J. A. POWELL.

SPIKE-EXTRACTOR.

No. 188,407. Patented March 13, 1877.

Fig. 1.

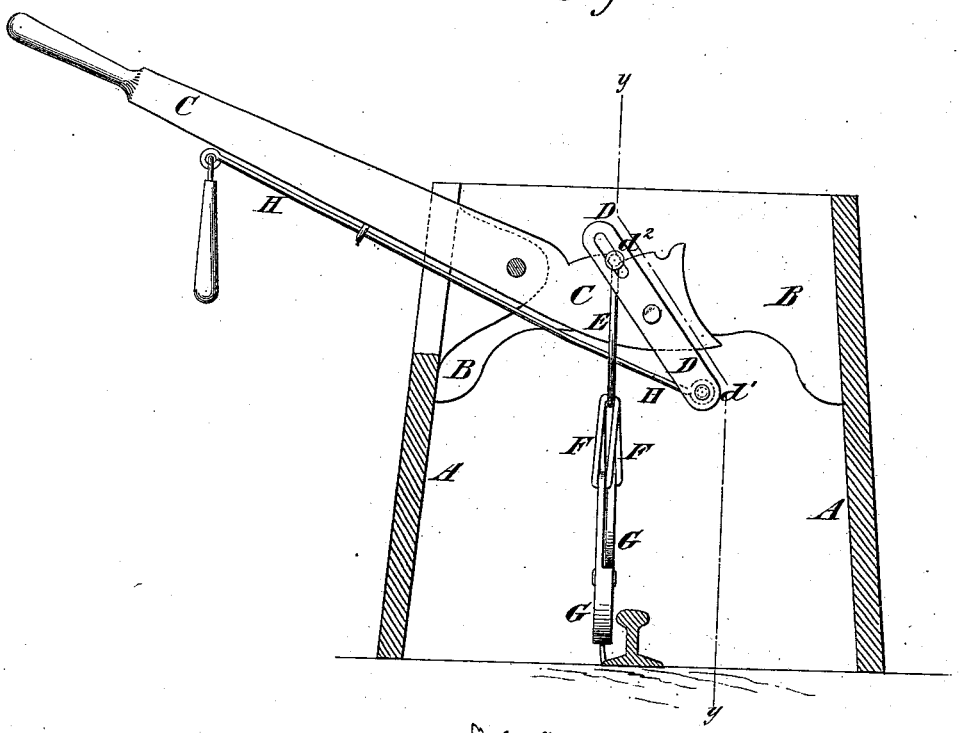
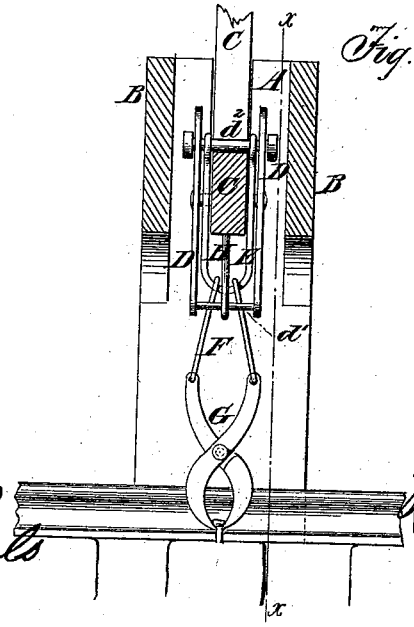


Fig. 2.



WITNESSES:

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BY

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UNITED STATES PATENT OFFICE.

JOHN A. POWELL, OF CALIFORNIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND JOS. B. CROWTHERS, OF SAME PLACE.

IMPROVEMENT IN SPIKE-EXTRACTORS.

Specification forming part of Letters Patent No. **188,407**, dated March 13, 1877; application filed September 2, 1876.

To all whom it may concern:

Be it known that I, JOHN A. POWELL, of California, in the county of Washington and State of Pennsylvania, have invented a new and useful Improvement in Spike-Extractors, of which the following is a specification:

Figure 1 is a vertical longitudinal section of my improved machine, taken through the line *x x*, Fig. 2. Fig. 2 is a cross-section of the same, taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved machine for pulling railroad-spikes, which shall be simple in construction, convenient in use, and effective in operation, pulling the spikes without bending them, and which shall be so constructed as to allow the operator to always stand within the track, so that the instrument can be used in cuts and tunnels, upon trestle-work, and in any place where spikes can be driven.

The invention consists in the combination of the lever, provided with one or more notches in the upper side of its forward end, the pivoted slotted bars and their rods or bolts, the clevis, the links, the clamp, and the sliding rod with each other and with the frame, as hereinafter fully described.

A are the end frames or legs of the machine, which are so formed as to rest upon the tie upon the opposite sides of the rail from which the spikes are to be drawn. To the side edges of the upper part of the frame or legs A are attached, or upon them are formed, side boards or frames B. The upper end of one of the legs A is slotted to receive the lever C, which is pivoted to projections formed upon said end, or to the sides B. To the opposite sides of the forward end of the lever C are pivoted two bars, D, the lower ends of which project below the said lever, and are connected by a rod or bolt, d^1. The upper ends of the bars D project above the end of the lever C, and are slotted to receive the rod or bolt d^2, so that by turning the bars D upon their pivot the rod or bolt d^2 may be moved from one to another of a number of notches, c', formed in the upper side of the forward end of the lever C, to bring it nearer to or farther from the fulcrum of said lever C, to gain power or space, as may be required. E is a loop or clevis, the arms of which are placed upon the opposite sides of the lever C, and their ends are pivoted to the rod or bolt d^2. Upon the bend of the clevis E are placed two links or short chains, F, to which are pivoted the ends of the arms of the clamp G. The arms of the clamp G are pivoted to each other in such a position that their jaws may be opened enough to receive and grasp the head of a spike, which is then drawn by bearing down upon the free end of the lever C. The spike may be started with the rod or bolt d^2 in one of the notches c' nearest the fulcrum, which may then be moved farther outward until the spike is fully drawn.

To the rod or bolt d^1 is pivoted the lower end of a rod, H, which passes up along the lower edge of the lever C, and is kept in place by keepers attached to said lever C. The upper end of the rod H may have a hand-piece formed upon or attached to its upper end, for convenience in operating it.

The rod H enables the rod or bolt d^2 to be changed from one to another of the notches c' without releasing the end of the lever C, and without allowing the clamps G to release the spike.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of the lever C, provided with one or more notches, c', in the upper side of its forward end, the pivoted slotted bars D and their rods or bolts d^1 d^2, the clevis E, the links F, the clamp G, and the rod H with each other and with the frame A B, substantially as herein shown and described.

JOHN A. POWELL.

Witnesses:
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