

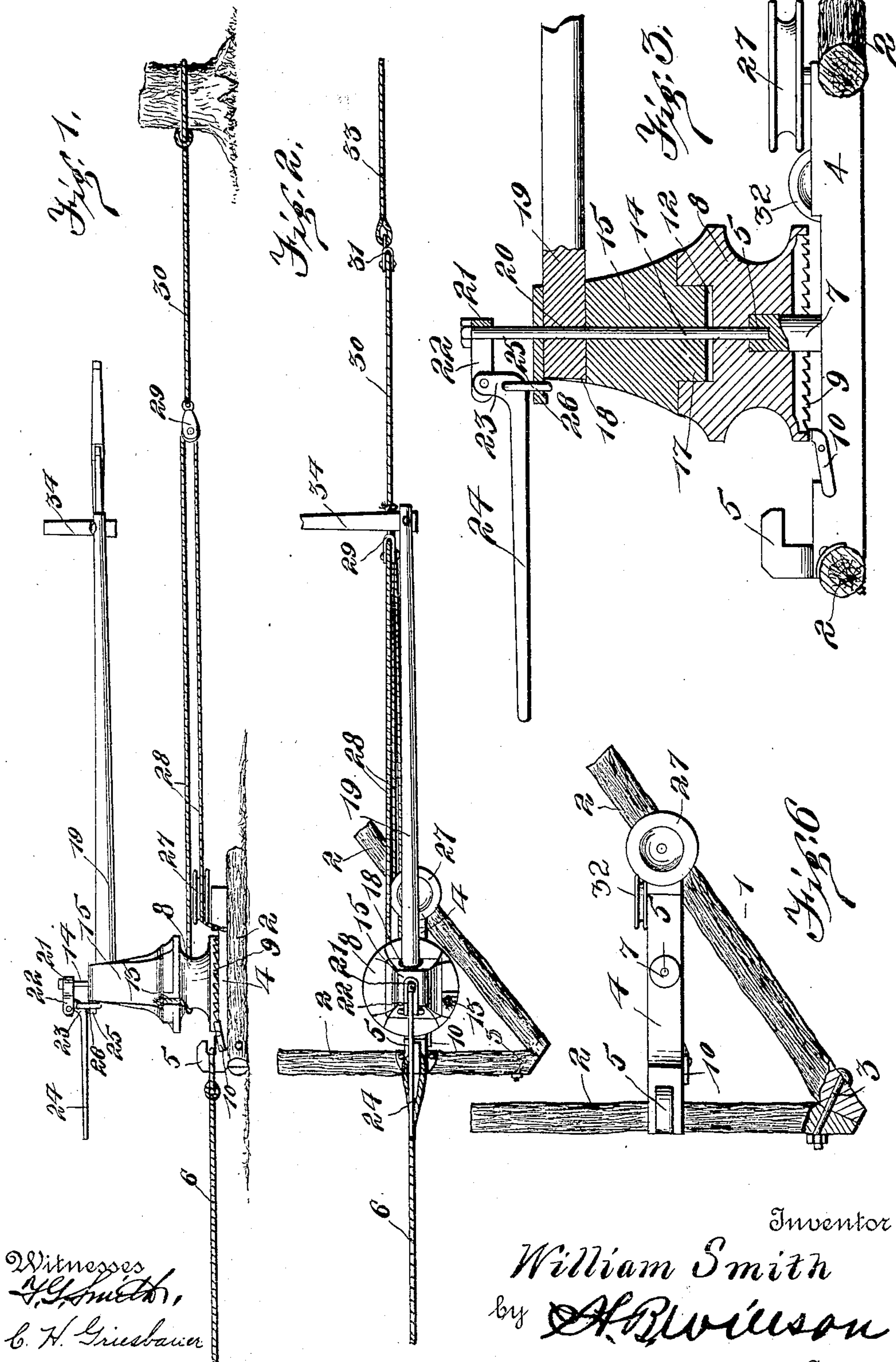
No. 808,879.

PATENTED JAN. 2, 1906.

W. SMITH.  
STUMP PULLER.

APPLICATION FILED JUNE 8, 1905.

2 SHEETS—SHEET 1.



Witnesses  
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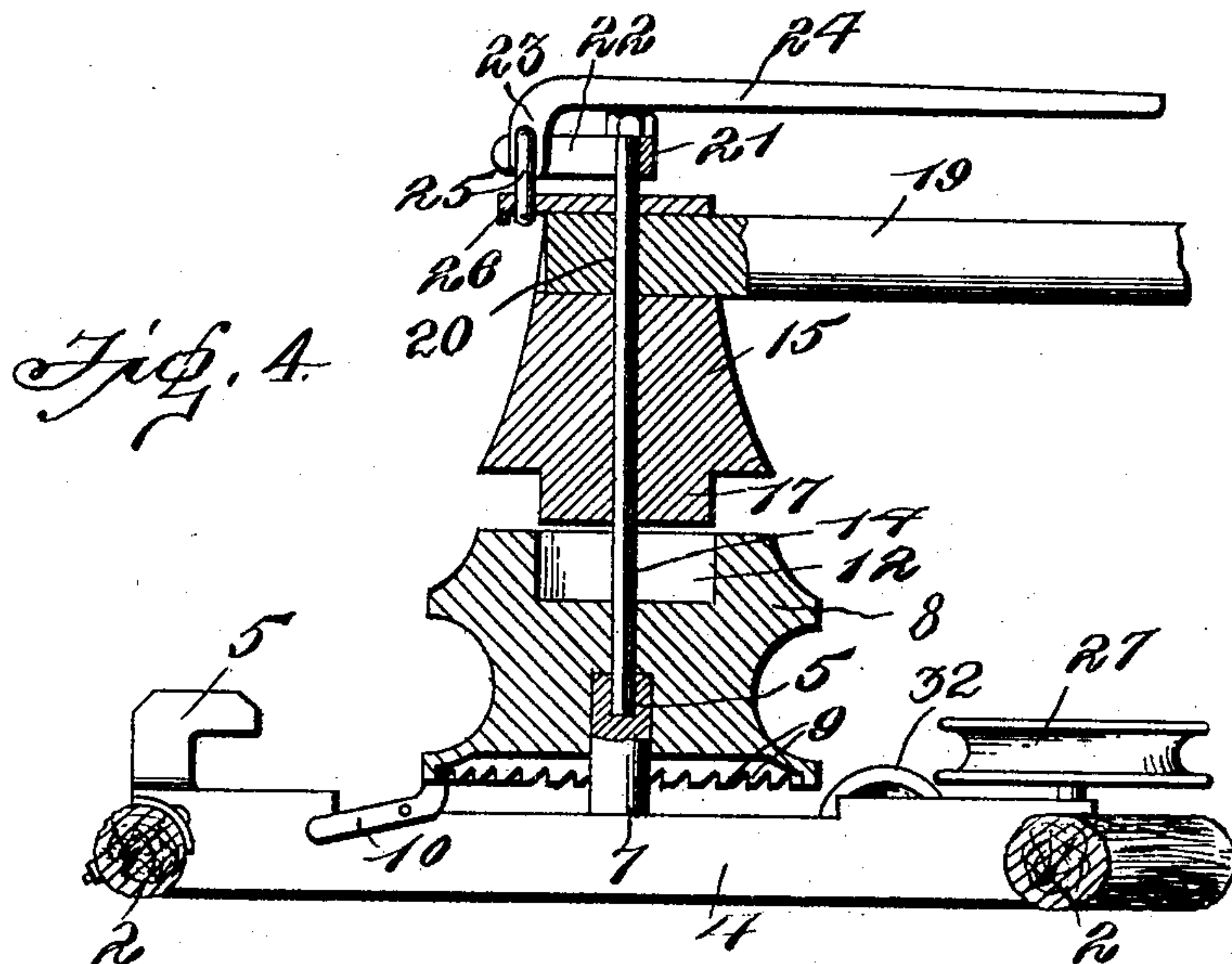
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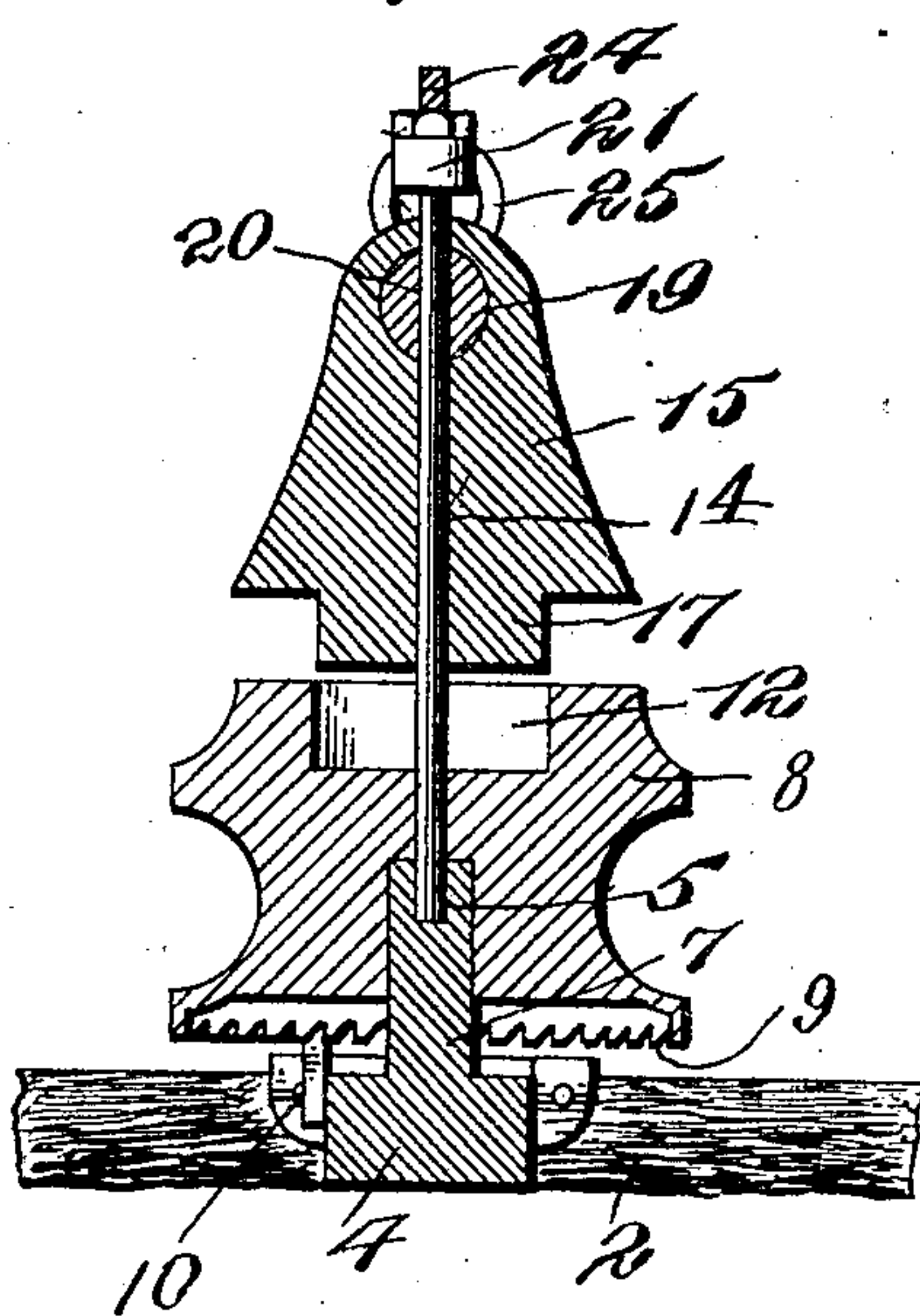
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*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

WILLIAM SMITH, OF LA CRESCENT, MINNESOTA.

## STUMP-PULLER.

No. 808,879.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed June 8, 1905. Serial No. 264,361.

*To all whom it may concern:*

Be it known that I, WILLIAM SMITH, a citizen of the United States, residing at La Crescent, in the county of Houston and State of Minnesota, have invented certain new and useful Improvements in Stump-Pullers; and I do declare the following to be a clear, full, 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.

This invention relates to new and useful improvements in stump-pulling machines.

The object of the invention is to provide a base for the machine, said base being so constructed as to permit the machine to be easily moved over rough timber-land and among stumps without easily upsetting the same.

Another object is to provide an improved means for securing the inner end of the sweep to the winding-drum and means for supporting and carrying the outer end of the same over the pull-rope and over roots and stumps.

A further object is to provide means for throwing the winding-drum out of gear and to provide means for detachably securing the end of the pull-rope to the drum, so that the rope will be guided to the center of the drum, and means for increasing the power of the machine.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of the device arranged in operative position. Fig. 2 is a top plan view of the same, showing the parts arranged to increase the power of the machine. Fig. 3 is a vertical sectional view with the parts in operative position. Fig. 4 is a similar view showing the sweep-rest elevated and out of gear with the winding-drum. Fig. 5 is a similar view taken at right angles to Figs. 3 and 4, and Fig. 6 is a plan view of the platform and base with the machine removed.

Referring more particularly to the drawings, 1 denotes the platform of the machine, which is constructed of two timbers 2, which are preferably round logs. The timbers 2 are bolted together at one end, as shown at 3, the opposite ends of the same diverging to form a V-shaped arrangement. To the platform-timbers 2, substantially midway between the ends of the same and preferably at right angles to one of said tim-

bers, is bolted or otherwise secured a base plate or bar 4. On one end of the bar 4 is formed an anchoring-hook 5, to which is adapted to be connected an anchor-rope 6, by which the machine is secured to a stump or other form of anchor. On the upper side of the base-bar 4 is arranged an upwardly-projecting stub-axle 7, on which is revolutely mounted a grooved or channeled winding-drum 8. On the under side of the winding-drum 8 is formed an annular series of ratchet-teeth 9, with which is adapted to be engaged a holding-pawl 10, said pawl being pivotally mounted upon the side of the base-bar 4, as shown. In the upper portion of the winding-drum 8 is formed a rectangular recess 12, and on the top portion of the drum adjacent to the edge of the same is formed a pull-rope-attaching hook 13, which communicates with a guide-passage by which said pull-rope is guided or conducted to the center of the winding-drum.

Arranged in the recess 12 is a centrally-disposed upwardly-projecting shaft 14, the lower end of which is seated in an aperture formed in the stub-axle 7. On the shaft 14 is slidably mounted a sweep-rest 15, on the lower end of which is formed a rectangular projection 17, which is adapted to seat into the rectangular recess 12 formed in the upper side of the winding-drum, thereby securing said sweep-rest to the drum. In the sweep-rest 15 is formed a horizontal transversely-disposed passage 18, forming a seat to receive the inner end of a sweep 19, said inner end of the sweep being provided with a vertically-disposed aperture 20, through which the shaft 14 passes, thereby securing said sweep in the rest.

On the upper end of the shaft 14 is mounted a collar 21, on which is formed a pair of laterally-projecting ears or lugs 22, between which is pivoted the inner offset end 23 of a lifting-lever 24. To said inner end of the lever 24 is also connected a link 25, which is adapted to engage a hook or projection 26 formed on the upper end of the sweep-rest. By providing the lever 24 the sweep-rest may be raised and lowered on the shaft 14 to move the projection 17 on the lower end thereof out of and into engagement with the recess 12, formed in said winding-drum, thereby throwing the sweep-rest out and into engagement with the winding-drum. The operation of the lever 24 is clearly shown in Figs. 3 and 4 of the drawings.



On the opposite end of the base 4 from the anchor-hook 5 is journaled a shortener-sheave 27, around which the pull-rope 28 is adapted to be wound after passing through a snatch-block 29, whereby said pull-rope may be quickly shortened and the slack in the same taken up. Connected to the snatch-block 29 is a hitch-rope 30, the opposite end of which is adapted to be connected with one or more stumps to be extracted, or, if desired, the hitch-rope 30 may be passed around a second snatch-block 31, the free end of the hitch-rope 30 being secured to a rope-shortener or grooved pulley 32, secured to the side of the base-bar 4, as shown in Figs 3, 4, and 6. To the second snatch-block 31 is secured a hitch-rope 33, the opposite end of which is attached to the stump to be pulled. By providing one or more snatch-blocks and additional pull-ropes the power or pulling capacity of the machine will be increased.

In order that the outer end of the sweep 19 may be supported to carry the same over the pull-rope 28 and stumps or obstructions that may lie in the path thereof, a pole 34 is rigidly secured to the outer end of the sweep. Said pole is preferably bolted to the under side of said end and from thence extends forwardly between the draft-animals and is secured to the neck-yoke, thus forming a runner to carry the end of the sweep in an elevated position.

By providing a platform constructed as herein shown and described the machine may be more readily transported from one stump to another over rough timber-land and stumps without danger of upsetting the same and when the machine is in use will form a firm support or rest for the operating mechanism of the machine. By providing a sweep-rest adapted to be moved into and out of engagement with the winding-drum said drum may be thrown into and out of gear, thus providing for an independent movement of the drum without moving the sweep or sweep-rest.

A stump-puller constructed as herein shown and described will be found to be complete and efficient in all its details.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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 a V-shaped platform, of a base secured to said platform, an upwardly-projecting

stub-axle secured to said base, a winding-drum revolubly mounted on said axle, a sweep-support having a horizontally-disposed opening to form a sweep-seat, a rectangular projection formed on the lower end of said support to engage a similarly-shaped recess in said winding-drum, a sweep secured in said opening, a centrally-disposed shaft extending through said sweep-support, and winding-drum and into said stub-axle, a lever connected to the upper end of said shaft, and means whereby said lever is connected with said sweep-support to raise and lower the same out of and into engagement with said winding-drum, substantially as described.

2. In a stump-puller, the combination with a V-shaped platform, of a base secured to said platform, an upwardly-projecting stub-axle secured to said base, a winding-drum revolubly mounted on said axle, a sweep-rest removably mounted in said winding-drum to turn the same, an anchoring-hook on said base, a pull-rope adapted to be detachably secured to said anchoring-hook, a sweep adapted to be firmly secured in said rest, and means to support the outer end of said sweep, substantially as described.

3. In a stump-puller, the combination with a platform consisting of two timbers bolted together at one end and diverging toward their other ends to form a V-shaped construction, a base-bar arranged across and secured to said platform-timbers, an anchor-hook formed on one end of said base-bar, an upwardly-projecting stub-axle secured to the center of said base-bar, a winding-drum revolubly mounted on said axle, a sweep-support arranged on said drum, and a sweep secured to said support, substantially as described.

4. In a stump-puller, the combination with a platform consisting of two timbers bolted together at one end and diverging toward their other ends to form a V-shaped construction, a base-bar arranged across and secured to said platform-timbers, an anchor-hook formed on one end of said base-bar, an upwardly-projecting stub-axle secured to the center of said base-bar, a winding-drum revolubly mounted on said axle, a sweep-support arranged on said drum, a sweep secured to said support, a pull-rope detachably connected to said winding-drum, a shorter sheave mounted on said base-bar, a snatch-block arranged on said pull-rope and hitch-ropes connected to said snatch-block, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM SMITH.

Witnesses:

A. P. PARSONS,  
MARK W. SMITH.