G. H. CLARK.

STUMP-EXTRACTOR.

No. 188,340. Patented March 13, 1877.

Fig. 1.

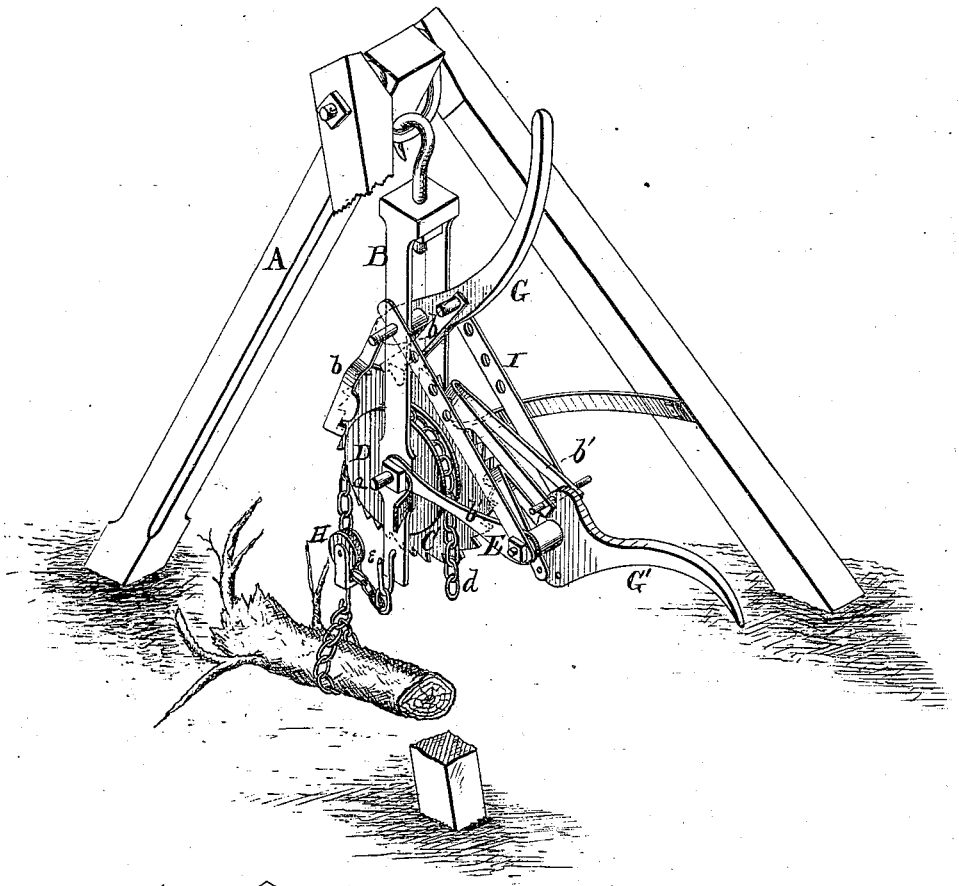


Fig. 3

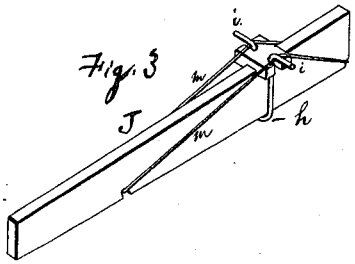
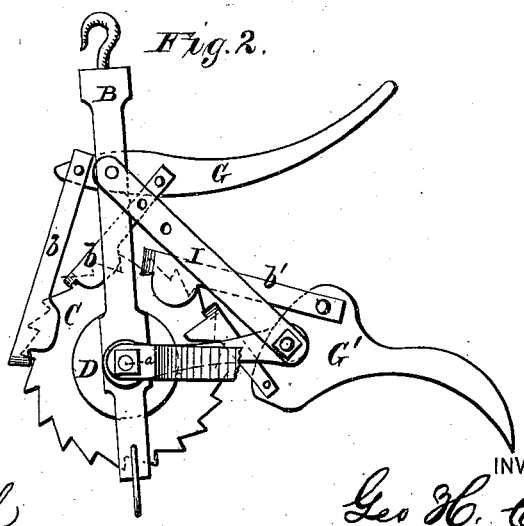


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE H. CLARK, OF LAPEER, MICHIGAN.

IMPROVEMENT IN STUMP-EXTRACTORS.

Specification forming part of Letters Patent No. **188,340**, dated March 13, 1877; application filed February 19, 1877.

To all whom it may concern:

Be it known that I, GEORGE H. CLARK, of Lapeer, in the county of Lapeer and in the State of Michigan, have invented certain new and useful Improvements in Stump-Extractors; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a stump-extractor, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view of my stump-extractor. Figs. 2 and 3 are detailed views of parts thereof.

A represents a derrick of any suitable size and construction, from the top of which is suspended a clevis, B. In the lower part of this clevis is a shaft, *a*, on which are secured a ratchet-wheel, C, and a chain-wheel, D, as shown.

A suitable distance above the ratchet-wheel C, in the clevis B, is pivoted a lever, G, and to this lever are pivoted two pawls, *b b*, which operate on the ratchet-wheel C. These pawls are pivoted to the lever—one on each side of the pivot-point of the lever—so that by operating the lever up and down the two pawls will alternately operate on the ratchet-wheel, and turn the same continuously in one direction.

On the ends of the shaft A are placed two arms, E E, between the outer ends of which is pivoted a second lever, G′, and to this lever are, in like manner, pivoted two pawls, *b′ b′*, to operate on the ratchet-wheel C in the same manner as the pawls *b b*. This lever G′ is held at any height desired by means of two perforated arms, I I, which are placed on the pivot of the lever G′, and adjusted on the pivot of the upper lever G, thereby raising or lowering the lever G′ to suit the height of the derrick.

By this arrangement of the two levers and two dogs on each lever I obtain a double motion of the wheel, moving the same at every stroke of the levers, whether up or down; and by making the lower lever adjustable, it can be worked on a higher or lower derrick, throwing the lever in a position to be easily handled on either a high or low derrick.

d represents the pulling-chain, which is hooked with one end on a hook, *e*, at the side of the clevis B. The chain is then run through a pulley, H, and then up over the main wheel D, the said pulley H being fastened in any suitable manner to the stump or other article being lifted.

J represents a lever of any suitable dimensions, provided near one end with a stirrup, *h*, forming hooks *i i* at its ends, and brace-rods *m m* are suitably arranged, as shown. This lever may be used in the following manner: The short end of the lever is laid on the stump or other object to be moved, and a chain is then put around the root, and hooked on the hooks *i i*. The long end of the lever is connected to the machine, whereby a strong power is obtained to pull any stump.

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

The combination of a derrick, A, with suspended clevis B, ratchet-wheel C, chain-wheel D, lever G, with pawls *b b*, and the lever G′, with pawls *b′ b′*, said lever G′ being held in and adjusted by the arms E and perforated arms I, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 29th day of January, 1877.

GEORGE H. CLARK. [L. S.]

Witnesses:
J. B. MOORE,
J. BENTLEY.