W. UPTON.
Spike-Extractor.

No. 202,609. Patented April 16, 1878.

FIG. 1.

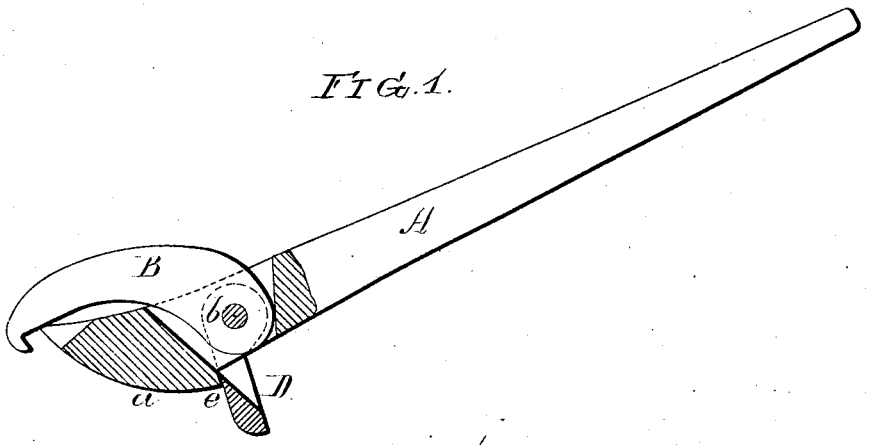


FIG. 2.

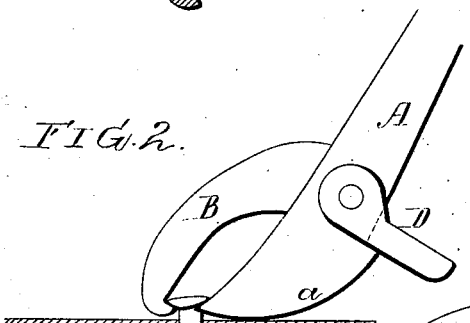


FIG. 4

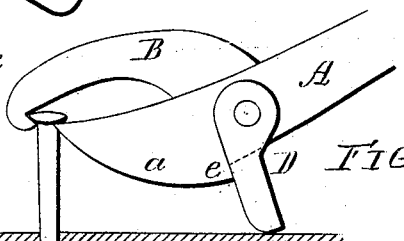


FIG. 6.

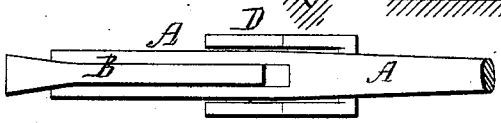


FIG. 5.

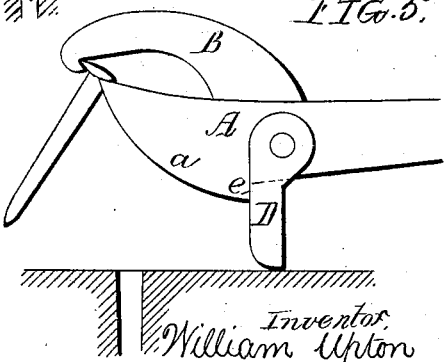
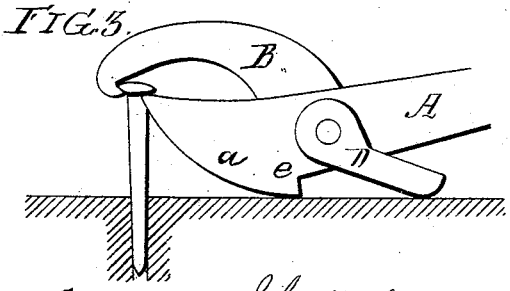


FIG. 3.



Witnesses,
John H. Feemer
Harry Smith

Inventor,
William Upton
by his Attorneys
Howson and Sons

UNITED STATES PATENT OFFICE.

WILLIAM UPTON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO CHARLES R. KOHL, JOHN W. KOHL, AND WILLIAM S. KOHL, OF SAME PLACE.

IMPROVEMENT IN SPIKE-EXTRACTORS.

Specification forming part of Letters Patent No. **202,609**, dated April 16, 1878; application filed March 7, 1878.

To all whom it may concern:

Be it known that I, WILLIAM UPTON, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Spike-Extractors, of which the following is a specification:

The object of my invention is to construct a simple and effective device for withdrawing spikes—an object which I attain in the following manner, reference being had to the accompanying drawing, in which—

Figure 1 is a side view, partly in section, of my improved spike-extractor; Figs. 2, 3, 4, and 5, views illustrating the method of withdrawing a spike; and Fig. 6, a plan view of part of the implement.

A is a lever, of any suitable length, this lever having a notched lower end, and immediately adjacent to said lower end, and on the under side, a convex face, *a*. The lever is slotted for the reception of one end of an arm, B, which is hung to a transverse pin, *b*, and is hooked at the outer end, as shown.

To the opposite projecting ends of the pin *b* is hung a yoke, D, which embraces the stem of the lever A, and hangs down below the same.

In operating with the above-described device, the notched end of the lever A is adapted to the head of the spike on one side, the hooked end of the arm B catching under the head at the opposite side, as shown in Fig. 2. The outer end of the lever is then depressed, the convex face *a* forming a constantly-shifting fulcrum, so that the spike is gradually withdrawn until it is raised to the position shown in Fig. 3. The lever A is then elevated, as shown in Fig. 4, so that the yoke D may fall into position against a stop, *e*, on the lever. The fulcrum of the lever is now at the pin *b*, which is some distance above the surface of the object into which the spike is driven, so that on further depressing the outer end of the lever the entire withdrawal of the spike is effected, as shown in Fig. 5.

Although the pivoted arm B may be dispensed with in some cases, its use is to be preferred, as it enables a secure gripe to be taken upon the head of the spike, and prevents the displacement of the lever A when the position of the latter is being changed, as described.

Owing to the curved fulcrum-face *a*, the greatest power is exerted upon the spike at the time when it is most needed—namely, at the commencement of the withdrawing operation.

I am aware that a spike-extracting lever has heretofore been combined with a pivoted yoke, and also that levers have been combined with pivoted arms for clutching the head of the spike, and these therefore, in themselves, I do not desire to claim; but

I claim as my invention—

1. The combination of the lever A, having a shoulder, *e*, with the pivoted yoke D, adapted to the said shoulder, all substantially as set forth.

2. The combination of the lever A, the arm B pivoted thereto, and having a hooked end, and the yoke D, pivoted to the lever, and adapted to swing down below the same, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM UPTON.

Witnesses:

HARRY A. CRAWFORD,

HARRY SMITH.