as before, and so continue to change the point *a* from one notch to another, and operate the lever until the spike is completely drawn.

The advantages of my improvement are, that at the beginning, when the point *a* is in the notch *c*, the purchase or power is the greatest, as the claws or sides of the recess at E (which clasp the head of the spike,) are very near the fulcrum D. But after the spike has been started, and the point *a* changed to the other notches, (in their order,) the purchase or power is continually being diminished, and the length of the motion largely increased, so as to expedite the drawing of the spike: and that by the manner of changing the relative positions of the parts or points D and E, the tendency will be, at all times, to draw the spike in so nearly a vertical direction, that it will remain straight, and fit to be driven again without being strained.

What I claim as my invention, and desire to secure by Letters Patent; is—

The lever A, with the lifter B, the pair of levers C, and the spring *b*, constructed to operate substantially as herein described and set forth.

IRA W. MEAD.

Witnesses:

LYMAN L. SQUIRE,  
R. FITZGERALD.