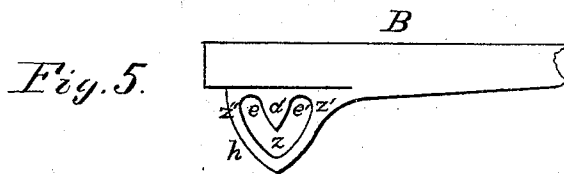
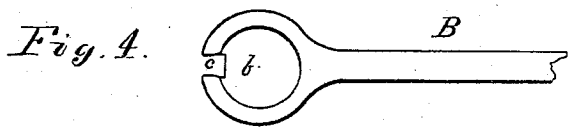
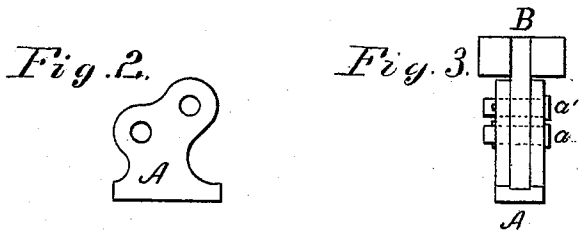
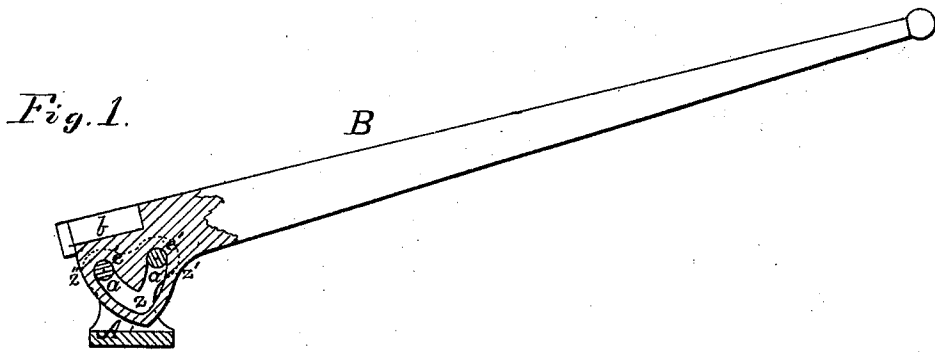


A. F. JACKSON.
Spike Extractors.

No. 140,371.

Patented July 1, 1873.



Witnesses.
E. A. Bates.
Chas. P. Steele.

Inventor:
A. F. Jackson,
Chapman & Fossner & Co.,
Attorneys,

UNITED STATES PATENT OFFICE.

AMBROSE F. JACKSON, OF MINNEAPOLIS, MINNESOTA.

IMPROVEMENT IN SPIKE-EXTRACTORS.

Specification forming part of Letters Patent No. **140,371**, dated July 1, 1873; application filed January 25, 1873.

To all whom it may concern:

Be it known that I, A. F. JACKSON, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and valuable Improvement in Spike-Extractors; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of side view of my spike-puller. Figs. 2, 3, 4, and 5 are detail views.

This invention has relation to means for extracting spikes from railway ties and other places, and it consists in the construction and novel arrangement of the slotted lever and double-fulcrum block, hereinafter more particularly described. The object of this invention is to provide an extracting-lever capable of pulling the spike entirely out by a single depression of its power-arm; and in order to accomplish this object, my lever is made to bear at first upon a fulcrum very near the spike, and afterward, when the spike has been partly drawn, upon a second fulcrum, more distant from the spike, thus lengthening the short arm of the lever, and increasing its radial play.

In the accompanying drawings, the letter A designates the fulcrum-block, preferably made of metal, and provided with the fulcrum-pins *a a'*, the latter being in rear of the former, and usually a little higher. The letter B indicates the lever provided in the upper portion of its front end with an expanded recess, *b*, to receive the head of the spike, the neck thereof being received in the narrow throat *c* formed through the front wall of the recess. The under side of the forward portion of the lever is provided with the fulcrum-seats *e e'*, corresponding to the fulcrum-pins *a a'*, respectively, and with an angular tongue, *d*, which projects downward between said seats. Usually the metallic wall of the outer edges

of the fulcrum-seats is continued downward on each side parallel with the angular tongue *d*, as shown at *h*, forming a V-shaped slot, *z*, inclosing the fulcrum-pins, and serving to keep the fulcrum and lever together. As the two branches *z' z''* of this angular slot are preferably made on circular curves, the radii running to the centers of the opposite fulcrum-pins, respectively, each branch will serve as a cam-slot, working upon the free fulcrum-pin to keep the acting fulcrum-pin home to its seat.

In the operation of this device the jaw at the front end is engaged with the spike, with the lever in a perpendicular position. In consequence of the engagement of the cam-slot *z''* with the pin *a*, the fulcrum-block cannot slip to the rear, and the spike is slowly started from its bed. As the long arm of the lever is depressed, the rear fulcrum-seat *e'* is brought to bear upon the pin *a'*, lengthening the short arm of the lever, and thereby giving it a longer sweep, enabling it, as the depression of the power-arm is continued, to rapidly extract the remaining length of the already loosened and started spike.

I am aware that double fulcrums have been used with a lever and link, as shown in the patent of William Kegg, dated January 18, 1870. I do not claim such invention.

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

The spike-puller, consisting of the block A having two fulcrums *a a'*, and the lever B recessed at its end to form jaws, and provided with the guide-slot *z*, the ends of which, *z'* and *z''*, form seats for said fulcrums, substantially as specified.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

AMBROSE F. JACKSON.

Witnesses:

CHAS. H. WOODS,
ROBERT S. BRYANT.