

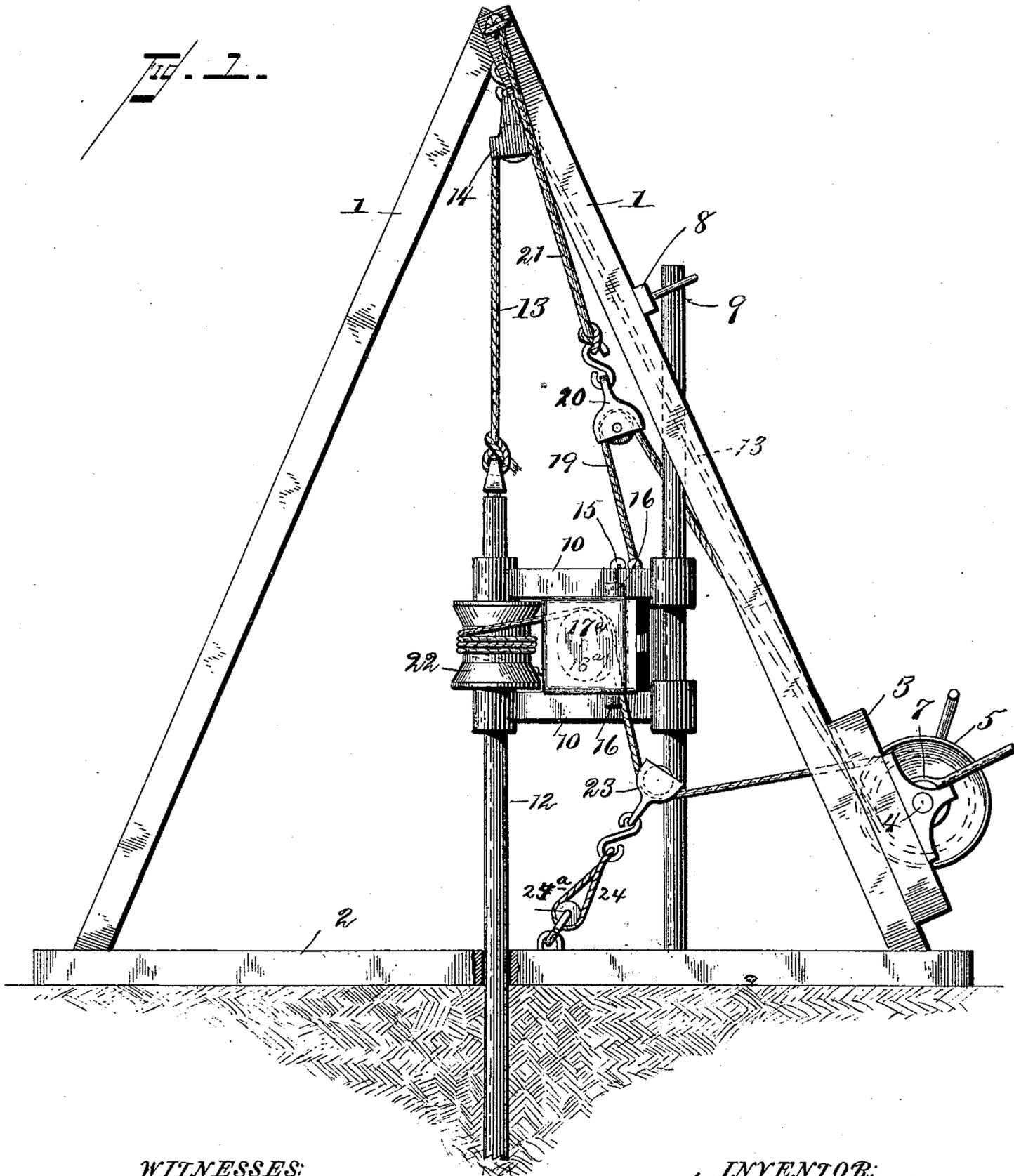
(No Model.)

2 Sheets—Sheet 1.

A. V. JACKSON.
WELL SINKING MACHINERY.

No. 454,870.

Patented June 30, 1891.



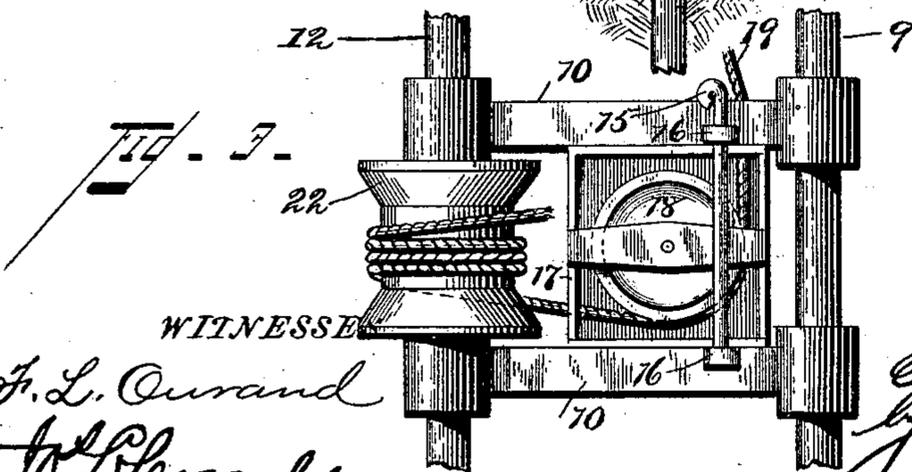
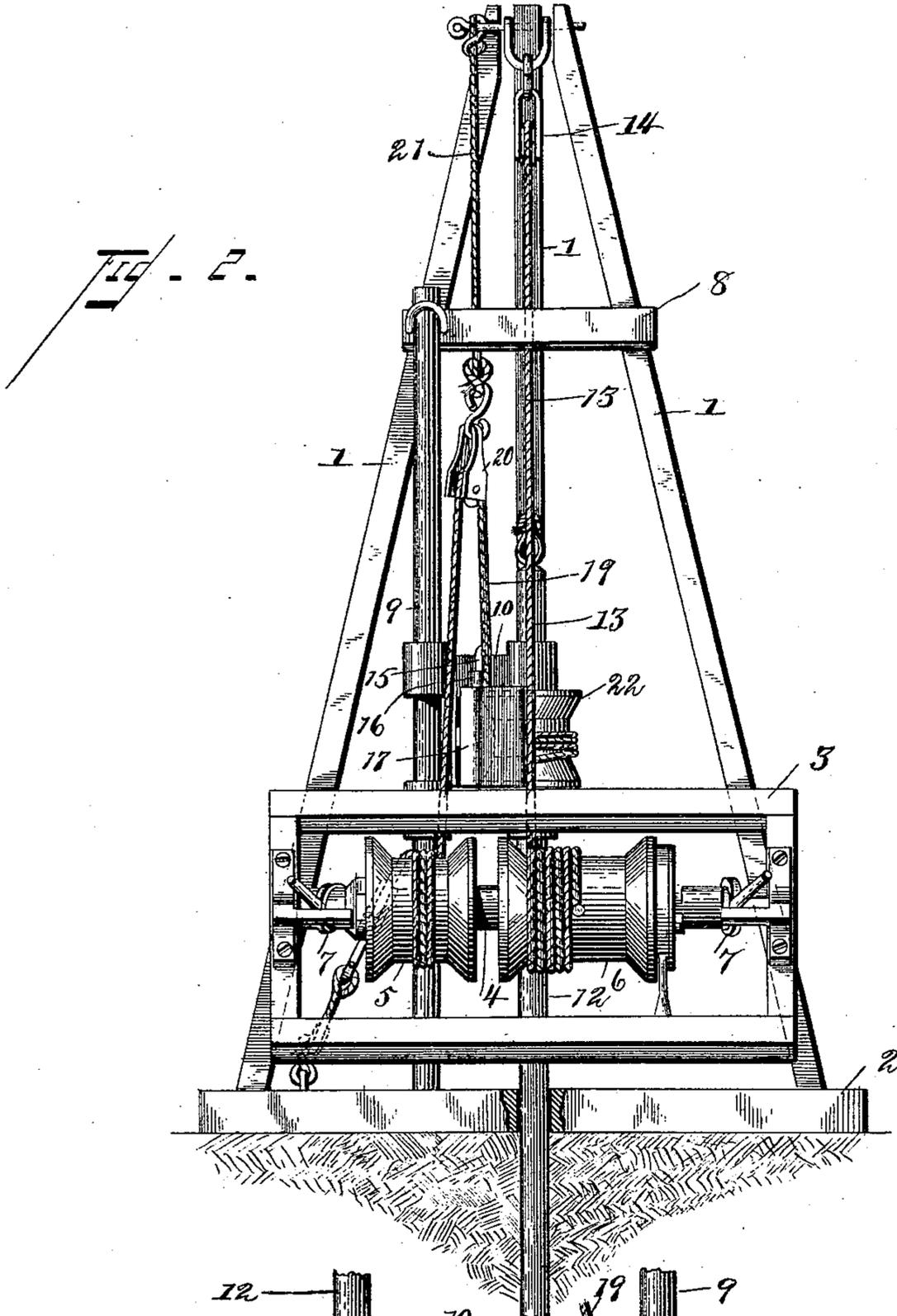
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UNITED STATES PATENT OFFICE.

ANDREW VINCENT JACKSON, OF PALESTINE, ARKANSAS.

WELL-SINKING MACHINERY.

SPECIFICATION forming part of Letters Patent No. 454,870, dated June 30, 1891.

Application filed December 22, 1888. Serial No. 294,443. (No model.)

To all whom it may concern:

Be it known that I, ANDREW VINCENT JACKSON, a citizen of the United States, residing at Palestine, Arkansas, have invented new and useful Improvements in Well-Sinking Machinery, of which the following is a full, clear, and exact specification.

My invention relates to improvements in well-sinking machinery, the object being to provide simple, economical, and efficient means for rotating the drill-bar, and also allowing the drill-bar to have a vertically-reciprocating movement without interfering with its rotary motion.

The invention consists in the novel construction and combination of parts herein-after fully described, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of an apparatus constructed in accordance with my invention. Fig. 2 is a front view of the same. Fig. 3 is a detail view of the sheave-carrying frame.

In the said drawings the reference-numeral 1 designates three uprights, connected together at their upper ends, forming a tripod, which supports the working parts of the apparatus. These uprights may be set in the ground, or their lower ends may be secured to a base 2, provided with an opening for the passage of the drill-bar. Near the lower ends of the two front uprights is secured a rectangular frame 3, in which is journaled a driving-shaft 4, provided with driving-pulleys 5 and 6 and any ordinary clutch mechanism 7 for throwing said pulleys into and out of engagement with said shaft, the latter being driven by any suitable means.

Secured to the base 2 and to a cross-piece 8 near the upper ends of the front uprights is a vertical bar 9, upon which are journaled two horizontal arms 10, which are capable of being moved up and down thereon. The other ends of these arms guide the drill-bar 12, which has secured to its upper end one end of a rope or cable 13, which passes over a sheave 14, suspended in the upper part of the tripod. This rope then passes to the pulley 6, and is secured thereto.

Pivoted to the arms 10 by means of the vertical pivot-bars 15, passing through lugs 16 in said arms, are the rectangular sheave-blocks 17 17^a, carrying the sheaves 18 18^a.

The numeral 19 designates an endless rope

or cable, which is wound several times around the pulley 5, from whence it passes to a sheave 20, suspended from the tripod by means of rope 21. It then goes to sheave 18, in block 17, to and around a spool 22, rigidly secured to the drill-rod intermediate of the arms 10. Said rope then passes to sheave 18^a in block 17^a, to and around a sheave 23, connected by means of rope 24 with a pulley 24^a, secured to the base 2, and from thence to said driving-pulley 5.

From the above it will be seen that by the revolution of the shaft 4 and driving-pulley 5 the drill-bar will be rotated through the medium of the endless rope or cable. The frame carrying the sheave-blocks is also capable of being vertically reciprocated on the standard to which it is journaled, carrying with it the drill-bar and its spool, so that the rotary motion of said drill-bar will not be interfered with.

By means of rope 24 and sheave 23 the tension of the endless rope may be regulated.

Having thus described my invention, what I claim is—

1. In well-sinking machinery, the combination, with the supporting uprights having a driving-shaft provided with pulleys, of the vertical standard, the arms journaled thereon, the sheave-blocks pivoted to said arms and provided with sheaves, the drill-bar to which said arms are journaled, the spool secured to the drill-bar, and the endless rope or cable, substantially as described.

2. In well-sinking machinery, the combination, with the supporting uprights having a driving-shaft provided with pulleys fixed thereon, of the vertical standard, the drill-rod, the horizontal arms journaled to said standard and drill-rod, the sheave-blocks pivoted to said arms and provided with sheaves, the spool fixed to the drill-bar intermediate of said arms, the endless rope, the sheaves connected with the uprights and base, over which said rope passes, and the rope secured to the drill-bar and one of the pulleys on the driving-shaft, and the sheave suspended from the uprights over which said rope passes, substantially as described.

ANDREW VINCENT JACKSON.

Witnesses:

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