No. 799,220. PATENTED SEPT. 12, 1905.

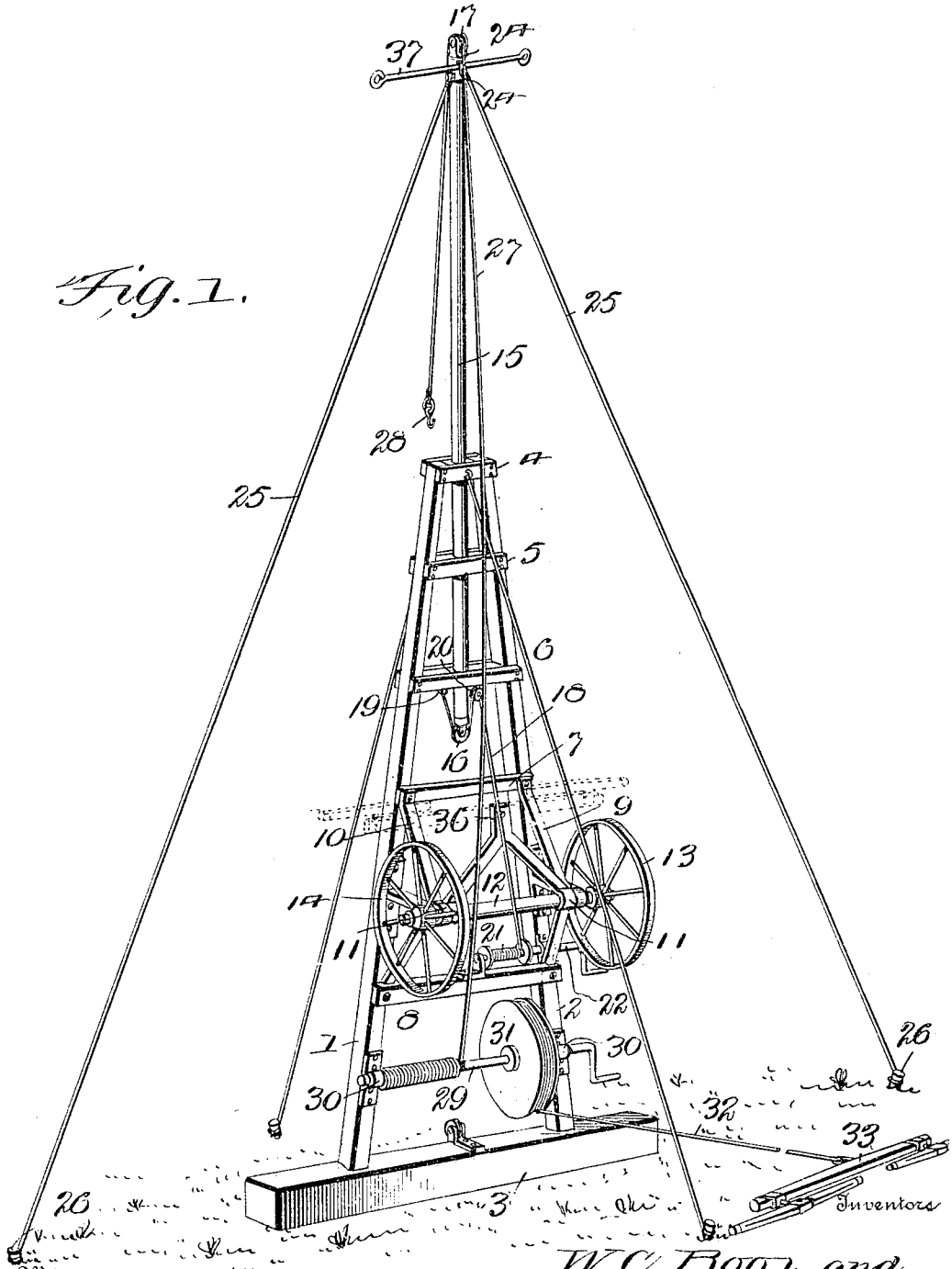
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PORTABLE DERRICK.

APPLICATION FILED AUG. 1, 1904.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

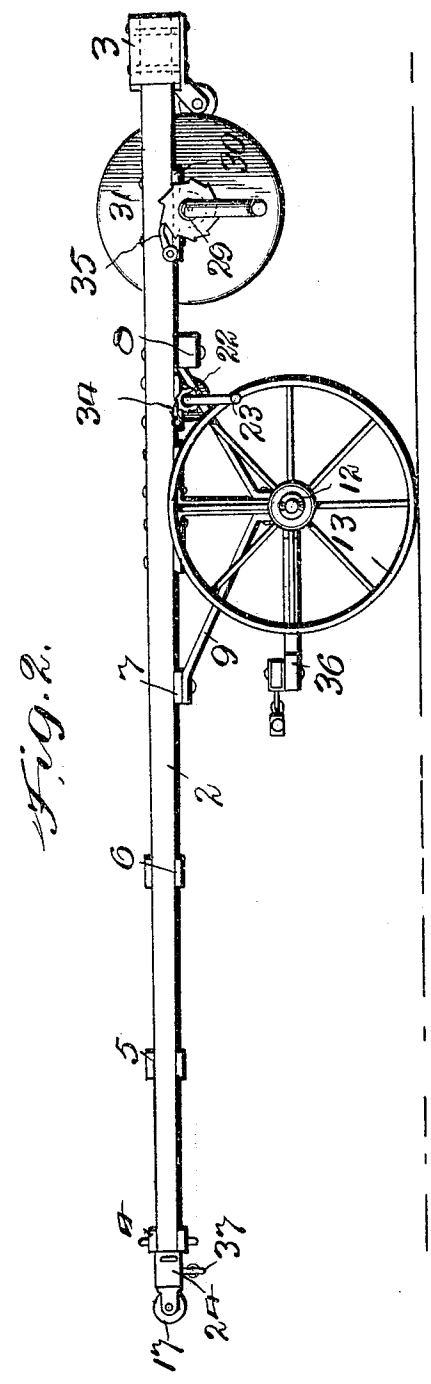


Fig. 2.

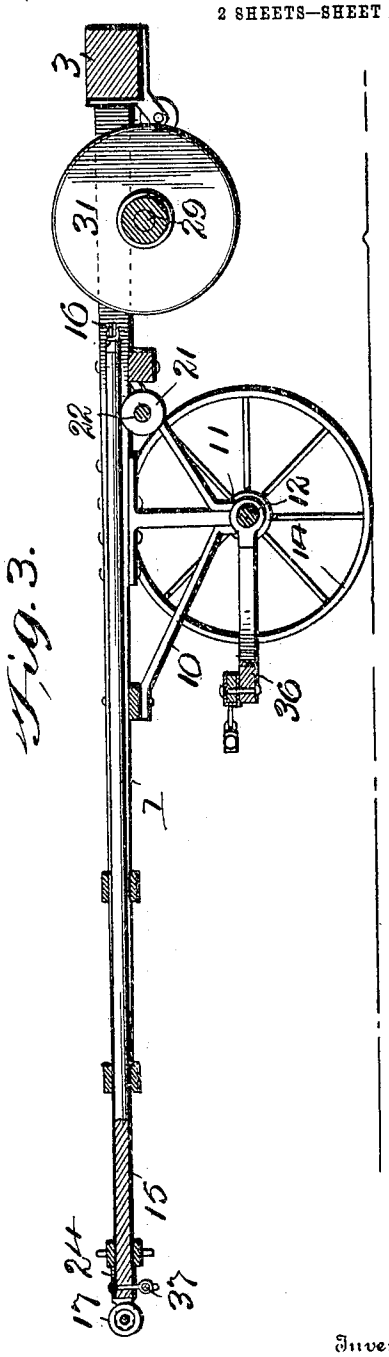


Fig. 3.

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UNITED STATES PATENT OFFICE.

WILLIAM C. BOOZ AND AUDLEY M. KRIBBS, OF VANBUREN, INDIANA.

PORTABLE DERRICK.

No. 799,220. Specification of Letters Patent. Patented Sept. 12, 1905.

Application filed August 1, 1904. Serial No. 219,092.

To all whom it may concern:

Be it known that we, WILLIAM C. BOOZ and AUDLEY M. KRIBBS, citizens of the United States, residing at Vanburen, in the county of Grant and State of Indiana, have invented certain new and useful Improvements in Portable Derricks; and we 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.

Our invention relates to a hoisting-derrick, and more particularly to that form of derrick or hoisting apparatus which may be collapsed or disposed in a very compact position when not required for use, so as to greatly subserve convenience of transportation, whereby the same may be readily carried from place to place; and our invention consists of certain novel features of combination and construction of parts, the preferred form whereof will be hereinafter clearly set forth, and pointed out in the claim.

The prime object of our invention, among others, is to provide a derrick of the character specified which will be found reliably efficient and useful for a great variety of purposes, as in withdrawing the tubular lining of oil and other wells and for hoisting pump-rods, &c.

A further object of our invention is to enable the parts of our hoisting appliance or portable derrick to be disposed in a folded or collapsed position, whereby it may be easily taken from place to place upon its own carrying-wheels, which are made a permanent part of the framework.

Other objects and advantages will be hereinafter made clearly apparent, reference being had to the accompanying drawings, which are made a part of this application, and in which—

Figure 1 shows a perspective view of our invention complete ready for use. Fig. 2 is a side elevation thereof, while Fig. 3 is a longitudinal central section of our hoisting apparatus complete and disposed in a collapsed condition.

For convenience of reference to the various details and coöperating accessories of our invention numerals will be employed, the same numeral applying to a similar part throughout the several views.

In carrying out our invention we provide a suitable framework consisting of the side bars or frame-sections 1 and 2, connected together at their lower ends by means of the base-plate 3, while their upper ends are drawn toward each other and permanently united by a plurality of cross-bars 4, 5, 6, and 7, while the lower end may also be reinforced and strengthened by the cross-bar 8. To one side of the framework thus or otherwise constructed we attach the brackets 9 and 10, which may be secured in any preferred way, as by bolting the same to the framework. The said brackets 9 and 10 serve as a means for carrying the bearing-seats 11, in which is secured the carrying-axle 12, having the carrying-wheels 13 and 14 operatively mounted on the ends thereof, and it is therefore obvious that the entire framework may be readily transported from place to place by means of said wheels, as will be obvious.

In the normally upward end of the framework we mount the longitudinally-movable shaft 15, which fits loosely in suitable openings provided in the cross-bars 4, 5, and 6, as clearly shown in Fig. 1. The lower end of the shaft 15 is provided with the pulley 16, while the upper end carries a similar pulley 17. The pulley 16 is engaged by the controlling-cable 18, which is secured to the cross-bar 6 at a point designated by the numeral 19. The cable 18 is then extended under the pulley 16 and up over the pulley 20 and thence downward around the winding-drum 21, which latter is mounted upon a suitable shaft 22, provided with a handle or controlling-crank 23, whereby the drum may be rotated in either direction, the result being that the force of the cable 18 is thus brought to bear upon the shaft 15, whereby said shaft may be easily raised or lowered to the desired point.

In order to reinforce and properly sustain the upper end of the shaft 15, we provide the collar 24, designed to coöperate with the guy ropes or cables 25, there being any desired number of said cables deemed necessary to sustain our hoisting appliance or derrick in an upright position, it being understood that the lower ends of the cables 25 may be anchored in any preferred way, as by means of the stakes 26 or the equivalent thereof. We also provide the hoisting-cable proper, 27, which is extended over the pulley 17 and is provided at its free end with a hook or clamping member 28, designed to take around the tubing, shafting, or other object to be elevated, it being understood that the other end of the cable 27 is extended downward around the winding-shaft 29, mounted in suitable

bearings 30 in the lower portion of the frame-sections 1 and 2.

Upon the winding-shaft 29 we fixedly key the winding-drum 31, and it is obvious that by extending a cable 32 around said drum and attaching the doubletrees 33 thereto great power may be applied to the winding-shaft 29 when draft-animals are properly connected to said doubletrees, and that a maximum amount of force may be applied to the object to which the hook or clamp member 28 has been connected.

Our hoisting appliance possesses great capacity for lifting heavy objects, as in removing tubing and shafting which may have become very securely fastened in place, and when our hoisting appliance is not required for further use at the point where it is located it may be very readily and cheaply removed to any other point desired.

Inasmuch as the winding-drum 31 is keyed fixedly to the shaft 29 and is of much greater diameter than said shaft, it therefore follows that a great degree of leverage is applied in the lifting operation, as will be obviously clear by reference to Fig. 1.

It will be understood that any suitable form of pawl and ratchet, as designated by the numerals 34 and 35, may be adopted for holding the shafts 21 and 29, respectively, in an adjusted position.

When it is desired to remove our hoisting appliance or portable derrick to another point, the guy ropes or cables 25 are removed and the framework lowered into a horizontal position, which will leave it resting upon the carrying-wheels 13 and 14. The shaft 15 is then moved inward to its fullest extent and the doubletrees then connected to the forwardly-extending bracket 36, the protruding end of the shaft 15 serving as a tongue, to the extreme end of which we have attached a suitable neck-yoke 37 of permanent character, thereby fitting the entire machine for being easily drawn to another point where its use is required.

The various parts of our invention may be cheaply and expeditiously manufactured and each readily assembled in its respective operative position, and while we have described the preferred form or materialization of our invention we desire to comprehend in this application all substantial equivalents and substitutes as may be considered as falling fairly within the scope and purview thereof.

Believing that the construction, advantages, and manner of using our invention have thus been made clearly apparent, further reference to the details is deemed unnecessary.

What we claim as new, and desire to secure by Letters Patent, is—

In a portable derrick or hoisting apparatus, the combination with a framework comprising side pieces converging at their upper ends, a base member at their lower ends and a series of cross-bars connecting said side pieces, a shaft reciprocatingly mounted between said side pieces and cross-bars and means to operate said shaft, of a carrying-truck comprising brackets 9 and 10 having bearing-seats, an axle mounted in said seats, carrying-wheels mounted thereon, a forwardly-extending bracket 36, doubletrees secured to said bracket and a neck-yoke secured to the outer end of said shaft whereby, when the frame is disposed in a horizontal position, the same may be transported upon said truck, said shaft serving as a pole to guide the same, substantially as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WILLIAM C. BOOZ.
AUDLEY M. KRIBBS.

Witnesses:
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