

No. 654,802.

Patented July 31, 1900.

T. H. McCAIN.  
STUMP PULLER.

(Application filed Nov. 14, 1899.)

(No Model.)

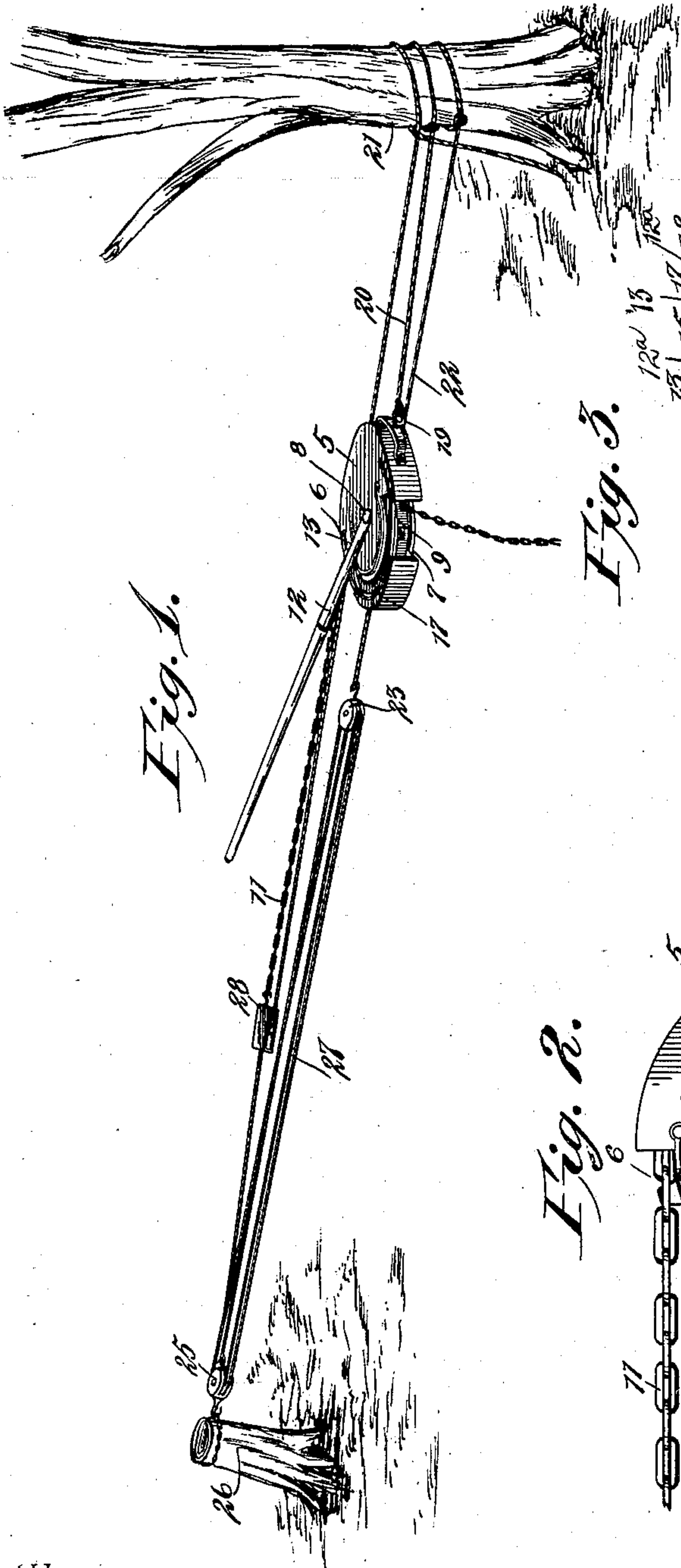


Fig. 1.

Fig. 3.

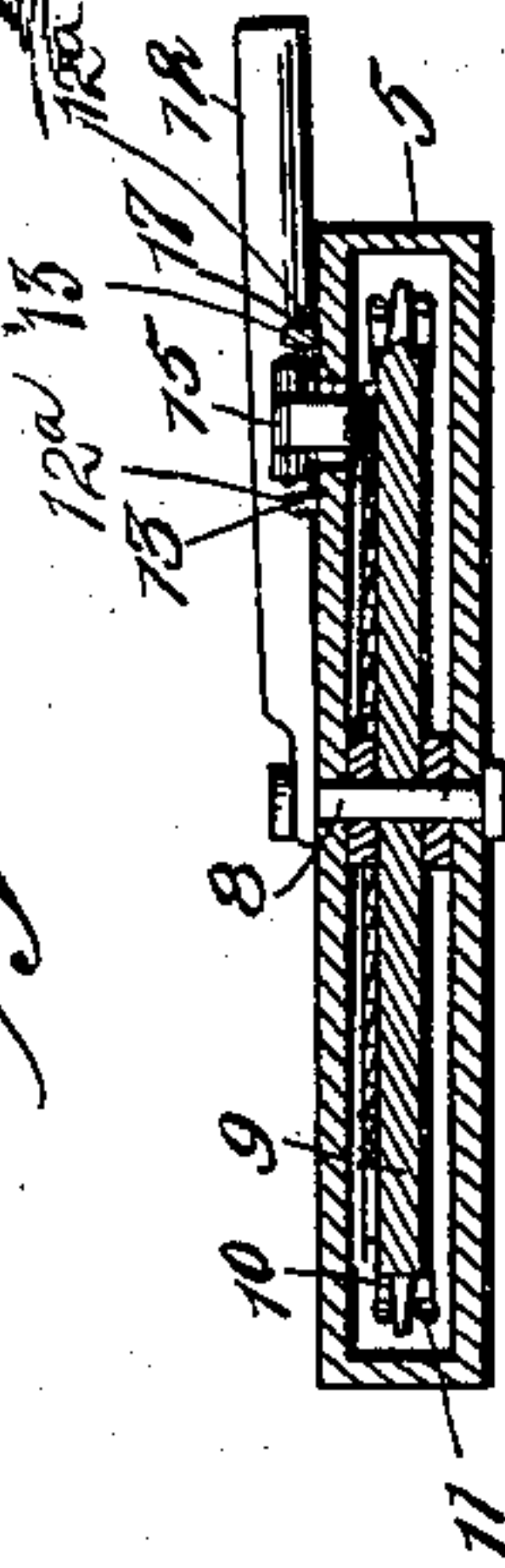


Fig. 5.

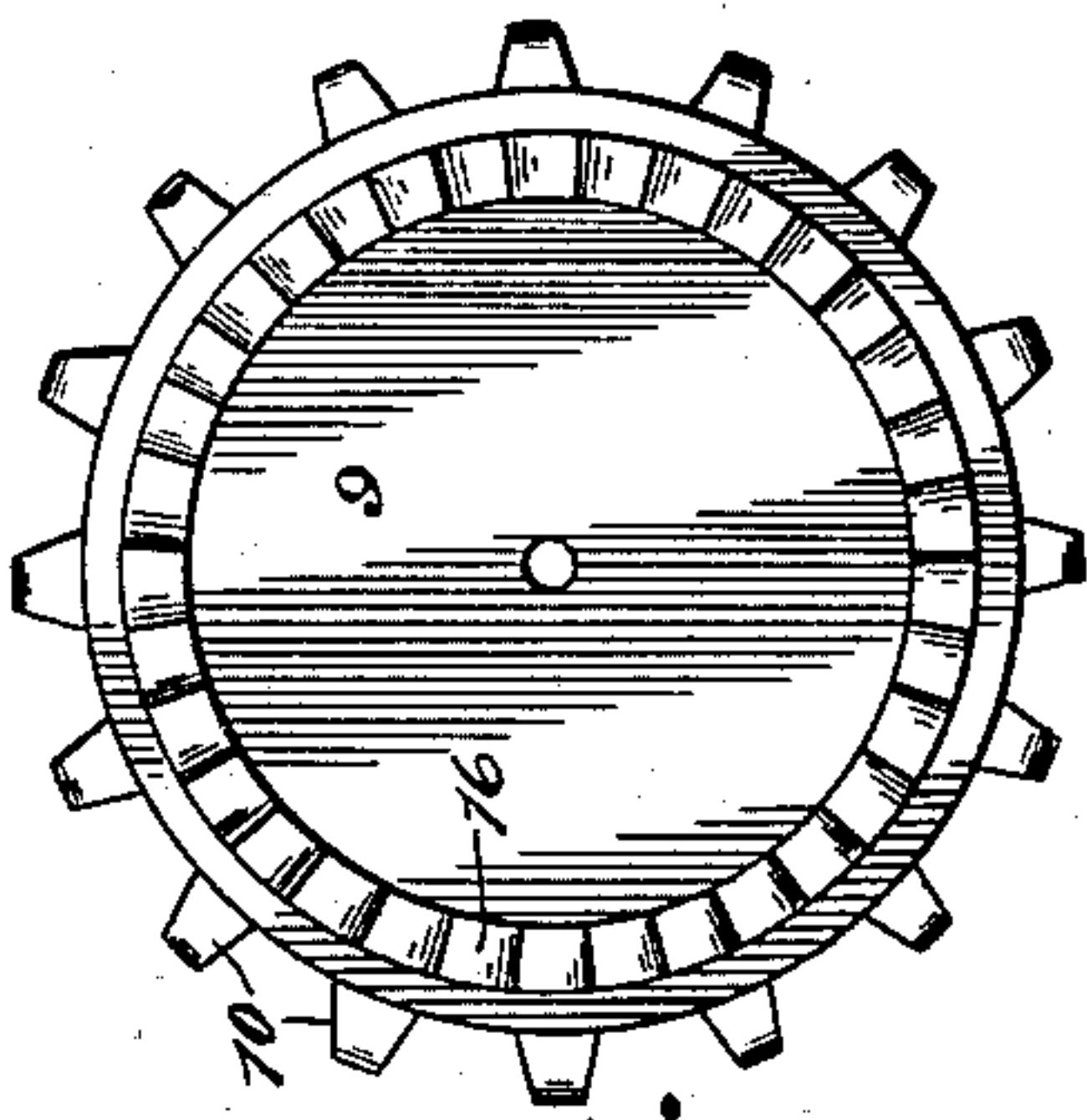
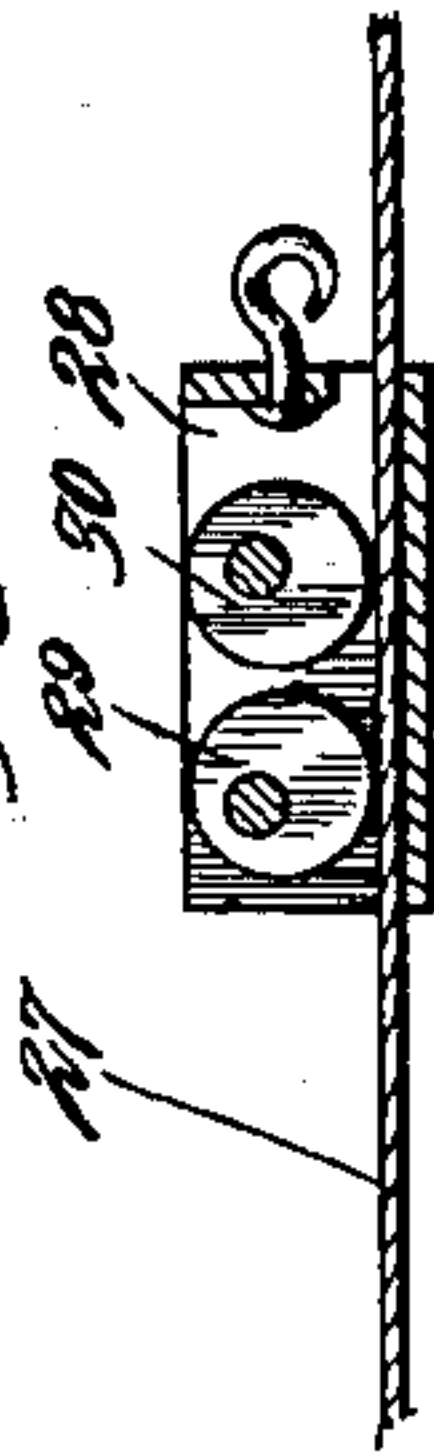
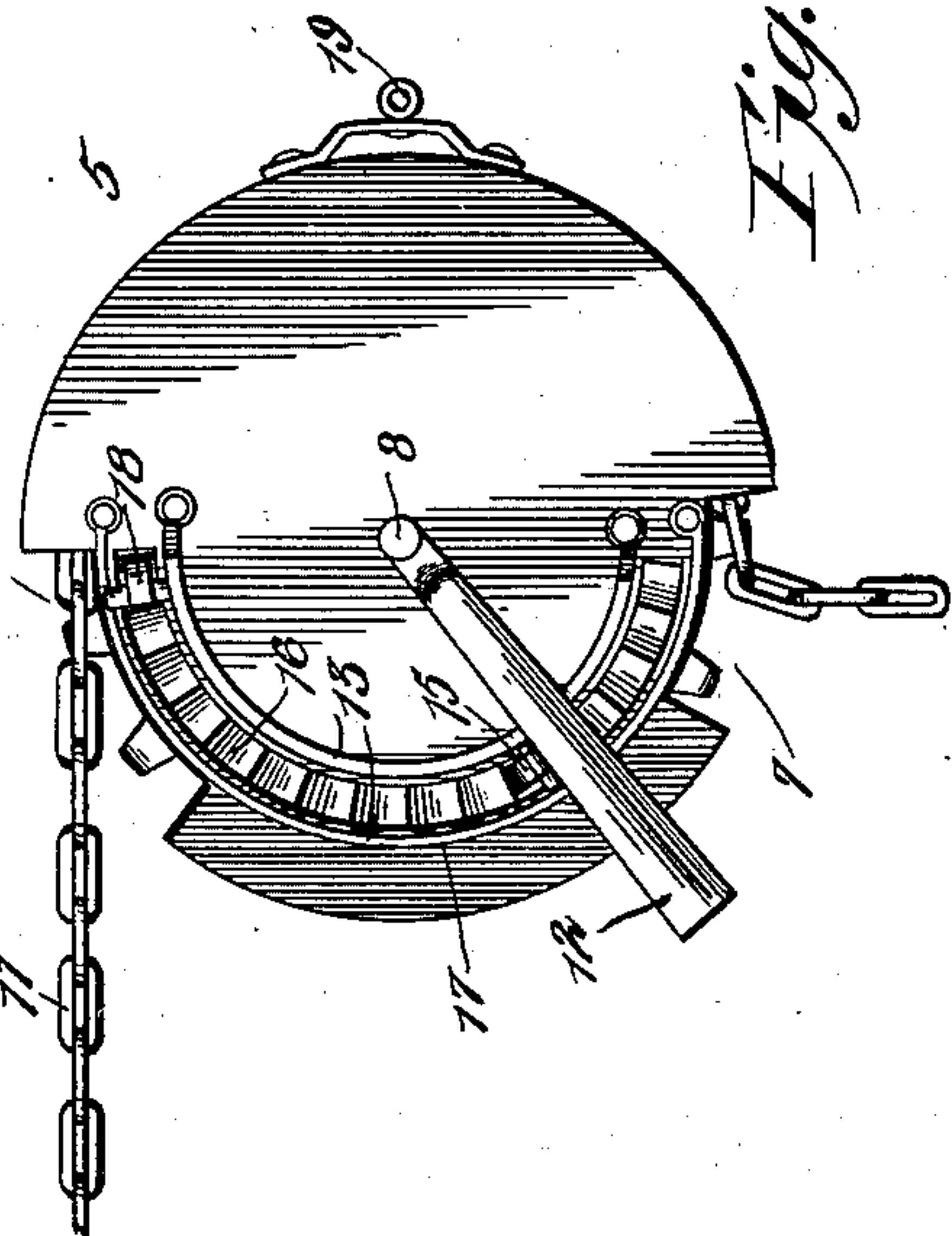


Fig. 4.

Fig. 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

THEODORE H. MCCAIN, OF MONROE, WASHINGTON.

## STUMP-PULLER.

SPECIFICATION forming part of Letters Patent No. 654,802, dated July 31, 1900.

Application filed November 14, 1899. Serial No. 736,960. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE H. MCCAIN, a citizen of the United States; residing at Monroe, in the county of Snohomish and State of Washington, have invented a new and useful Stump-Puller, of which the following is a specification.

This invention relates to stump-pullers in general, and more particularly to that class adapted for operation by hand; and it has for one object to provide a construction in which a rope or cable may be employed for pulling the stump and in which the parts may be adjusted to secure a new grip without releasing the stump, and thus permitting it to settle back.

A further object of the invention is to provide a construction which will be simple and cheap of manufacture and efficient in its operation.

In the drawings forming a portion of this specification, and in which similar numerals of reference designate like and corresponding parts in the several views, Figure 1 is a perspective view showing the practical application of the stump-puller. Fig. 2 is a detail plan view of the winding-drum. Fig. 3 is a central section of the winding-drum. Fig. 4 is a detail plan view of the drum proper removed from its casing. Fig. 5 is a detail view of the cable-clutch, partially in section and partially in elevation.

Referring now to the drawings, the stump-puller comprises a substantially-cylindrical drum-casing 5, having segmental openings 6 and 7 communicating with the interior of the casing, and within this casing and upon an axial spindle or shaft 8 is mounted a winding-drum 9, which drum is in the form of a sprocket-wheel having teeth 10, as shown, these teeth being adapted for engagement with the links of a chain 11, through the medium of which strain is applied to the stump-pulling cable.

In order to rotate the drum 9, the spindle 8 is provided with a radially-extending lever 12, having grooves 12<sup>a</sup> in its under side which receive arc-shaped flanges 13 upon the end of the casing and lying at opposite sides of a segmental slot 17 therein, which flanges prevent outward displacement of the lever. In order to communicate motion from the lever

12 to the drum, said lever has a dog 15 pivoted thereto which engages the teeth of a circular rack 16 upon the upper face of the drum through the segmental slot 17 in the end of the casing. As the lever 12 is moved in one direction the dog 15 engages the teeth of the rack 16 and moves the drum, said dog riding loosely or freely over the teeth of the rack in the return movement of the lever.

In order to prevent return movement of the drum 9 when released by the dog 15, a second dog 18 is pivotally mounted upon the ends of the casing 5 and depends through the slot 17 and rests upon the circular rack 16. The circular rack passes freely beneath the dog in the forward movement of the drum and the adjacent tooth of the rack engaged by the dog when the rotating influence of the lever 12 is removed. It will thus be seen that by operation of the lever 12 the chain 11 may be caused to pass through the casing 5, this chain being disposed to enter through the opening 6, while the slack passes out through the opening 7. In practice this casing 5 has an attaching-eye 19 secured to one side and to which is attached a rope or other connection 20, which is passed around a tree or suitable point of leverage, as shown at 21. A second rope 22 is attached at one end to the tree or other suitable point, while the other end is attached to the hook of a block or pulley 23. The block 23 may be either single or double and has a cooperating block 25, which is adapted for connection with a stump 26, which is to be pulled. Fixed to the block 25 is one end of a cable 27, said cable being passed backwardly and forwardly through the blocks and having its opposite end engaged with the chain 11. This engagement of the cable with the chain is secured by means of a clutch which is attached to the free end of the chain and comprises a frame 28, in which are eccentrically mounted two rollers 29 and 30, so positioned that they may exert pressure in the direction of the bottom of the frame. Through the frame 28 and between the rollers and frame the slack end of the cable 27 is passed, and if the chain 11 be then drawn upon by operation of the lever 12, as above described, the tendency of the rollers 29 and 30 to rotate will cause the lower portions of their peripheries to impinge against the cable



27, and thus hold it firmly. In practice the slack of the cable 27 after it has passed between the rollers and frame is taken around the tree 21, and thus after the chain 11 has all been wound in this slack end may be hitched to the tree to hold the parts, while the grip or clutch is freed from the cable and is reengaged with the cable near the block 25 for a second pull.

10 It will of course be understood that in practice the specific arrangement of the parts shown may be varied and that various modifications may be made without departing from the spirit of the invention.

15 What is claimed is—

1. In a stump-puller, the combination with a casing having a slot therein, of a drum mounted in the casing, a rack upon the drum, a lever mounted upon the casing, a dog carried by the lever and adapted for engagement with the rack through the slot of the casing, and a dog mounted upon the casing and adapted for engagement with the rack to hold the drum when the first-named dog is disengaged.

25 2. A stump-puller comprising a casing having a slot therein, a drum mounted in the casing, a rack upon the drum, a lever mounted on the casing, a dog carried by the lever adapted to enter the slot and engage the rack, a second dog pivoted to the casing and adapted to enter the slot and engage the rack, and a guide-plate fixed to the casing and adapted to hold the lever against outward displacement, said casing also having openings leading to the drum.

3. In a stump-puller, the combination with a casing having a slot, of guide-ribs upon the casing adjacent the slot, a drum mounted in the casing, a rack upon the drum, a lever mounted upon the casing and having slots which receive the guide-ribs, a dog carried by the lever and adapted for engagement with the rack through the slot of the casing, and a dog mounted upon the casing and adapted for engagement with the rack to hold the drum when the first-named rack is disengaged.

4. In a stump-puller, the combination with a casing having a slot therein, of a drum mounted in the casing, a rack upon the drum, a lever mounted upon the casing, a dog carried by the lever and adapted for engagement with the rack through the slot of the casing, a dog mounted upon the casing and adapted for engagement with the rack to hold the drum when the first-named dog is disengaged, means for the attachment of a rope to the casing, a chain engaged with the drum, a block connected with the chain, and additional blocks adapted for connection with the stump to be pulled and with a suitable support.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

THEODORE H. MCCAIN.

Witnesses:

C. G. SMYTH,  
J. HUNSAKER.