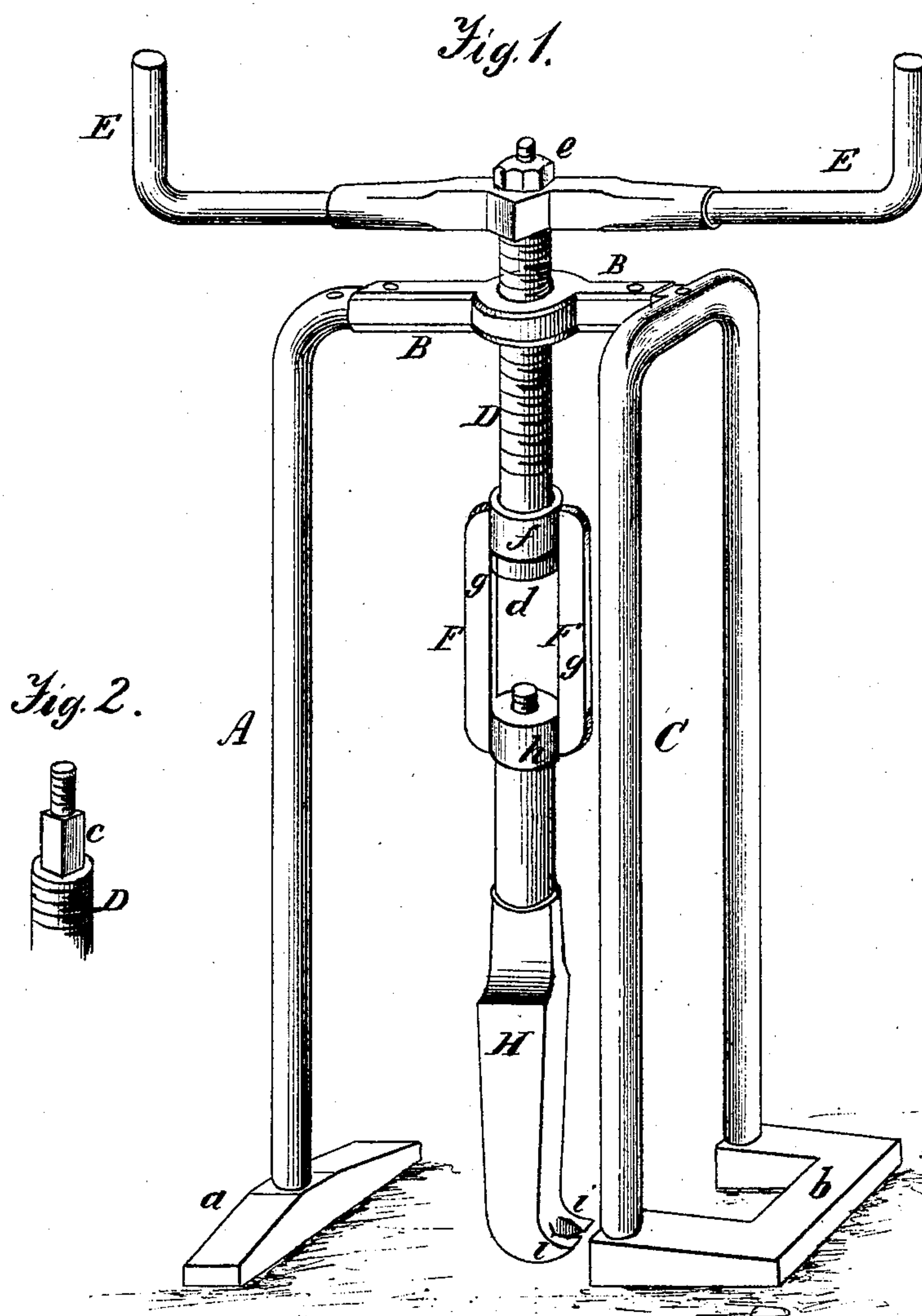


J. W. BUTLER.

Improvement in Spike-Extractors.

No. 131,050.

Patented Sep. 3, 1872.



Witnesses.
A. Ruppert.
Wm. J. Timmy

Inventor.
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Cox and Cox

UNITED STATES PATENT OFFICE.

JOHN W. BUTLER, OF QUINCY, ILLINOIS.

IMPROVEMENT IN SPIKE-EXTRACTORS.

Specification forming part of Letters Patent No. 131,050, dated September 3, 1872.

To all whom it may concern:

Be it known that I, JOHN W. BUTLER, of the city of Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Railroad Spike-Extractors, of which the following is a specification, reference being had to the accompanying drawing.

Nature and Objects of the Invention.

The invention relates to a frame provided with a jack-screw working vertically, and operating an upright claw-bar provided with a clutch of requisite form and dimensions for grasping the head of a railroad-spike. The object of the invention is to provide a means of rapidly and efficiently drawing railroad-spikes from the ties and for other analogous purposes.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of my invention. Fig. 2 is also a perspective view, showing the rectangular shoulder C.

General Description.

A in the accompanying drawing is a standard provided with the foot *a*, placed at right angles to the lower extremity of the claw-bar, and connected by the cross-bar B with the double-arched standard C, which is provided with the rectangular foot *b*. The dimensions of the standards A and C are similar, so that the lower surfaces of the feet *a* and *b* are in the same horizontal plane. The frame, composed of the parts A, C, *a*, and *b*, and cross-bar B, may be varied in construction, the standard A being made double and similar to the standard C; the frame may be cast or wrought in one or more pieces; its height should be about three (3) or four (4) feet. The cross-bar B is enlarged at its middle part, and provided with a threaded aperture, in which revolves the jack-screw D, the upper parts of which are provided with an angular shoulder, *c*, over which fits a corresponding aperture at the center of the lever E, the extremities of which are provided with upright handles. The upper end of the jack-screw D projects above the adjacent parts of the lever E, is of reduced diameter, and threaded to receive the nut *e*, which secures the lever upon the jack-

screw, the lower part of which is provided with a thread working in the aperture in the cross-bar B, and extending from the shoulder *c* nearly to the lower extremity of the jack-screw, where it is cylindrical in form, its base being provided with a plate or button, *d*, of proper dimensions. The upper part of the frame F is provided with a collar, *f*, through which the jack-screw D passes, thus suspending the frame F upon the jack-screw by the collar resting upon the button *d*. The frame F is composed of the collar *f*, bars *g*, and cylinder *h*, the collar being connected by the bars with the cylinder, which is provided with a thread to receive the screw on the upper end of the claw-bar H; the bars *g* being of such dimensions as to allow a sufficient amount of space between the under surface of the button *d* and the upper surface of the cylinder *h*, to which the claw-bar may be secured in the aforesaid or any other suitable manner. The claw-bar H consists of a bar of metal of proper weight and dimensions, having its lower surface convex and its extremity provided with the rounded prongs or claws *i*, separated by a conical aperture with reversed apex, and so constructed that when forced about the rear of the lower part of the head of a railroad-spike it will clutch the same. The vertical axes of the jack-screw D, frame F, and claw-bar H are coincident.

Operation.

Place the foot *a* upon the tie or other device supporting the rail, inside of the rail, and adjacent to the spike to be removed, opposite the foot *a*, and outside the rail place the foot *b* so that the claw-bar H is almost directly above the spike, and so situated that its convex surface slightly impinges upon the upper surface of the tie; place the claws *i i* so that the rear lower part of the head of the spike lies opposite the center of the space between them; then with a sharp tap upon the rear of the claw-bar force the claws about the aforesaid portion of the spike; then operate the lever E in such manner as to elevate the claw-bar H, which will draw the spike vertically and without bending it. The above follows, as the lower part of the rear of the heads of railroad-spikes is generally reduced or beveled, and this part stands outside of the rail. The

above construction of the spike prevents its head passing through the reversed cone-shaped aperture between the prongs when the claw-bar is operated as aforesaid.

It is obvious that the above operation can be applied with equal efficiency to all spikes, bolts, and analogous devices which are provided with a head, and are forced by driving in the material holding them.

I do not claim the device shown in the patent of R. Haynes, dated July 25, 1836; but

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

The claw-bar H, frame F, jack-screw D, lever E, in combination with the frame composed of the standards A and C, feet *a* and *b*, and cross-piece B, substantially as shown and described.

In testimony that I claim the foregoing improvements in railroad spike - extractors as above described I have hereunto set my hand and seal this 11th day of July, 1872.

JOHN W. BUTLER.

Witnesses:

EBENEZER B. BARKER,
JESSE LANDRUM.