D. A. KELLER.

APPARATUS FOR PULLING OIL WELLS.

APPLICATION FILED JUNE 11, 1908.

930,480.

Patented Aug. 10, 1909.

2 SHEETS—SHEET 1.

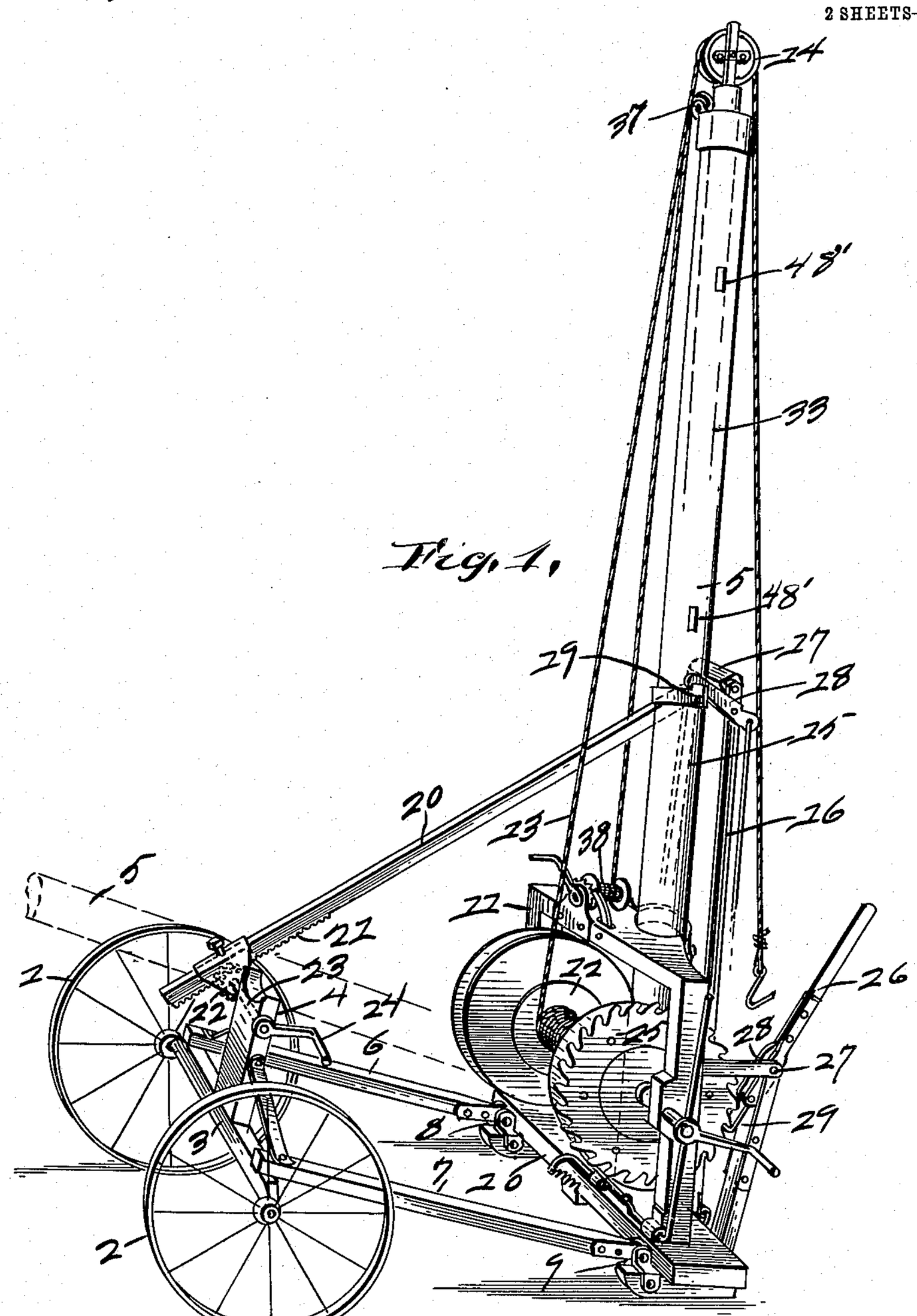


Fig. 1.

Witnesses,

J. L. Bick.

J. J. Dowdall

Inventor,

David A. Keller

By Earl H. Keller

Atty.

D. A. KELLER.

APPARATUS FOR PULLING OIL WELLS.

APPLICATION FILED JUNE 11, 1908.

930,480.

Patented Aug. 10, 1909.

2 SHEETS—SHEET 2.

Fig. 2, Fig. 3,

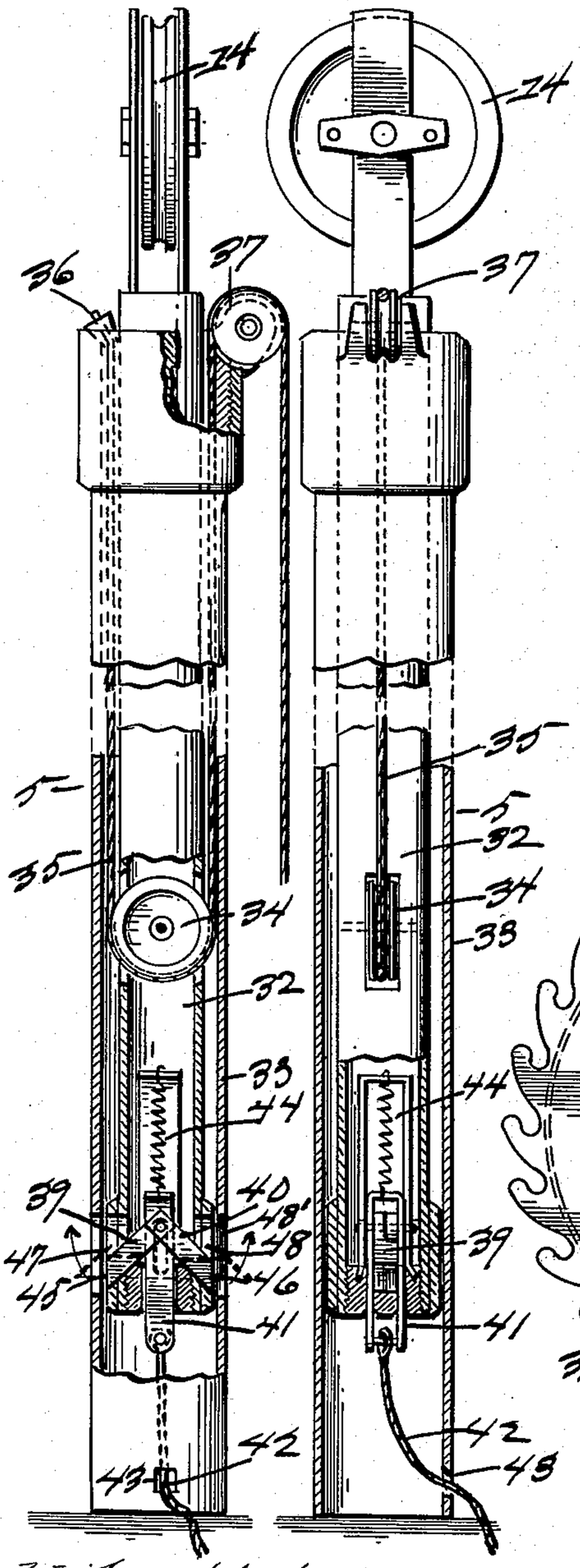


Fig. 5.

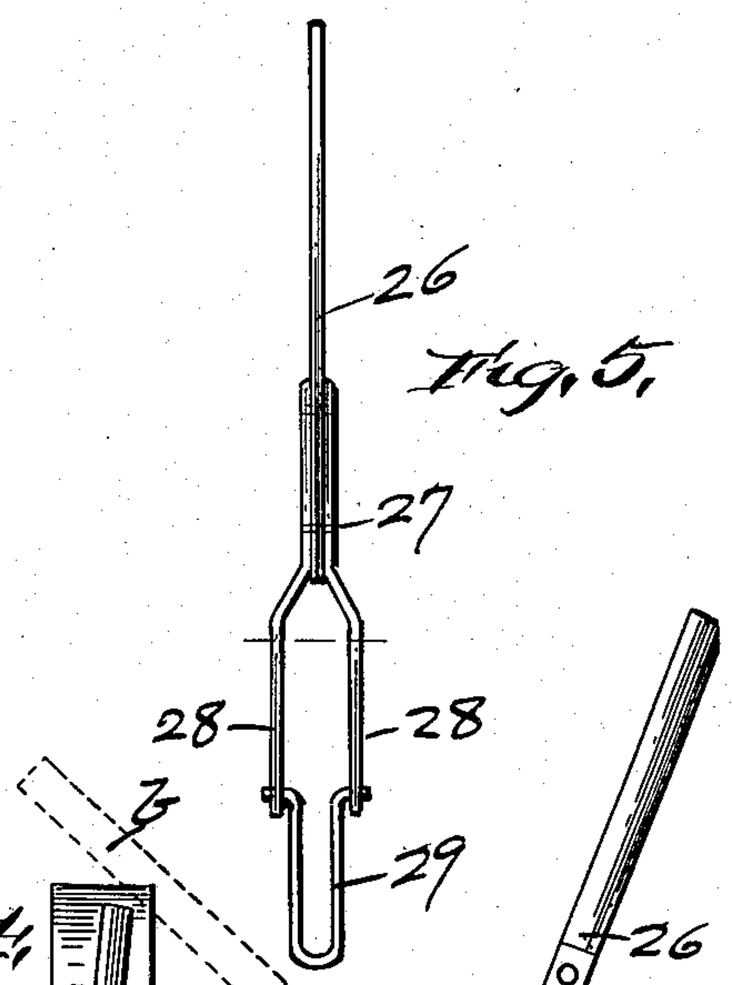
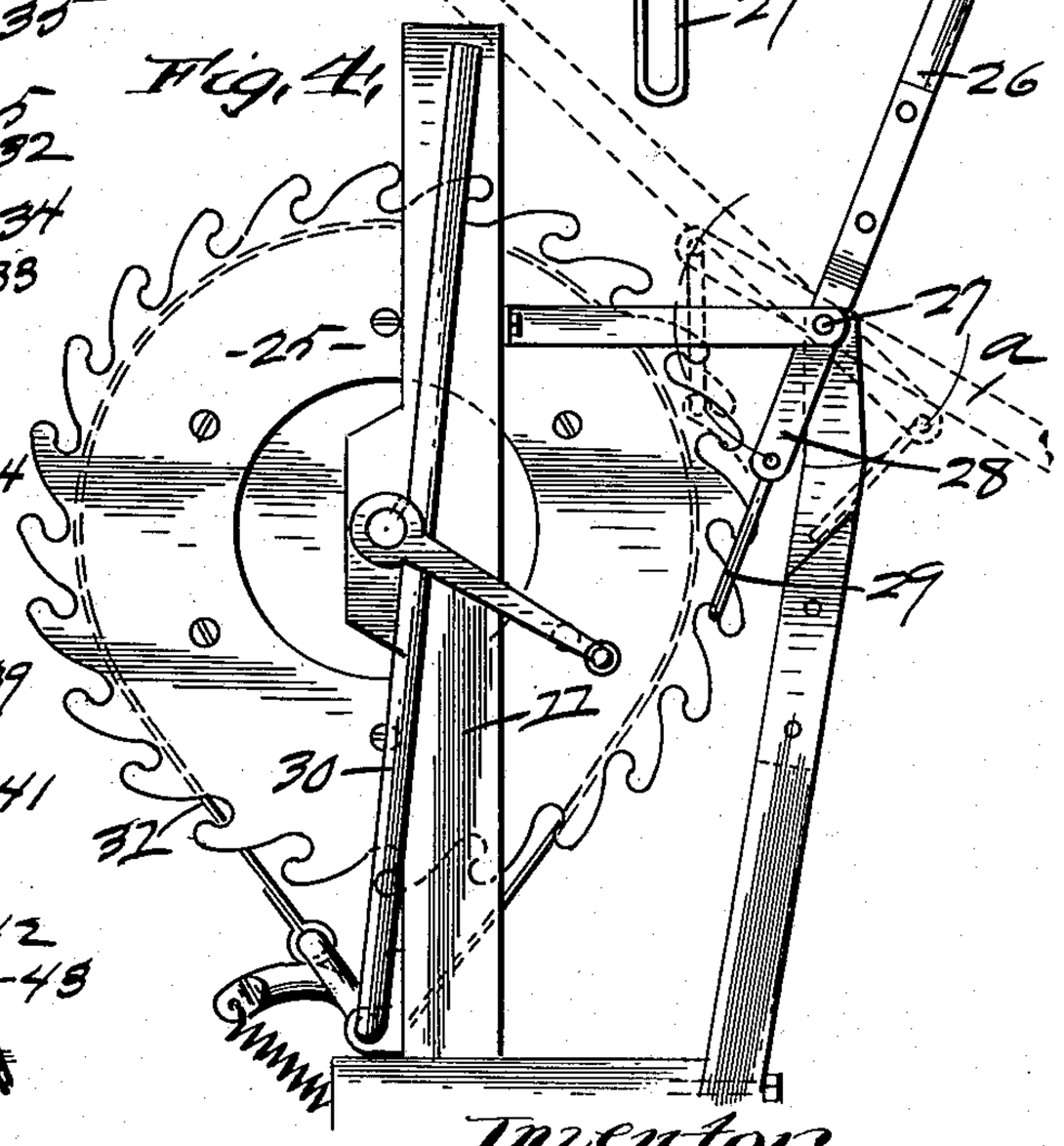


Fig. 4.



Witnesses,
J. L. Bick.
J. J. Hardaee

Inventor,
David A. Keller
By Carl D. Keller
Atty.

UNITED STATES PATENT OFFICE.

DAVID A. KELLER, OF TOLEDO, OHIO.

APPARATUS FOR PULLING OIL-WELLS.

No. 930,480. Specification of Letters Patent. Patented Aug. 10, 1909.

Application filed June 11, 1908. Serial No. 437,804.

To all whom it may concern:

Be it known that I, DAVID A. KELLER, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Apparatus for Pulling Oil-Wells; 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.

This invention has reference to apparatus for pulling oil-wells, and it has for its object to provide an improved apparatus of this character in which the mast may be raised or lowered conveniently by a single operator and its position over the well adjusted without the use of horses or other external power other than that furnished by the operator himself.

The invention embodies certain specific details of construction and the novel combination and arrangement of the parts hereinafter shown, described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of the complete apparatus; Fig. 2 is a sectional front elevation of the telescopic mast showing the elevating means and also the manually-operated catch for supporting the inner tube of the mast at various degrees of elevation; Fig. 3 is a view like Fig. 2 showing a side elevation of the mast; Fig. 4 is a view illustrating the operating means for the windlass; and Fig. 5 is a detached view of the lever employed in operating the windlass.

Referring to the drawings, 1 and 2 are the wheels of a supporting truck, 3 an axle connecting the wheels, 4 a post mounted at a central point of the axle and supporting the mast 5 when lowered as in dotted lines, Fig. 1, 6 and 7 frames secured at one end to the axle and pivotally connected at 8 and 9 to a base piece 10 upon which the lower end of the mast is firmly supported. 11 is a frame also carried by the base 10 and 12 a windlass mounted upon the frame, a cable or flexible connection 13 operating from the drum of the windlass over a sheave 14 at the upper end of the mast.

15 and 16 are upright bars pivotally secured at their lower ends to the base-piece 10, and 17 is a connecting piece between the upper ends of the bars 15 and 16 against which the mast leans when elevated, there being a hooked catch 18 to engage a lateral projection 19 on the mast, the catch being manually operated to release the mast when the latter is to be lowered.

20 is an adjusting-bar arranged at an inclination between the upper ends of the bars 15 and 16, and 21 is a rack upon the bar engaged by a pinion 22 upon an axle 23 mounted upon the post 4, a crank 24 operating the axle and pinion and altering the longitudinal position of the adjusting-bar and also the position of the mast, the latter being capable of very close adjustment to any position slightly inclined to the vertical.

Constituting a part of the windlass 12 is a disk 25 having peripheral teeth of peculiar form as plainly shown in the drawings, and 26 is a lever having a pivotal connection 27 upon the windlass frame, the pivotal axis of the lever being outside the toothed periphery of the disk 25. The inner end of the lever is forked as at 28 to travel on opposite sides of the toothed periphery of the disk 25, and 29 is a U-shaped link which is freely suspended to swing at the outer forked end of the lever. When the lever is in the position in full lines, Fig. 4, the windlass is held against rotation, the link being drawn directly outward from the pivot of the lever. By swinging the lever to the position *a*, Fig. 4, the windlass is moved a short arc. To release the windlass, the lever is moved to the position *b* to disengage the link 29 from the toothed disk 25. 30 is a lever and 31 a friction band, both of ordinary construction and operating upon the windlass in the usual manner.

The mast of the apparatus comprises two telescoped tubular sections 32 and 33, the inner tube 32 carrying the sheave 14 at its upper end and at its lower end the inner section supports a sheave 34 around which is directed a flexible cable 35, secured at one end to the upper end of the outer section, as at 36, and this cable operates over a sheave 37 at the upper end of the outer section and is then directed downward to a manually operated winding drum 38 upon the frame 11. Thus it is seen that the inner section of the mast may be readily raised and lowered within the outer tubular section. Carried by the inner tubular section of the mast near its lower end, are a pair of fingers 39 and 40 which are pivoted together and to a sliding piece 41, a flexible cable or connection 42 leading from the sliding piece through an opening 43 at the lower end of the outer section. The fingers are maintained nor-

mally in inclined position by a spring 44, the outer ends 45 and 46 being then retracted, there being guide slots 47 and 48 in the inner tubular section through which the fingers are guided. When the actuating cable for the fingers is pulled from below the ends of the fingers will be projected, as in dotted lines, Fig. 2, and as there are openings 48′ in the outer section, the fingers will be projected into these openings, and the inner section supported at desired degrees of elevation, it being apparent that the openings in the outer tube may be provided at suitable intervals therein.

While the apparatus is being transported, the mast is in lowered position upon the truck and is elevated in the usual way upon reaching its destination. The inner section of the mast is then extended relative to the outer section and its angular position to the vertical adjusted by turning the crank upon the truck which operates the adjusting bar. Thus it is seen that I provide improved means for adjusting the mast at a slightly inclined angle to the vertical and also improved means for supporting the inner section of the mast at various degrees of elevation within the outer section.

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

In an apparatus for pulling oil-wells, a wheeled truck, a base, a mast supported upon the base, a pair of frames secured at one end to the truck and having pivotal connections with the base, two upright bars pivoted at their lower ends to the base and detachably engaging the mast at their upper ends, an adjusting bar pivotally connected to the upper ends of the upright bars, a rack carried by the adjusting bar, and a manually operated pinion mounted upon the truck and engaging said rack, substantially as described.

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

DAVID A. KELLER.

Witnesses:

GRANT WILLIAMS,

CARL H. KELLER.