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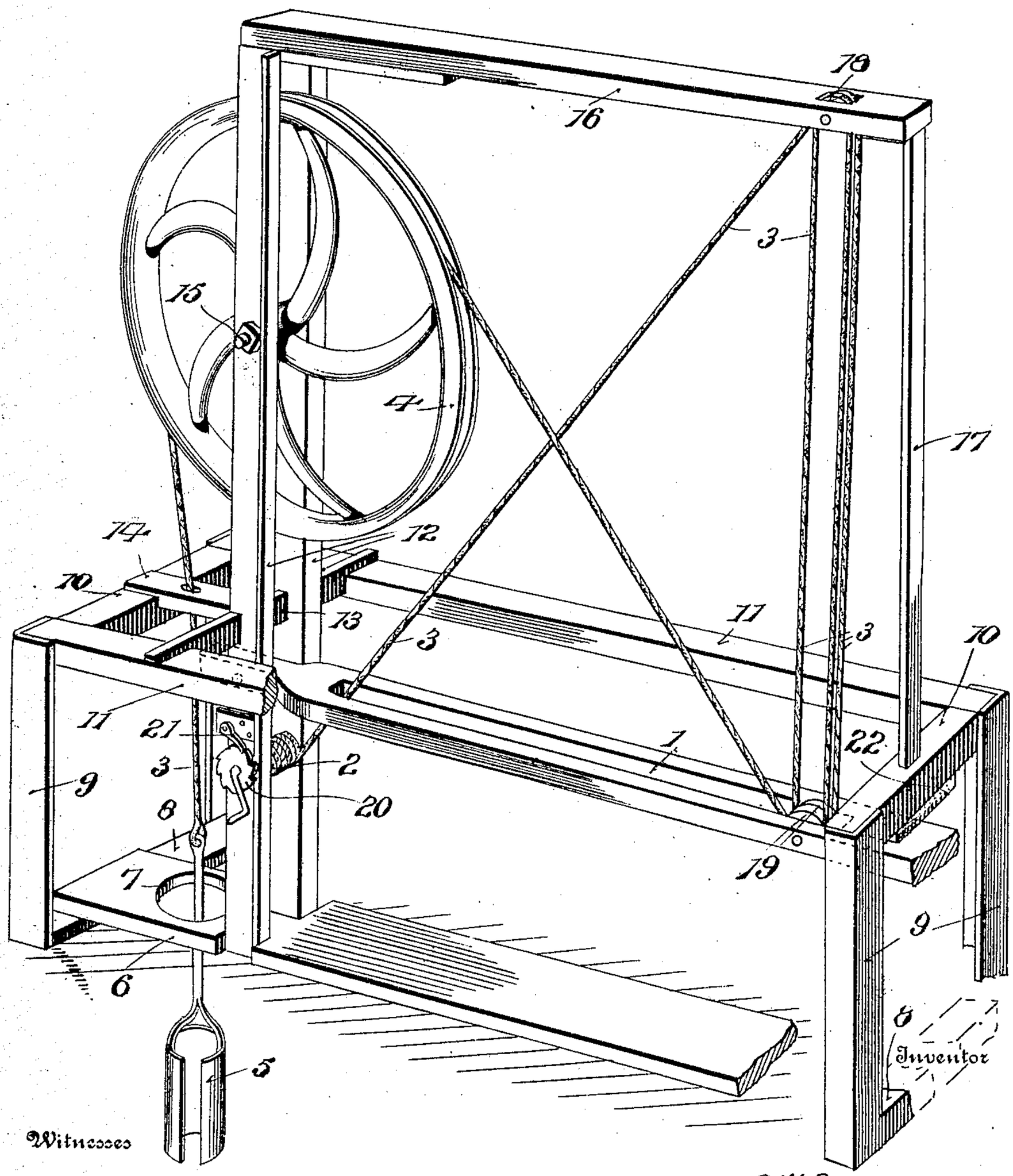
G. W. DOSS.

WELL DRILLING MACHINE.

APPLICATION FILED JUNE 18, 1907.



Witnesses

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WELL-DRILLING MACHINE.

No. 870,765. Specification of Letters Patent. Patented Nov. 12, 1907.

Application filed June 18, 1907. Serial No. 379,627.

To all whom it may concern:

Be it known that I, GEORGE W. DOSS, a citizen of the United States, residing at Erick, in the county of Greer and Territory of Oklahoma, have invented certain new and useful Improvements in Well-Drilling Machines, of which the following is a specification.

This invention provides a mechanism for spudding or boring Artesian and oil wells, the purpose being to provide a mechanism which may be manually operated and provide an increased stroke of the drill, spud or boring tool.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawing.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawing which is a perspective view of a machine embodying the invention.

The machine comprises, in its organization, an operating lever 1, a windlass 2, an operating cord, rope or cable 3, bull-wheel 4 and a series of pulleys for the operating cord or rope. The spudding or drilling tool 5 is attached to the cord or rope 3 and may be of any type according to the nature of the work and the soil to be operated upon.

The framework for supporting the working parts may be of any construction and comprises a base 6 having an opening 7 near one end for the spud or drilling tool 5 to operate through so as to prevent injury to the well. Cross pieces 8 are secured to opposite end portions of the base 6 and corner posts 9 rise vertically from the ends thereof and are connected at their upper ends by cross pieces 10 and longitudinal timbers 11. Spaced uprights 12 rise from the base 6 and are connected midway of their ends by means of a cross piece 13, which is also connected to the longitudinal timbers 11. A short longitudinal bar 14 connects the cross piece 13 with the cross piece 10 at the end of the frame adjacent to the well and is formed with an opening for the operating cord or rope 3 to pass through. The bull-wheel 4 is arranged between the upper portions of the spaced uprights 12 and is mounted upon a bolt 15 connecting the same. A longitudinal timber 16 is secured at one end to the upright 12 and at its opposite end to an upright 17 rising from the cross piece 10 at the end of the frame remote from the well. The operating lever 1 is pivoted between the uprights 12 and may be of any length to admit of the spudding tool being readily operated by hand.

In order to provide for an increased stroke of the spudding or drilling tool, the operating cord or rope 3, after passing over the bull-wheel 4, passes around a series of pulleys 18 and 19, the pulleys 18 being applied to the longitudinal timber 16 and the pulleys 19 fitted to the operating lever 1. The operating lever is slotted to admit of the passage of the cord or rope 3 therethrough and also to receive the pulleys 19. The pulleys 18 and 19 may be single or double according to the relative length of the stroke of the spudding tool 5 and the operating lever 1, it being understood that by increasing the number of the pulleys and passing the operating rope around the same after the fashion of a burton or block and tackle, the length of stroke of the spudding tool 5 is proportionately increased with reference to the length of stroke of the operating lever. The end of the operating cord or rope 3 is fast to the windlass 2 and is wound thereon and as the work progresses the spudding tool or drill is lowered or permitted to feed by turning the windlass 2 so as to unwind the cord or rope 3 therefrom. A ratchet wheel 20 and pawl 21 coöperate with the windlass 2 to hold the same in an adjusted position.

For drilling, spudding or boring a well, the machine herein disclosed is placed in position with the opening 7 in the base 6 in line with or over the well, and after the spudding or drilling tool 5 has been attached to the operating cord, rope or cable 3 and the latter properly adjusted, the spudding or drilling is effected by operating the oscillating lever 1, and as the work progresses, the windlass 2 is manipulated to play out the cord or rope 3, thereby to admit of the spudding tool feeding as the well deepens.

It will be understood that the machine, besides being light running, may be cheaply operated, since the lever 1 may be worked by hand.

To ease the upward stroke of the operating lever 1, a bumper 22 is fitted to the underside of the cross piece 10 from which the upright 17 rises, said bumper consisting of a cushion of any nature.

Having thus described the invention, what is claimed as new is:

In a machine of the character specified, the combination of a base having an opening to correspond with the well to be drilled, spaced uprights rising from said base, a bull-wheel mounted upon the upper portions of said spaced uprights, an operating lever having one end passed between said uprights and fulcrumed thereto and formed with a longitudinal slot, an upper longitudinal timber, pulleys applied to said longitudinal timber and the operating lever, a windlass, and an operating rope having a spudding tool connected with one end and having its opposite end wound upon the said windlass, and said rope being passed over the bull-wheel and around the pulleys applied to the said longitudinal timber and operating lever.

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

GEORGE W. DOSS. [L. S.]

Witnesses:
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