

(No Model.)

W. B. MORRIS.
STUMP PULLER.

No. 471,878.

Patented Mar. 29, 1892.

Fig. 1.

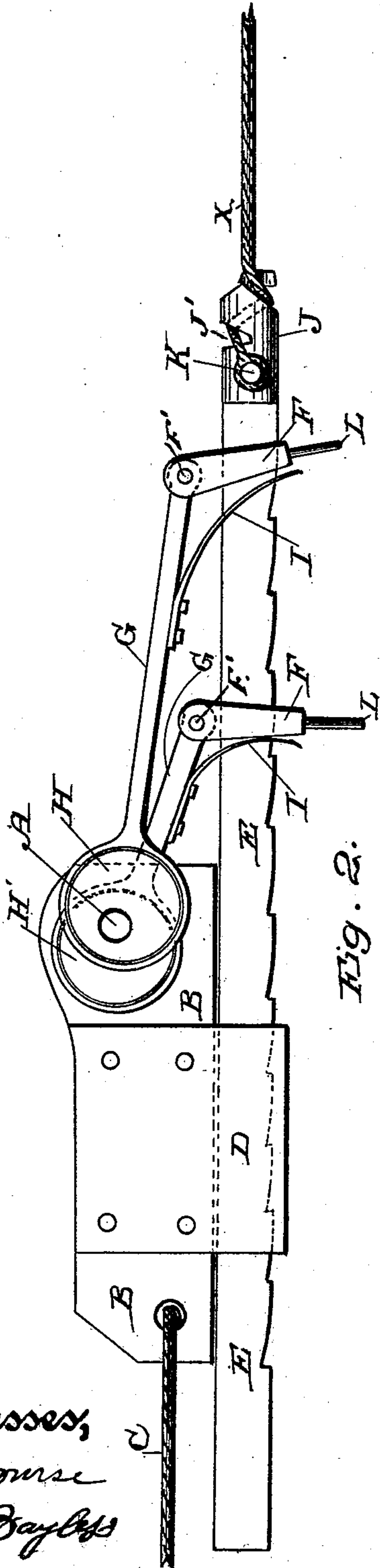
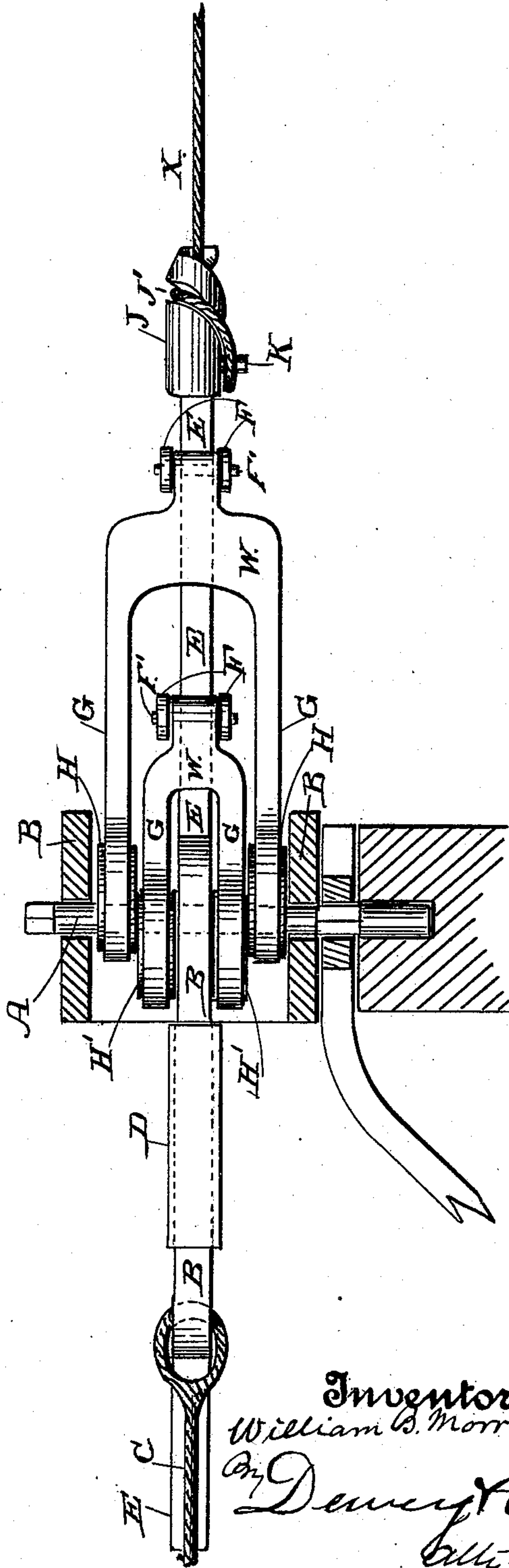


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM B. MORRIS, OF SEATTLE, WASHINGTON.

STUMP-PULLER.

SPECIFICATION forming part of Letters Patent No. 471,878, dated March 29, 1892.

Application filed October 17, 1891. Serial No. 409,043. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. MORRIS, a citizen of the United States, residing at Seattle, King county, State of Washington, have
5 invented an Improvement in Stump-Pullers; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an improved apparatus for extracting stumps, pulling heavy
10 weights, and for other similar work.

It consists of certain details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

15 Figure 1 is a plan view of the working parts of my apparatus. Fig. 2 is a side view of the same.

My present invention is an improvement upon a device for which Letters Patent No.
20 457,092 were issued to me August 4, 1891.

A is a vertical shaft journaled to turn in a frame or support B. This frame is mounted upon a sled, by which it may be transported to any suitable point, and has connected with
25 one end of it an anchor rope or chain C, which is passed around a stump, tree, or other suitable stationary article, by which the device may be strongly anchored and prevented from movement.

30 D is a guide-strap secured to one side of the frame, and through this guide-strap passes the draw-bar E.

F F are two clevises or yokes—one in front of the other—fitting the draw-bar, which is in
35 the present case shown rectangular in cross-section. At the side adjacent to the frame B these clevises are pivoted to the ends of the eccentric-straps G. The eccentric-straps are fitted in pairs to the eccentrics H H and
40 H' H', which are fixed upon the shaft A so that the throw of one pair is diametrically opposite to the throw of the other pair. The outer ends of the straps G of each pair of eccentrics are joined together to form a head
45 W, through which the pivot-pins F' of the clevises or yokes F pass and in which they are mounted, whereby the latter are hung from the heads. Each of these extensions has a curved spring I secured to it, extending
50 alongside the draw-bar and pressing against that portion of the yoke or clevis which is farthest from the hinge-pin. At the end of

the draw-bar I have shown the draft-head J secured firmly to it. This head is cylindrical in shape and has a deep spiral groove J' cut
55 around its outer end, which also tapers to a conical point. The draft rope or chain X is attached to this head by means of a pin K and makes one or two turns around, passing through the groove, and thence out through
60 the conical end of the head in direct line with the center of the draw-bar, so as to produce a central draft.

The operation of the apparatus will then be as follows: The shaft A is rotated by means
65 of a sweep with horse or other power attached to its outer end. This sweep may be placed upon either the upper or lower end of the shaft A, these ends being squared for the purpose, so that the device may be used either
70 for low or high work, as described in my former patent. When the shaft is rotated, the pairs of eccentrics will operate alternately upon their yokes or clevises, drawing them toward the shaft. The springs act to force
75 the outer portion of the clevis backward, and it is thus caused to bind at opposite sides upon the draw-bar, thus pulling it and anything which may be connected with it toward the anchored frame B. While one pair of ec-
80 centrics is pulling the draw-bar the other pair is moving the other clevis outwardly, and when in their revolution they commence drawing toward the shaft this clevis will in like manner be cramped by the action of its
85 spring, so as to pull upon the bar. The edge of the draw-bar may be either plain or corrugated to insure the clevises holding it without slipping in heavy work.

The two clevises have projecting arms L, 90 by which they may be pushed against the springs into a position at right angles with the draw-bar, when they will not bind upon it and it may be slipped freely through its guide and the clevises to again extend it for a new
95 pull.

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

1. In a stump-puller, the combination, with 100 the stationary anchored frame, a guide secured thereto, and a draw-bar adapted to slide through said guide, a shaft journaled in the stationary frame, eccentrics secured to said

shafts in pairs, which are set with their eccentricity diametrically opposite to each other, eccentric-straps surrounding said eccentrics, the extensions of each pair of straps being
5 united into a single continuous plate having a perforated head upon the outer end, clevises pivoted to each of said heads and surrounding the draw-bar, and springs secured to the eccentric-strap extensions and pressing upon
10 the clevises opposite their fulcrum-points, whereby they are caused to bind upon the draw-bar when moved by the eccentrics in one direction and to travel freely thereon when moved in the opposite direction, substantially as herein described.

2. In a stump-puller, an anchored frame having a guide secured to it, a draw-bar sliding through said guide, a shaft journaled in the anchored frame, having two pairs of eccentrics secured to it, with the throw of each pair opposite to the other, straps surrounding said eccentrics having extensions which are united to form a continuous plate and head for each pair of eccentrics, clevises fulcrumed
25 to these heads and fitted to clasp the draw-bar, springs secured to the eccentric-plates and pressing against the ends of the clevises

opposite their fulcrum-points, and arms or pins by which the clevises may be pressed back against the springs, so as to stand at right angles with the draw-bar and allow the latter to be moved freely through them, substantially as herein described.

3. In a stump-puller, the anchored frame, the shaft journaled therein, having oppositely fixed eccentrics, eccentric straps and plates connected with each pair of eccentrics and clevises fulcrumed to them, a guide fixed to the anchored frame, a draw-bar extending through this guide and through the clevises, springs fixed to the eccentrically-actuated plates and pressing upon the clevises to cause them to bind upon the draw-bar, a cylindrical spirally-grooved head upon the outer end of the draw-bar, and a draft-chain secured to said head passing around it within the spiral groove and out at the end thereof in a central line, substantially as herein described.

In witness whereof I have hereunto set my hand.

WILLIAM B. MORRIS.

Witnesses:

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WILL R. WHITE.