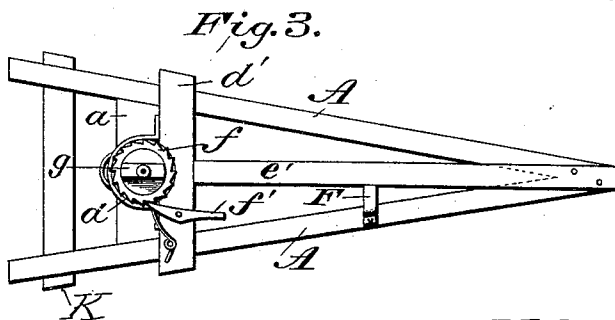
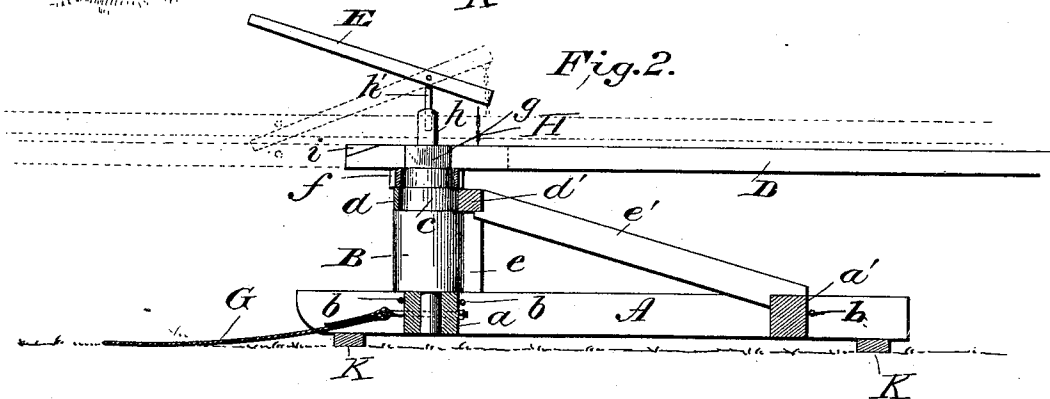
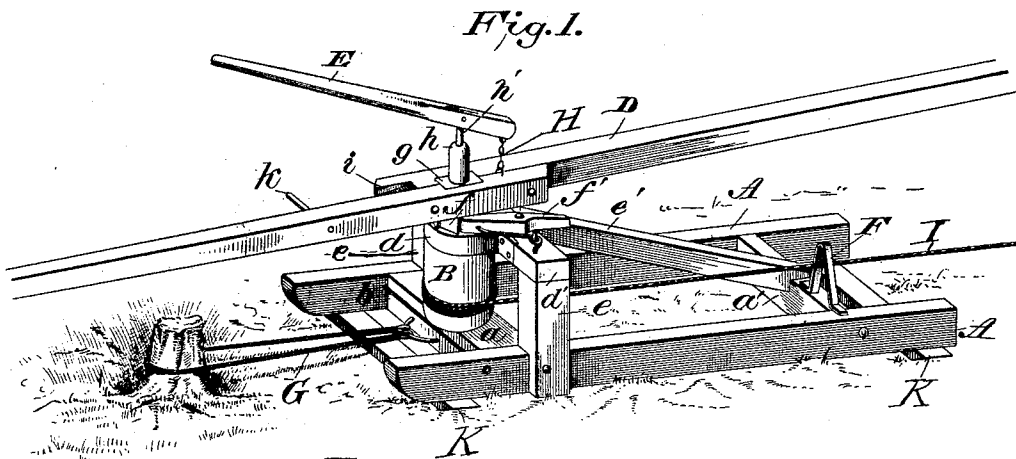


(No Model.)

J. MILNE.
STUMP PULLER.

No. 475,333.

Patented May 24, 1892.



James Milne.

Witnesses

L. S. Elliott,
W. M. Johnson.

Inventor

Inventor
by  Attorney

UNITED STATES PATENT OFFICE.

JAMES MILNE, OF SCOTCH GROVE, IOWA, ASSIGNOR OF TWO-THIRDS TO
JOSEPH J. MILNE, OF SAME PLACE.

STUMP-PULLER.

SPECIFICATION forming part of Letters Patent No. 475,333, dated May 24, 1892.

Application filed March 3, 1892. Serial No. 423,661. (No model.)

To all whom it may concern:

Be it known that I, JAMES MILNE, a citizen of the United States of America, residing at Scotch Grove, in the county of Jones and State of Iowa, have invented certain new and useful Improvements in Stump-Pullers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as 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.

This invention relates to improvements in stump-pullers.

The object of the invention is to provide a simple, cheap, and effective apparatus comprising a supporting-frame with a capstan mounted thereon, said capstan having a sweep to which the power is applied and means for elevating the sweep, so as to throw it out of engagement with the capstan, the frame upon which the capstan is mounted having runners and shoes for moving the frame either forward or to one side, as will more fully appear by reference to the specification, in connection with the drawings.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of my improved stump-puller. Fig. 2 is a sectional view. Fig. 3 is a plan view of a modification.

A A designate longitudinal beams, which in some instances form runners, these beams being rigidly connected to each other by transverse beams *a* and *a'*, adjacent to which are transverse brace-rods *b b*. The transverse piece *a* has a central bearing for the reception of a spindle formed on or attached to the capstan-drum B. This capstan-drum has a shoulder *c*, the cylindrical portion above the same being partially embraced by a band or strap *d*, the ends of which are rigidly secured to a transverse bar *d'*, secured to uprights *e e*, the lower ends of said uprights being rigidly secured to the longitudinal beams or runners A by one of the brace-rods *b*.

e' designates a brace, which extends from the bar *d'* to the transverse beam *a'*.

Adjacent to the upper end of the capstan-drum B is secured or formed a ratchet-wheel

f, and above said ratchet-wheel the drum has a rectangular portion *g*, beyond which is a projecting portion *h*, apertured for the reception of a pin *h'*, as shown.

D designates a sweep, the ends of which are provided with singletrees. This sweep is preferably made up of two bars securely bolted to each other and provided with a rectangular aperture or socket adapted to fit over the rectangular portion *g* of the capstan or drum, and when lowered thereon will rest upon the shoulders formed by the portion to which the ratchet-wheel is attached. One of the members of the sweep has its inner end beveled or cut away, as shown at *i*, to provide a shoulder on one side of said bevel, while the edge of the opposite sweep forms a stop. Beyond the cut-away portion is a pin *k*, which projects from the sweep. This construction provides a cheap, efficient, and convenient means for holding depressed the end of the lever E, which carries the pin *h'*, the opposite end of said lever being attached to the sweep by a flexible connection H, as shown. It will be seen that by this construction, when the lever is depressed and held in the position shown in dotted lines, the sweep will be elevated or raised out of engagement with the rectangular portion of the capstan, so that said capstan will be free to turn independent of the sweep.

The transverse bar *d'*, hereinbefore referred to, carries on its upper edge a spring-actuated pawl *f'*, which is normally held in engagement with the ratchet-wheel, but can be thrown and held out of engagement when desired. The cable I is attached to and wound around the drum in the usual manner, said cable passing through a suitable looped guide F, carried by the rear end of the frame. To the cross-beam *a* is secured a bail or loop G, which is adapted to be passed over a stump to hold the frame in a fixed position, while the cable which is passed around the windlass is made fast to the stump which it is desired to remove.

The runners or beams A A are provided with transverse runners or sill-pieces K, which can be readily detached therefrom in transporting the apparatus, these transverse runners being bolted or otherwise secured in

place when it is desired to use the apparatus and provide a means for sliding the same side-wise around the anchoring-stump to bring the capstan in line of the anchoring-stump and stump to be pulled, and the loop or guide F, through which the capstan-rope passes, will be acted upon to place the frame in position when the rope is drawn taut.

10 In the modification shown in Fig. 3 of the drawings the longitudinal beams A A converge and the brace *e'* is attached at the meeting-point of the beams.

15 Instead of using a sweep having singletrees attached at both ends, I may attach a weighted beam at one end to support the end carrying the singletree in a horizontal position.

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

In a stump-puller, the combination, with a frame consisting of longitudinal beams connected to each other by transverse beams *a a'*, and a transverse bar *d'*, supported by uprights and braced to the beam *a'*, of a drum B, carrying ratchet-teeth, a pawl pivoted to the bar *d'*, the drum having a rectangular portion above the ratchet-wheel and a projecting portion *h*, forming a fulcrum for a lever, which is pivoted thereto and connected to a sweep D, said sweep having a rectangular aperture for engagement with the drum, and a horizontally-projecting pin *k*, substantially as shown, and for the purpose set forth.

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

JAMES MILNE.

Witnesses:

ROBT. M. THOMAS,
E. H. MOATS.