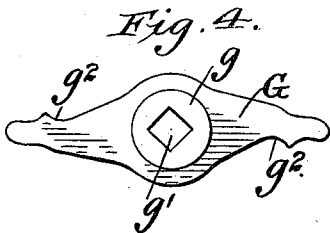
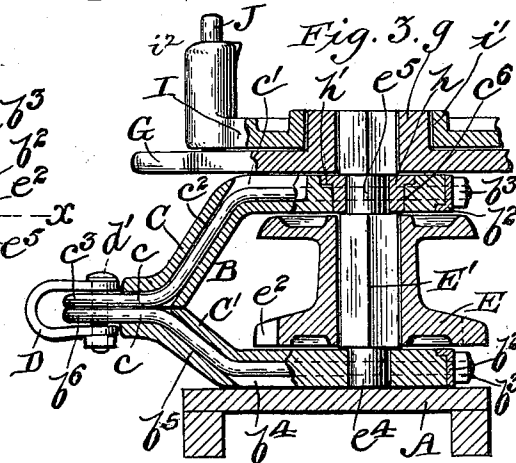
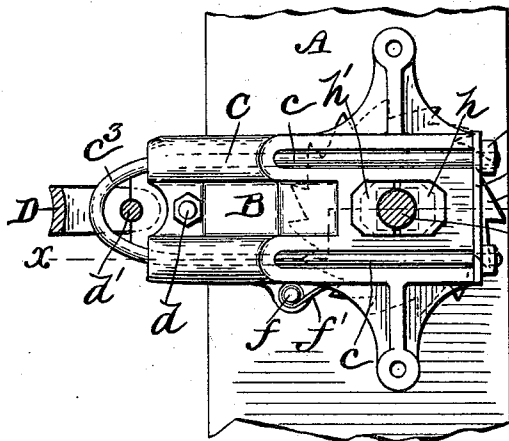
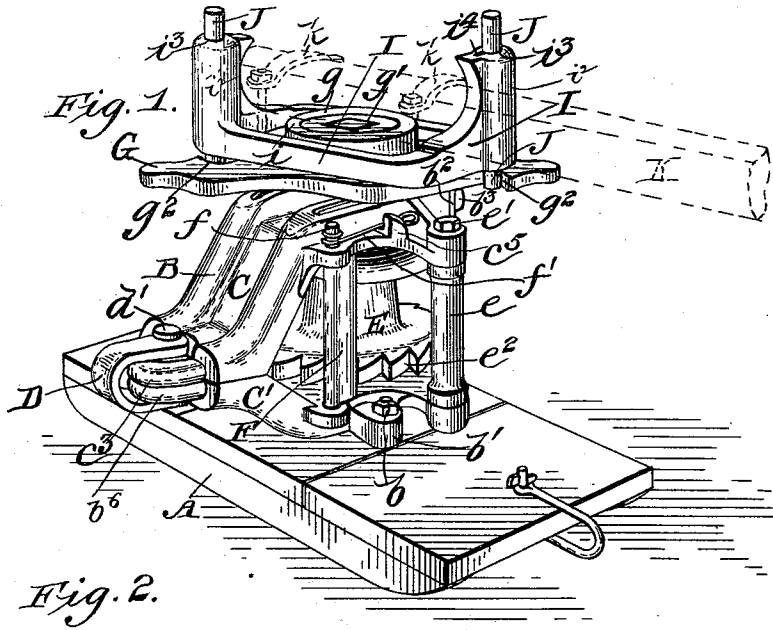


(No Model.)

E. W. JONES.
STUMP PULLER.

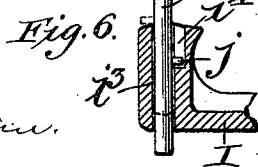
No. 536,876.

Patented Apr. 2, 1895.



WITNESSES

Everance.
N. S. Hockman.



INVENTOR
E. W. Jones
by his atty
Mason, Fenwick & Lawrence

UNITED STATES PATENT OFFICE.

EVAN W. JONES, OF PORTLAND, OREGON.

STUMP-PULLER.

SPECIFICATION forming part of Letters Patent No. 536,876, dated April 2, 1895.

Application filed January 22, 1895. Serial No. 535,832. (No model.)

To all whom it may concern:

Be it known that I, EVAN W. JONES, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, 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.

My invention relates to improvements in stump pullers and it consists of the combination with a suitable frame, of a shaft mounted in the same, a winding drum on said shaft, a hand lever for operating said shaft, a sweep attaching plate mounted in proximity to said hand lever, and means for connecting said plate to said lever at will, whereby they may operate separately or together.

It also consists of the combination of a separable frame having strengthening cones provided with loops to which the anchor attaching clevis is secured; a winding drum journaled in said frame and means for operating said drum.

It also consists of certain other novel combinations, constructions and arrangements of parts, all of which will be hereinafter more particularly set forth and claimed.

In the accompanying drawings, Figure 1. represents a perspective view of the devices embodying my invention. Fig. 2. is a top plan view of the same, the hand lever and sweep supporting plate being removed and the shaft shown in section. Fig. 3. represents a central vertical section through my said devices on the line X—X of Fig. 2. Fig. 4. represents a detail top plan view of the hand operating lever. Fig. 5. represents a detail top plan view of the sweep plate and the end of a sweep lever, showing the manner of attaching the said sweep lever thereto, and Fig. 6. represents a detail vertical section of one of the hollow studs of the sweep plate showing the hand lever engaging pin.

A in the drawings, represents the sled or other carriage upon which my machine is mounted and by which it is conveyed from one point to another of operation. A frame B is secured to this sled by bolts p which pass through lugs b' of said frame and said sled.

The rear end of the lower half C' of this frame is curved upward to meet the rear downwardly curved end of the upper half C. Both of the frames C and C' are provided with strengthening cores c , preferably of steel. These cores have their front ends secured in plates b^2 , preferably of steel, by nuts b^3 which screw on the screw threaded ends of said cores. The cores pass rearwardly through the respective halves of the frame in grooves c' , b^4 in said frame until they reach the upwardly and downwardly extending portions of said frame when they enter passages c^2 b^5 in said frame and form loops c^3 b^6 at the rear end of the frame; the core of each half frame being a continuous unbroken rod.

The rear end of the half frames C and C' are secured together by a bolt d . An anchor attaching clevis D is secured to the looped portions c^3 b^6 of the cores by a bolt d' and thus any strain brought to bear upon the clevis will be received by the continuous cores c and plates b^2 and thus the frame will be relieved of much of said strain.

A winding drum E is mounted between the forward separated ends of the half frames, C and C' , upon a squared shaft E' . The said half frames are retained in a separated position without bearing upon the top or bottom of said drum, by hollow columns or standards e which are interposed between said frames and kept in position by bolts e' which pass through said standards and frames and are secured in position by nuts.

The lower flange of the drum E is provided about its periphery with a rack e^2 which is adapted to be engaged by a pawl F which is pivoted between said half frames, C and C' and has its upper pivot point extended to form a spring attaching stud f to which one end of spring f' is rigidly attached, the other end of said spring being adapted to be passed behind a projection c^5 on frame C or be released therefrom at will and thereby cause said pawl to engage or disengage with the rack e^2 according as to whether it is desired to turn the drum backward or not.

The lower end of the shaft E' is rounded to form a journal e^4 which fits within a recess in the half frame C' . Said shaft is also rounded at a short distance below its upper end, at e^5 to form its upper journal. The journal box

h is composed of two half boxes which are set in an approximately rectangular recess c^6 in the top of the frame C and are provided with upper flanges h' which retain them in position. The hand lever G as shown in Fig. 4, is provided with a central stud g having a square passage g' through it, and end notches g^2 . This hand lever is slipped over the upper end of the squared shaft E and rests upon the top of the frame C. Any movement of this lever G will of course revolve the shaft E' and the winding drum carried thereby. A sweep carrying plate I is provided near its center with a passage i surrounded by an upwardly extending collar i' ; said sweep plate being adapted to be slipped on top of the hand lever G with the part g of the same extending through the passage i thus leaving the sweep plate free to move without affecting the hand lever.

The sweep plate is approximately rectangular in form and is provided at diametrically opposite corners with upwardly projecting studs i^2 . These studs are each provided with vertical passages i^3 having vertical slots i^4 cut in the walls thereof, the latter extending only half way down the said passages. Locking pins J, each provided with a projecting stud j are adapted to work vertically in said passages i^3 with the studs j in the slots i^4 . See Fig. 6. When it is desired to cause the sweep plate to engage with and move the hand lever G the pins J are turned so that the studs j of the said pins J correspond in position with the slots i^4 when said pins will descend and the lower projecting ends will engage the notches g^2 of the hand lever, when the sweep plate is rotated, and thus cause the shaft E to be revolved.

A sweep lever K is secured to the top of the plate I by yokes k which pass over said sweep and have their ends secured to the said plate by bolts k' , the formation of the sides of the studs i^2 , against which said sweep bears, being such as to conform to the shape of said lever and thus give it a firm seat against said studs. It will be observed that all the parts of my machine are interchangeable and by removing the shaft E, any part can be removed or repaired without difficulty.

The operation of the machine is as follows: The machine is first brought near a stump, and a steel cable or chain passed around the stump and through the clevis D, thus anchoring the machine firmly. One end of a steel cable of suitable length is passed through the upper flange of the drum and firmly secured thereto, and as much of the cable as may be desired is wound around the drum. To the other end of this cable is secured a suitable hook for grappling roots, brush or the like, or for forming a hitch around the stump to be pulled. Where it is desired to use a snatch block for the purpose of increasing the power, the shackle on said block is hitched by means of a short rope or chain to the stump that is to be pulled and the drum rope is then passed around the

sheave of the snatch block and to a second stump or other anchorage. The horse or horses are now hitched to the end of the sweep lever K, and said horses are caused to move in a circle, and when the pins are lowered, a rotary motion will be imparted to the drum and the steel cable will be wound on the same thus exerting a pulling strain on the rope in proportion to the strength of the horses, the length of the sweep, and the diameter of the drum. When it is desired to take up any slack in the pulling rope after pulling a stump I let the horses stand, lift the pins J, and give them a partial revolution so that the studs j on their sides will rest on top of the studs i^2 . The lower ends of these pins will then clear the lever G, and the operator then by means of this lever has complete control of the drum, winding or unwinding loose rope quickly at his pleasure. After the hitch has been made to another stump and the slack rope has been taken up, the pins are dropped into their former position, the horses are started up and the work goes on without the serious loss of time that would be unavoidable in using a machine without this improvement.

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

1. In a stump puller the combination of a suitable frame, a shaft mounted in the frame, a winding drum on said shaft, a hand lever connected to the shaft, and adapted to operate the same, a sweep attaching plate mounted in proximity to said hand lever, and means for connecting said plate to said lever at will, whereby they may be operated independently or simultaneously, substantially as described.

2. In a stump puller the combination of a separable frame, strengthening cores passed through the same and formed with loops to which the anchor attaching clevis is secured, a winding drum journaled in said frame, and means for operating said drum, substantially as described.

3. In a stump puller the combination of a suitable frame having strengthening cores passed through the same, a winding drum journaled in said frame, a hand lever for operating said drum, and a sweep attaching plate adapted to be thrown into and out of an engagement with the lever, substantially as described.

4. In a stump puller the combination of a suitable frame, a shaft mounted on the same, a winding drum on said shaft provided with a rack, a spring pressed pawl adapted to be adjusted in or out of engagement with said rack, a lever for revolving said drum by hand and sweep attaching means adapted to be thrown in or out of engagement with said lever at will, substantially as described.

5. In a stump puller the combination of a suitable frame, a shaft mounted therein, a winding drum on said shaft, a hand lever mounted on the upper end of said shaft and provided with notched ends, a sweep attach-

ing plate mounted upon said lever and provided with vertically adjustable pins adapted to be lowered to engage said lever or to be raised out of engagement therewith, whereby
5 the drum can be operated by the hand lever independently of the sweep lever, substantially as described.

10 6. In a stump puller, the combination of a two part separable frame, steel cores passing through the same and formed with anchoring loops, a shaft revoluble in said frame, a winding drum, a hand operated lever secured to

the shaft, a sweep plate journaled on said hand lever and means for locking the sweep plate in engagement with the hand lever, the
15 construction and operation being such that the drum can be operated independently of the sweep plate, substantially as described.

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

EVAN W. JONES.

Witnesses:

J. C. RUTENIC,
BEATRICE SWAIN.