(No Model.)

E. J. MOORE.

STUMP EXTRACTOR.

No. 367,428. Patented Aug. 2, 1887.

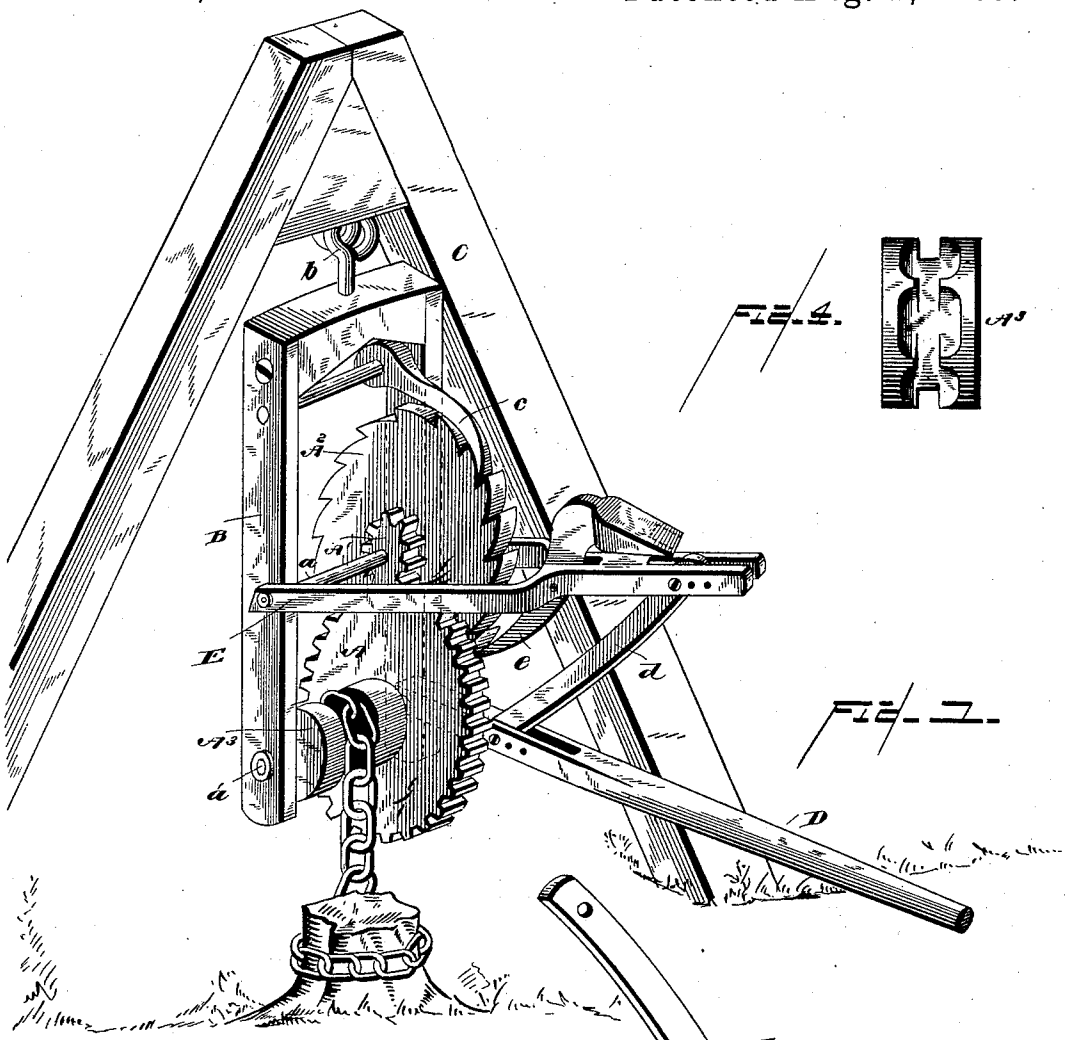


Fig. 4.

Fig. 1.

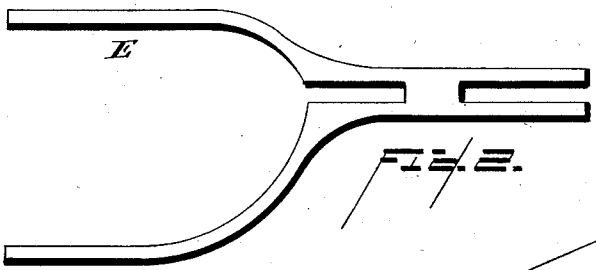


Fig. 2.

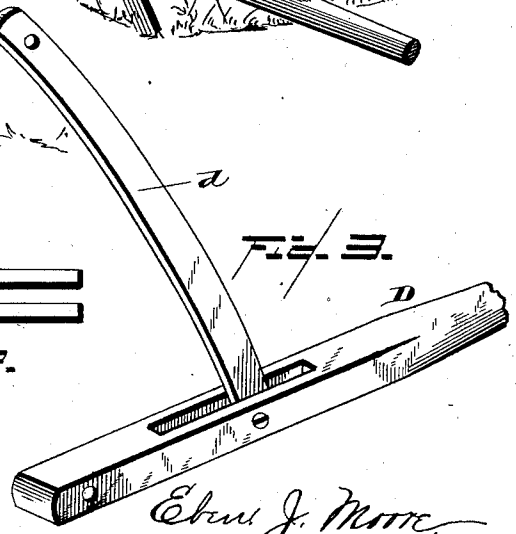


Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

EBEN J. MOORE, OF MONTICELLO, MINNESOTA.

STUMP-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 367,428, dated August 2, 1887.

Application filed October 7, 1886. Serial No. 215,576. (No model.)

To all whom it may concern:

Be it known that I, EBEN J. MOORE, a citizen of the United States, residing at Monticello, in the county of Wright and State of Minnesota, have invented certain new and useful Improvements in Stump-Extractors, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has relation to an improvement in stump-extractors whereby with the expenditure of a minimum amount of force the maximum application of power is secured; and the invention therefore consists of the combination of parts, including their construction, substantially as hereinafter fully set forth, and specifically pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of my improved stump-extractor, showing its operation. Fig. 2 is a plan view of the gravity-pawl-supporting frame. Fig. 3 is an enlarged detail perspective view of a portion of the lever and the means for connecting the frame thereto. Fig. 4 is an enlarged view of the chain-pulley.

In carrying out my invention I employ two or more gear-wheels, comprising a large toothed wheel, A, and a pinion, A′, which intergear and are hung upon separate shafts, *a a′*, respectively supported in a frame, B, having a suitable suspending-hook, *b*, for its suspension from the frame C. Secured upon the same shaft with the pinion A′ is a large ratchet-wheel, A^2, with which engages a retaining-pawl, *c*, suitably hung in the frame B; and upon the same shaft with the gear-wheel A is secured a chain-pulley, A^3, the chain through which connection is made with the stump to be extracted being passed over the same.

D is a hand-lever, having as its fulcrum the shaft *a′* of the wheel A, and to this lever is connected by a link or pitman, *d*, a frame, E, pivoted at its inner ends to the middle of the side bars of the frame B, and carrying a gravity-pawl, *e*, for propelling the ratchet-wheel A^2. Said link or pitman *d* is connected at its one end to the hand-lever D near its fulcrum, while the other end is connected to the outer end of the pawl-carrying frame E.

From the foregoing it is obvious that with the application of the minimum amount of force or pressure to the lever D a maximum amount of lifting-power can be exerted through the aforesaid train of wheels, the pivoted frame, and its pawl upon the lifting-chain, imparting the requisite power to the latter to enable it to effectually extract the stump with facility.

The link or pitman *d* is adjustable in both the hand-lever D and the pawl-carrying frame E; and, if desired, the gravity-pawl *e* may be provided with a weight for its more effective operation, which may be suspended at any suitable point therefrom, as will be readily understood.

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

In a stump-extractor, the combination, with a suitable supporting-frame, as C, of a frame, B, suspended therefrom, a shaft, *a*, journaled in the suspended frame and carrying a ratchet-wheel, A^2, another shaft, *a′*, journaled in the said suspended frame and adapted to be rotated by the shaft *a* through intermediate gearing, and having the chain-wheel A^3, a retaining-pawl, *c*, pivoted in the suspended frame and engaging the ratchet-wheel, a carrying-frame, E, pivoted to the suspended frame, a propelling-pawl pivoted at an intermediate point of its length in the carrying-frame E and engaging the ratchet-wheel to rotate the same, a pivoted hand-lever, and a link or pitman connecting the hand-lever and the carrying-frame, substantially as described, for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EBEN J. MOORE.

Witnesses:

H. A. GASKELL,

A. F. BARKER.