

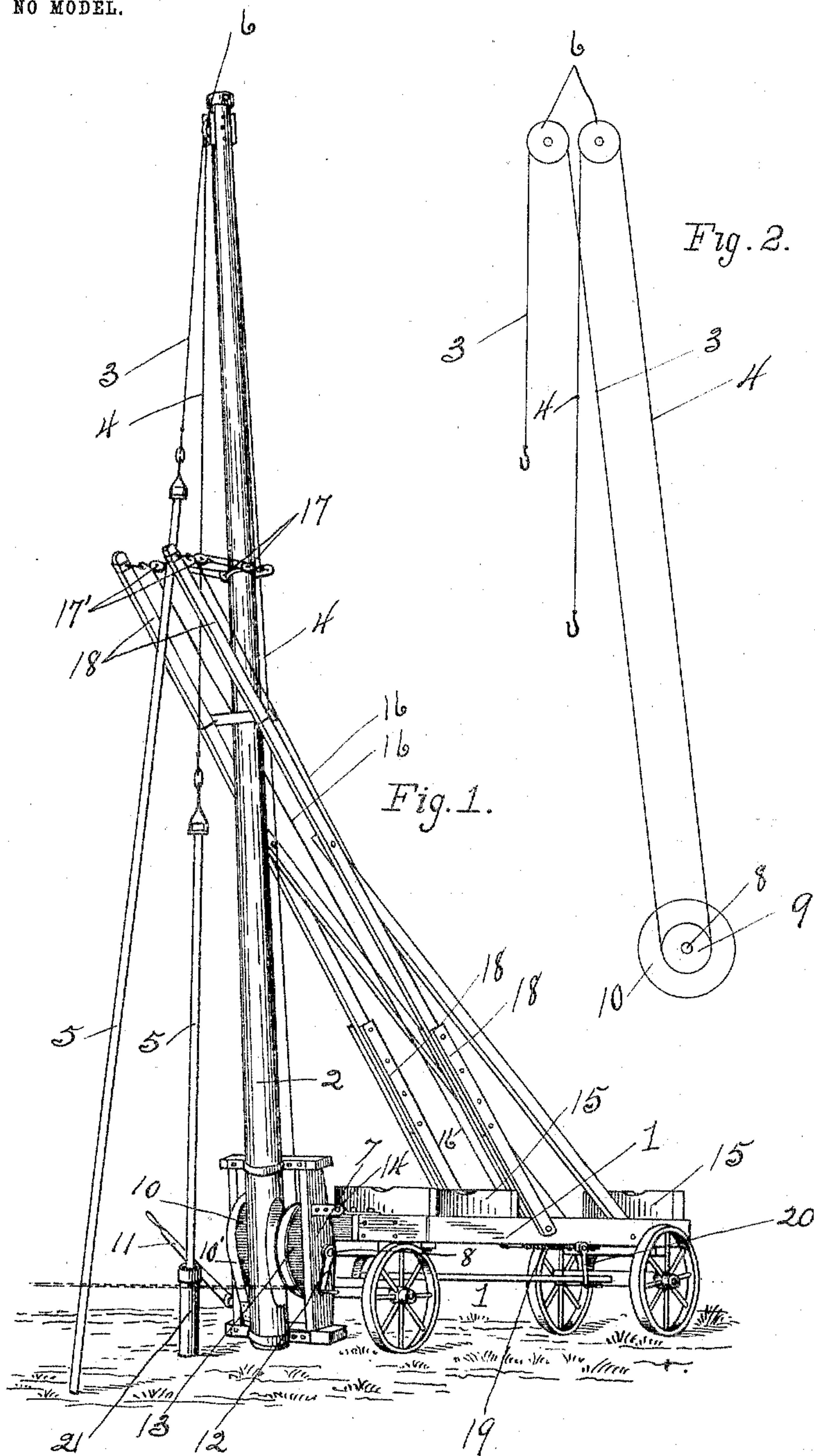
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W. M. BROWN.  
HOISTING MECHANISM FOR SUCKER RODS, &c.

APPLICATION FILED JUNE 25, 1903.

NO MODEL.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM M. BROWN, OF GIBSONBURG, OHIO.

## HOISTING MECHANISM FOR SUCKER-RODS, &c.

SPECIFICATION forming part of Letters Patent No. 767,135, dated August 9, 1904.

Application filed June 25, 1903. Serial No. 163,005. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM M. BROWN, a citizen of the United States, and a resident of Gibsonburg, in the county of Sandusky and State of Ohio, have invented certain new and useful Improvements in Hoisting Mechanism for Sucker-Rods, &c.; 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates particularly to improved means for elevating and lowering sucker-rods or pipes into oil or other wells, and is also adapted for the purpose of raising said rods or pipes when it is desired to withdraw them from the well into which they have been lowered.

The devices commonly used for the hoisting and lowering of sucker-rods into wells of this class employ one cable only, thereby causing considerable time to be lost between the time of releasing one of said rods after it has been lowered into a well and the raising and joining another to the end thereof preparatory to its being lowered therein.

The object of my invention is to provide means for operating a plurality of hoisting-cables whereby the raising of one causes a corresponding opposite movement of the other and the loads carried thereby to be alternately raised and lowered, thus greatly facilitating the work and obviating the above objections by having a rod in readiness to connect with the one being lowered as soon as the cable has been released therefrom.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a perspective view of my invention, showing the same mounted in operative position on a vehicle and one sucker-rod as being lowered into a well and the other being raised to proper position to be connected with the preceding one; and Fig. 2 is a detail of the hoisting-cables and the drum and pulleys with which they engage.

In the drawings, 1 represents a wheeled vehicle on which is mounted the pole 2 for supporting and elevating the hoisting-cables 3 and 4, the said cables being connected at one end to and adapted to wind in opposite directions upon a rotatable drum 9, mounted adjacent to the base of said pole, and to engage at their free ends with the pipes or sucker-rods 5 5, as shown, suitable means being provided on the ends of the cables 3 and 4 for that purpose. The pole 2 is of any desired length and is provided at its upper end with the grooved pulleys 6 6, over which the cables 3 and 4 are adapted to pass.

To one end of the vehicle 1 I secure the frame 7, to which the lower end of the pole 2 is made rigid to form a support therefor, and within which is journaled a shaft 8, arranged transversely of the pole 2 and carrying the rigid winding-drum 9 thereon, the said drum being engaged by the cables 3 and 4 in such manner as to adapt them to be wound in opposite directions thereon. A brake-wheel 10, for controlling the movement of the drum 9, is mounted on the shaft 8 at one side of the drum 9 and has its periphery engaged by the friction-band 10', which connects with and is operated by the lever 11. Power may be transmitted to the drum 9 either through the crank 12 or the enlarged drum 13, the said drum being adapted to receive a power-cable, as shown by dotted lines in Fig. 1, which cable may be attached to a horse or other suitable means of power. As very little effort is required to rotate the drum when both of the cables are in operation, one cable and its load acting as a balance for the other, the drum 13 is only used when it is desired to withdraw the sucker-rods or other object from a well, it then being more convenient to use but one of the cables.

When not in use, or for the purpose of transportation, the pole 2 and frame 7 of my device are adapted to be swung to a horizontal position on the pivots 14, connecting the frame 7 and vehicle 1, and the pole 2 to rest on the transverse supports 15. The raising and lowering operations of the pole 2 are controlled by the cables 16 16, which have their upper ends engaged to rings or other



means provided on the pulleys 17' 17', secured to the upper ends of the supporting-standards 18 18, thence passing over the pulleys 17 17, secured to the ends of a suitable cross-arm on the pole 2, and then over the pulleys 17' 17', with their other ends extended down to and secured to the windlass 19, the said cables being wound on said windlass when the pole is in elevated position, as shown in Fig. 1, the windlass being rotated by a crank 20. The standards 18 18 have their lower ends secured and suitably braced to the longitudinal beams of the vehicle 1 and their upper ends extended in a diagonal direction to a point beyond the pole 2, as shown, one standard being on either side of said pole. It will thus be seen that the pole 2 when resting in a horizontal position on the cross-beam 15 may be raised to a vertical position by turning the crank 20 and winding the cables 16 16 on the windlass 19, the hoisting movement of the pole 2 being stopped at a desired point by a suitable cross-piece secured to and interposed between the said standards 18 18 at a point in vertical alinement with the base and pivotal point of said pole.

It will be apparent that the winding of the cables 3 and 4 on the drum 9, as described, will cause one of the sucker-rods 5 or other object engaged thereby to be lowered into the well 21 while the other is being raised to a desired position above said well to enable its lower end to be connected to the upper end of the rod being lowered, after which the cable engaging the first-mentioned rod will be released therefrom and engaged with another preparatory to being raised to the proper position when the elevated rod is lowered.

While I have shown and described my device as being portable, it is obvious that the

same may be provided with a stationary frame and that such changes in the form, proportion, and minor details of construction of the parts as fairly fall within the scope of my invention may be made without departing from the spirit or sacrificing any of the advantages thereof.

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

1. In a device of the class described, a vehicle, a cable-supporting member pivotally secured thereto in such manner as to cause the base of said member when in vertical position to be suspended from said pivotal point, a drum rotatably mounted at the base of said member and movable therewith, cables supported by said member and connected to and adapted to be moved in opposite directions when said drum is rotated, substantially as described.

2. In a device of the class described, a vehicle, a frame pivotally attached thereto, a cable-supporting member rigid to said frame and adapted to be swung with said frame into vertical or horizontal positions, means provided for raising or lowering said member, a rotatable drum carried by said frame, cables supported by said member and connected to and adapted to be moved in opposite directions by said drum, a brake and power transmitting means connected to said drum, substantially as described.

In testimony whereof I have subscribed my name to this specification in the presence of two witnesses.

WILLIAM M. BROWN.

Witnesses:

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