

J. PASSENO.
Spike and Nail Extractor.

No. 168,281.

Patented Sept. 28, 1875.

Fig. 1.

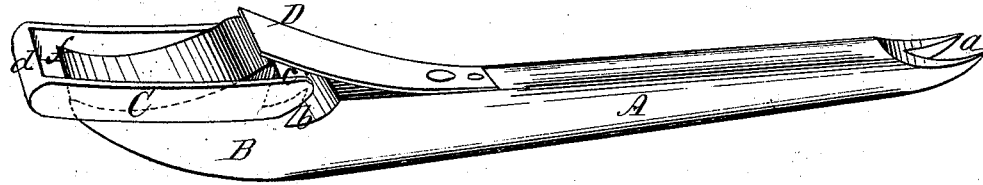


Fig. 2.

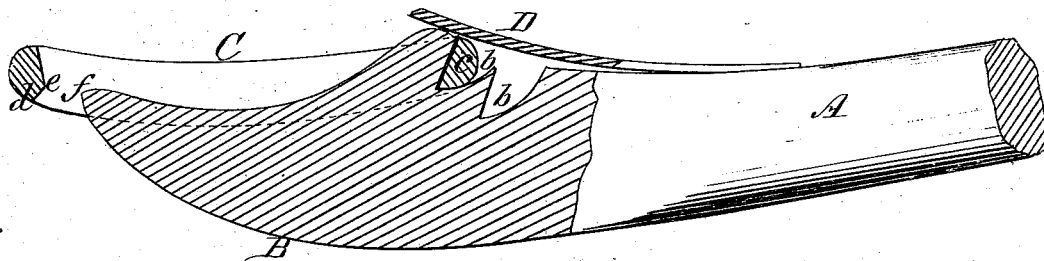
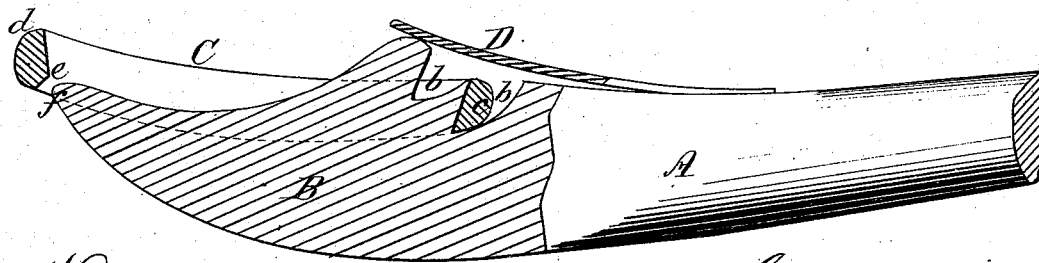


Fig. 3.



Witnesses:
J. West Wagner
J. H. Rutherford

Inventor:
Joseph Passeno
By Johnson & Johnson
Attys

UNITED STATES PATENT OFFICE.

JOSEPH PASSENO, OF GEORGETOWN, DISTRICT OF COLUMBIA.

IMPROVEMENT IN SPIKE AND NAIL EXTRACTORS.

Specification forming part of Letters Patent No. 168,281, dated September 23, 1875; application filed August 28, 1875.

To all whom it may concern:

Be it known that I, JOSEPH PASSENO, of Georgetown, in the District of Columbia, have invented certain new and useful Improvements in Spike and Nail Extractor; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

My invention is specially designed for use in ship-yards, railroad-shops, railroad wreck-er-trains, and the like, but is generally useful to trades where occasion frequently arises for drawing spikes and nails.

The device is a strong bar having a nail-starter at one end similar to the ordinary nail-starters of claw-hammers, and widening at its lower or fulcrum end into a runner shape, the upper side of the runner being notched to hold a shackle-bar, said bar being held in the desired notch by a cap-spring fastened to the bar, and having its end free to admit of the removal of the shackle, or its adjustment into different notches.

When the shackle-bar is in the notch nearest the nose of the runner the space between the lower end of the shackle-bar and the nose of the runner is the greatest, and at this adjustment the device is used for drawing bolts or heavy spikes.

When the shackle-bar is in the notch remote from the nose, vice versa, the grasping-space is decreased, and the device is then used for drawing small nails.

That cross-bar of the shackle which engages with the notches of the runner is, in its cross-section, of corresponding shape with the notch, so as to seat itself firmly therein, it being held in such seat by the cap-spring before mentioned. The other cross-bar, or that which, in connection with the nose of the runner and the sides of the shackle, bounds the grasping-space, has a nearly-medial biting-edge, which acts upon one side to bite the nail, which is grasped by the nose upon its other side, and thus a headless nail may be drawn.

The particular feature of the invention will be found specifically indicated in the claim.

In the accompanying drawings, Figure 1 represents a view in perspective of my spike and nail extractor; Fig. 2, a vertical longitudinal section, showing the shackle-bar adjusted for spikes; and Fig. 3, a similar view, showing it adjusted for small nails.

A strong bar, A, has at one end a claw nail-starter, *a*, and widens at its other end into a runner, B. Upon the upper side of this runner are two or more notches, *b*, almost quadrant-shaped in their cross-section. Within one of these notches, according to the adjustment desired, fits one cross-bar, *c*, of a shackle, C, which cross-bar is seated in said notch *b*, and corresponds with it in shape. A cap-spring, D, exerts its force to hold this cross-bar in its seat, but yields when it is desired to remove the shackle or alter its adjustment, since it is necessary to raise the cross-bar well out of one notch before it can be seated in another, and to permit of this its holding-cap must yield. The shackle C is well and strongly made, its two side bars sliding freely upon each side of the runner as pivoted from its seating-notch. The lower cross-bar *d* of the shackle has a nearly-medial biting-edge, *e*, which acts against one side of the nail or spike, while the sharp nose *f* of the runner acts against the other side. The side bars, the cross-bar *c*, and the nose *f* bound the grasping-space. This grasping-space is increased, to accommodate itself to bolts or large spikes, by adjusting the shackle in that notch *b* nearest the nose, while to decrease the space to grasp small nails the shackle is adjusted in that notch *b* remote from the nose.

The nail is grasped by two biting-edges—the nose *f* and biting-edge *e*.

In operating the device, if the nail or spike be headed it is started by the claw *a*; but when the bolt or nail is headless this operation is, of course, unnecessary. In commencing to draw a nail or spike the bar is held nearly vertical. In this position the lower cross-bar of the shackle hangs freely against one side of the nail, and by pressing the bar down the space between this cross bar is rapidly decreased until the nose comes in contact with the other side of the nail; then, by reason of the pur-

chase of the curved runner and the leverage of the long bar, the bolt, nail, or spike is readily extracted.

I claim—

The combination of the lever-shoe B, provided with the notches *b b*, with the shackle-bar C, adapted to be adjusted in said notches, and the spring D, as shown and described.

In testimony that I claim the foregoing I have affixed my signature in presence of two witnesses.

JOSEPH PASSENO.

Witnesses:

A. E. H. JOHNSON,

J. W. HAMILTON JOHNSON.