F. HAMACHEK.
Stump-Extractor.

No. 218,814. Patented Aug. 26, 1879.

Fig. 1.

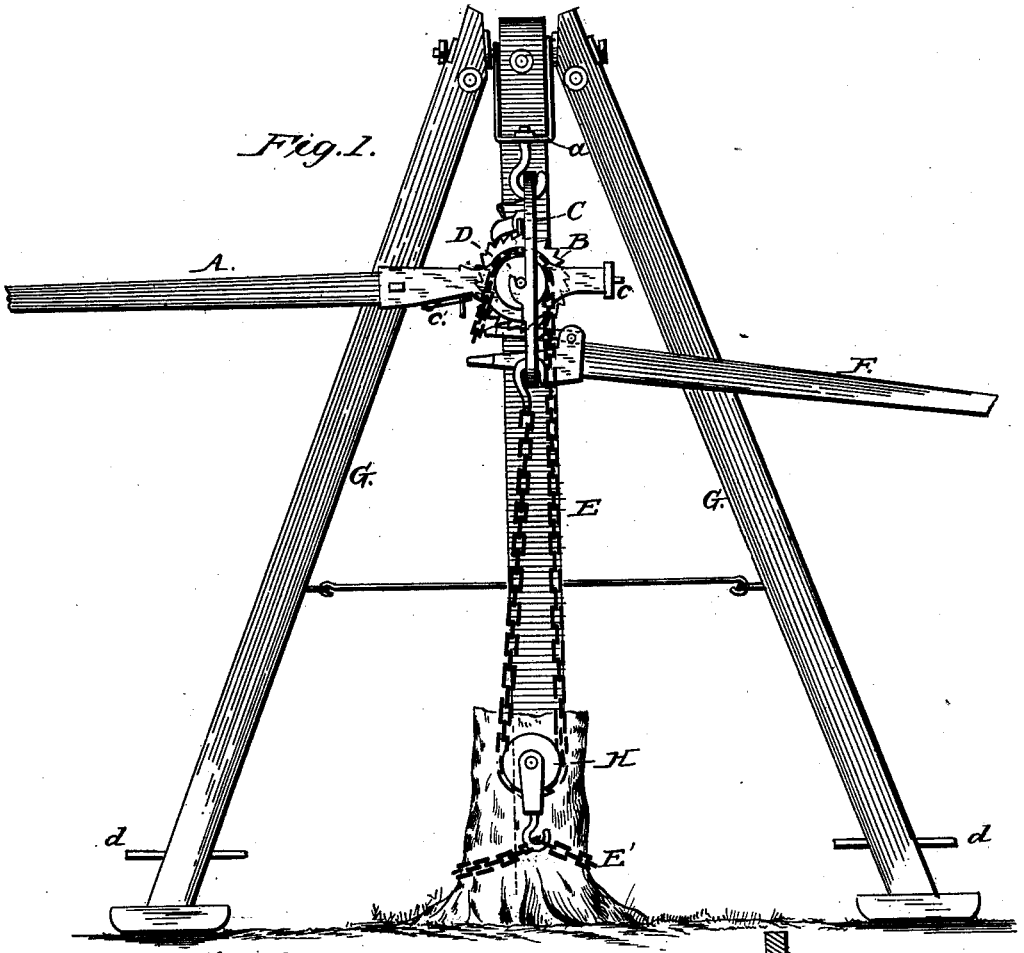


Fig. 2.

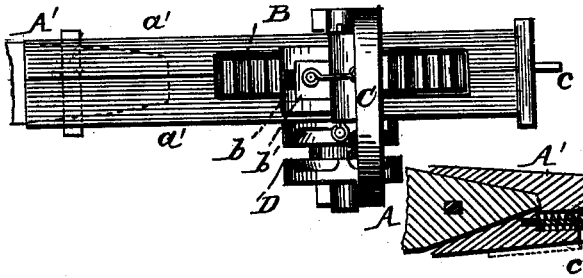


Fig. 3.

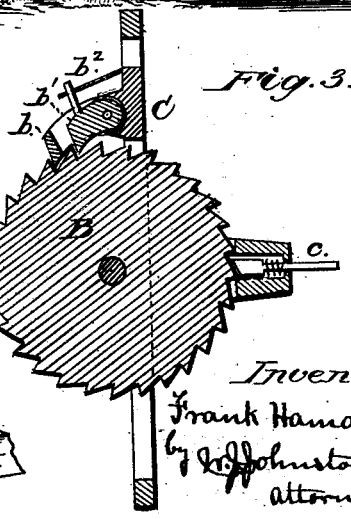
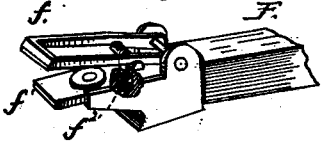


Fig. 4.



Witnesses
Fred. G. Dieterich
Jos. Tyssowski

Inventor
Frank Hamachek.
by H. Johnston
attorney

UNITED STATES PATENT OFFICE.

FRANK HAMACHEK, OF KEWAUNEE, WISCONSIN.

IMPROVEMENT IN STUMP-EXTRACTORS.

Specification forming part of Letters Patent No. **218,814**, dated August 26, 1879; application filed July 12, 1879.

To all whom it may concern:

Be it known that I, FRANK HAMACHEK, of Kewaunee, in the county of Kewaunee and State of Wisconsin, have invented certain new and useful Improvements in Stump-Extractors; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to stump or rock extractors having a tripod supporting the lifting mechanism, chain, pulley, &c., as is usual in such extractors; and consists in a metallic frame and ratchet-wheel having one or more levers connected therewith, and used separately or in conjunction, as occasion may require.

In the accompanying drawings, in which similar parts are represented by the same letters in the several figures, Figure 1 is a perspective view of the extractor. Fig. 2 is a plan view of the metallic frame and lever attachment. Fig. 3 is a vertical section of the metallic frame, lever end, and ratchet-wheel. Fig. 4 is a perspective view of a section of the heavy lever and its attachments.

To enable those skilled in the art to which my extractor belongs to manufacture and use it, I will explain its construction and operation.

I construct a strong tripod, bolted together at the top and having each leg G connected laterally by metallic rods. The legs of the tripod stand upon broad, rounded wooden shoes, which prevent their being forced into the ground unequally, and enable the machine to be transported from place to place with ease. Pins *d* pass through the legs of the tripod, and it can be lifted by their means when the distance to be moved is small. If the distance is great, the rounded bottoms of the shoes will admit of its being drawn over the ground by horse-power.

From the connecting-bolt at the top of the tripod hangs a link, *a*, provided with a hook, from which the lifting apparatus is suspended.

A is the quick lever, which is attached to the metallic frame, and ratchet-wheel B, and sprocket-wheel D, all suspended within the yoke C by a spindle or arbor working in bearings in the sides of the yoke. D is the sprocket-wheel, over which passes and works the chain E.

The ratchet and sprocket wheels are firmly united and revolve together, and are practically one wheel.

A′ is the metallic frame, which receives the lever A at one end. It has a vertical slot through its center, in which the ratchet-wheel is hung. *c* and *c′* are pawls at each end of the frame A′, which work into the ratchet-wheel and hold it fast.

The chain E passes over the sprocket-wheel and through the pulley H, which is made fast to the stump-chain E′, and the end is then brought up and hooked to the lower part of the yoke C. By pressing down on the end of the lever A, the ratchet-wheel is turned several cogs, and held fast by the pawls *b* and b^1 while the lever is lifted for another stroke. The pawl b^1 has a projecting pin, b^2, which can be hooked back, so as to release the ratchet-wheel.

The frame A′, being pivoted exactly in the center, has a double purchase and lifting power, so that a weight of one pound at the lever will lift at least one hundred and fifty pounds at the chain.

To disengage the stump after it has been extracted, raise the lever A slightly, pull the pin, projecting from the frame opposite the lever, and hook back the pawl b^1 by the pin b^2, and also hook *e* back, when the chain will run back on the sprocket-wheel and allow the stump to be lowered to the ground.

The second lever, F f^1, is used for heavy work. It is provided with a clevis, *f*, as shown in Fig. 4.

f^2 is a spring which lifts the clevis when the lever is raised. The end of the lever F is inserted on the opposite side to lever A, with the clevis upward through the lower part of yoke C, and the clevis or loop catches in a cog of the ratchet-wheel.

Where great power is desirable both levers may be used in conjunction, in which case a weight of one pound at the levers will give six hundred pounds lift at the chain.

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

1. In a stump-extractor, the metallic slotted lever-frame A′, pivoted in the center and having a double action on the ratchet-wheel, thereby imparting greater power.

2. The combination of the metallic frame A′, the ratchet-wheel B D, and the yoke C, substantially as and for the purposes specified.

3. The combination of the two levers A and F, constructed as described, and for the purpose specified.

4. The combination of the levers A and F, the frame A′, the ratchet-wheel B D, the yoke C, and the chain E, as and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

FRANK HAMACHEK.

Witnesses:
HENRY TISCH,
W. T. ROONEY.