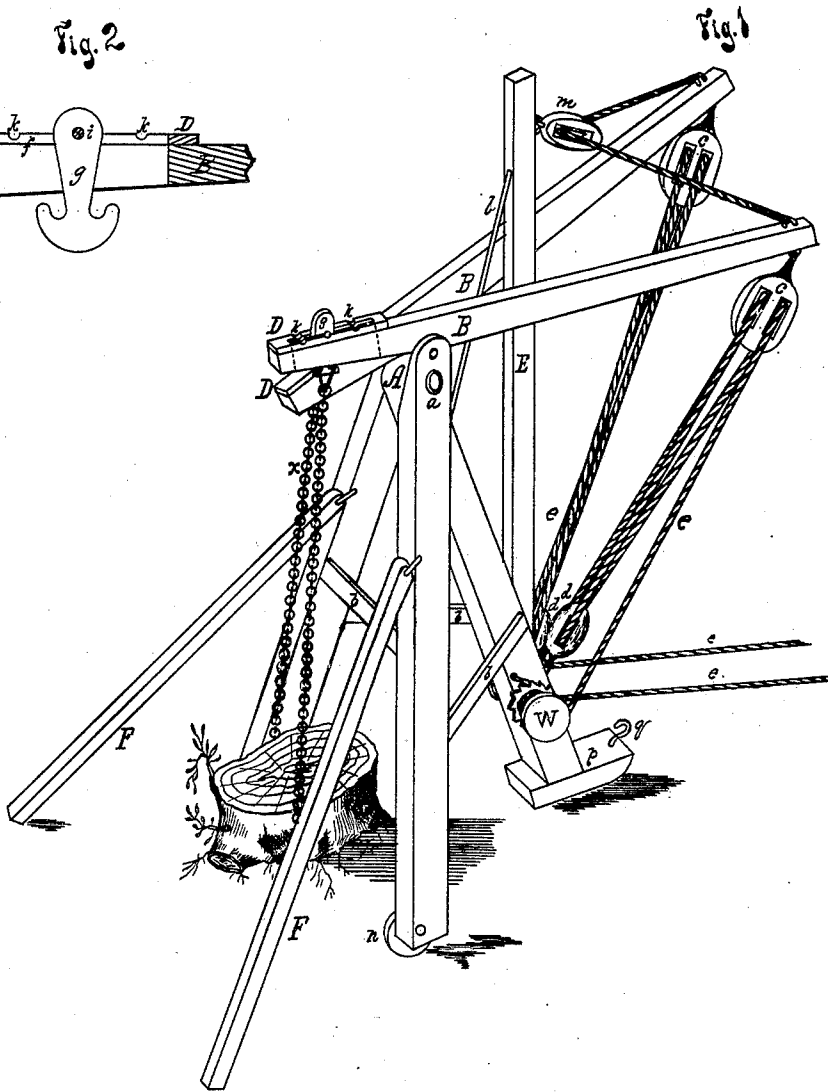
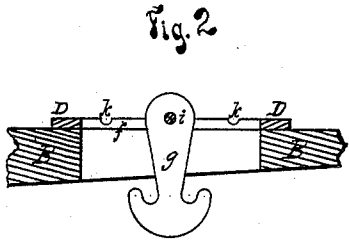


STUMP-EXTRACTOR.

No. 176,127.

Patented April 11, 1876.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM HOLLENBECK, OF CHEMUNG COUNTY, ASSIGNOR OF ONE-HALF
HIS RIGHT TO JOSEPH HOLLENBECK, OF CORNING, NEW YORK.

IMPROVEMENT IN STUMP-EXTRACTORS.

Specification forming part of Letters Patent No. **176,127**, dated April 11, 1876; application filed
November 10, 1875.

To all whom it may concern:

Be it known that I, WILLIAM HOLLENBECK, in the county of Chemung and State of New York, have invented a new and valuable Improvement in Stump-Extractor; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of my device, with a stump extracted and hanging in the chain. Fig. 2 is a detail view of the form and manner of adjustment of the interchangeable hangers to which the stump-chain is attached.

My invention is a stump-extractor; and consists in the novel construction, arrangement, and operation of its parts, embracing essentially the following elemental features: a triple-legged frame or tripod, bolted together at top, and the legs kept permanently separated and braced below; two lever-beams, securely hinged and vertically oscillating (independently of each other) upon the top of said tripod, to the long arms of which are secured hooks or eye-bolts, to which, in turn, suitable blocks and tackle are attached, the falls of which are run over winches suitably situated on the front leg of the tripod; slotted plates secured over longitudinal slots cut vertically through the short arms of said levers, said plates having several transverse grooves or bearings made in their upper surfaces, into which are interchangeably placed the pintles of movable double-tailed hooks or hangers, to which are attached the stump-chain; a perpendicular standard firmly fixed to the front leg of the tripod, extending thence vertically upward between and above said levers, and near the top of which a pulley-block is fixed, through which a rope is rove, stretching from the end of one to the end of the other of the long arms of said levers; two small wheels or casters, one attached to each of the feet of the rear legs of said tripod; a metallic shoe with a suitable hook in its toe, securely pivoted to the foot of said front leg of the tripod; and, finally, stay-braces, one hinged to each of said rear legs

near their top joint, and extending thence outward and downward into the ground; all of which and their purposes are hereinafter more fully described, and illustrated by the accompanying drawings, in which the same letters designate identical parts of my device in the different figures, respectively.

The letter A represents said tripod, consisting of three suitably-strong wooden beams or legs, all firmly fastened together at the top by the metal bolt *a*, and their lower ends resting upon the ground, spread outward, and permanently separated by suitable wooden bars *b*, as shown. The letter B represents the said two lever-beams, each of suitable material, length, size, and strength, both suitably and securely pivoted or hinged, so as to vertically oscillate, each by a long and a short arm, independently of each other, upon the top of said tripod, as shown. To the outer ends of said long arms and the front leg of the tripod are suitably attached, as shown, the running-blocks *c*, the stationary ones *d* of which, together with their falls *e*, serve to haul down either of the said long arms, and consequently raise the short arms, of said levers. The said falls *e*, after being rove through said blocks *c* and *d*, are carried, by several turns, over the winches *W*, as shown, and have their loose ends ready to be attached to any suitable draft-power. Near the outer end, and upon the upper side, of each of the said short arms a metallic plate, *D*, is suitably secured, through which and the said arm a suitable slot, *f*, is longitudinally and vertically cut, in which a hanger, *g*, is readily slid to and fro. Said hangers, to which the stump-chain *x* is attached, are each made of tough metal, fish-shaped, with a double-tailed hook of suitable size and strength, and provided with a suitable pintle, *i*, which holds it, at any desired distance from the fulcrum of the said lever-beam, within one of the several transverse grooves or bearings *k*, formed for the purpose in the top of said slotted plate *D*. By said contrivance the leverage-power is increased and the strain diminished in each lever, as desired.

The letter E represents the aforesaid standard, which is a wooden post, of suitable size and length, mortise-jointed into the front leg

of said tripod directly underneath the levers, and extending perpendicularly upward, between and above them, to any suitable distance, as shown. Said standard is also suitably back-stayed by the guy *l*, as shown. Near the top of said standard is fixed a pulley-block, *m*, through which a rope is run, stretching, as shown, from the end of one of the long arms of said levers *B* to the said end of the other lever. By this contrivance the said long arms are supported when loaded, and either of them is raised and held up while the other is being hauled down, as aforesaid.

A suitable caster, *n*, is attached to the foot of each of said rear legs of the tripod, for the purpose of conveniently aiding the moving of my device for short distances, and to the foot of said front leg is suitably pivoted a metallic shoe, *p*, with a hook, *q*, in its toe, as shown, for attaching draft-power to my device, and to readily direct its course while moving, as aforesaid. A stay-brace, *F*, consisting of a wooden bar of suitable size and length, is hinged by one end, as shown, to each of said rear legs of the tripod, and extending thence, for a suitable distance outward and downward, into the ground, for the purpose of preventing any backward movement or overturning of my device while in use.

The operation of my device is as follows: The tripod *A* is placed straddling the stump to be removed, with the said stay-braces *F* in place, as aforesaid. The blocks and tackles *c*, *d*, *e*, and *m* having been attached and rove, as shown, the long arm of one lever, *B*, is

raised. The stump-chain *x* being then hooked, as aforesaid, to both the hanger of said lever and the stump, the power is applied to the said fall *e* of that long arm, and again hauls it down. This raises one side of the stump out of the ground. The other side of said stump is then raised, by a similar process, with the other lever, so that it can be readily moved away. Therefore,

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a stump-extractor, the tripod *A*, provided with the bolt *a*, the bars *b*, the casters *h*, the shoe *p*, the hook *q*, and the stay-braces *F*, all constructed, arranged, and operated in combination with the levers *B*, the blocks and tackles *c*, *d*, *e*, and *m*, and the winches *W*, the vertical standard *E* and its guy *l*, substantially as and for the purposes specified.

2. In a stump-extractor, the interchangeable fish-shaped and double-tailed hangers *g*, in combination with the alternately-oscillating levers *B* and the winches *W*, and also with their co-operative blocks and tackles *c*, *d*, *e*, and *m*, substantially as and for the purposes specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

his
WILLIAM X HOLLENBECK.
mark.

Witnesses:

R. H. RANSOM,
W. L. GIBSON.