

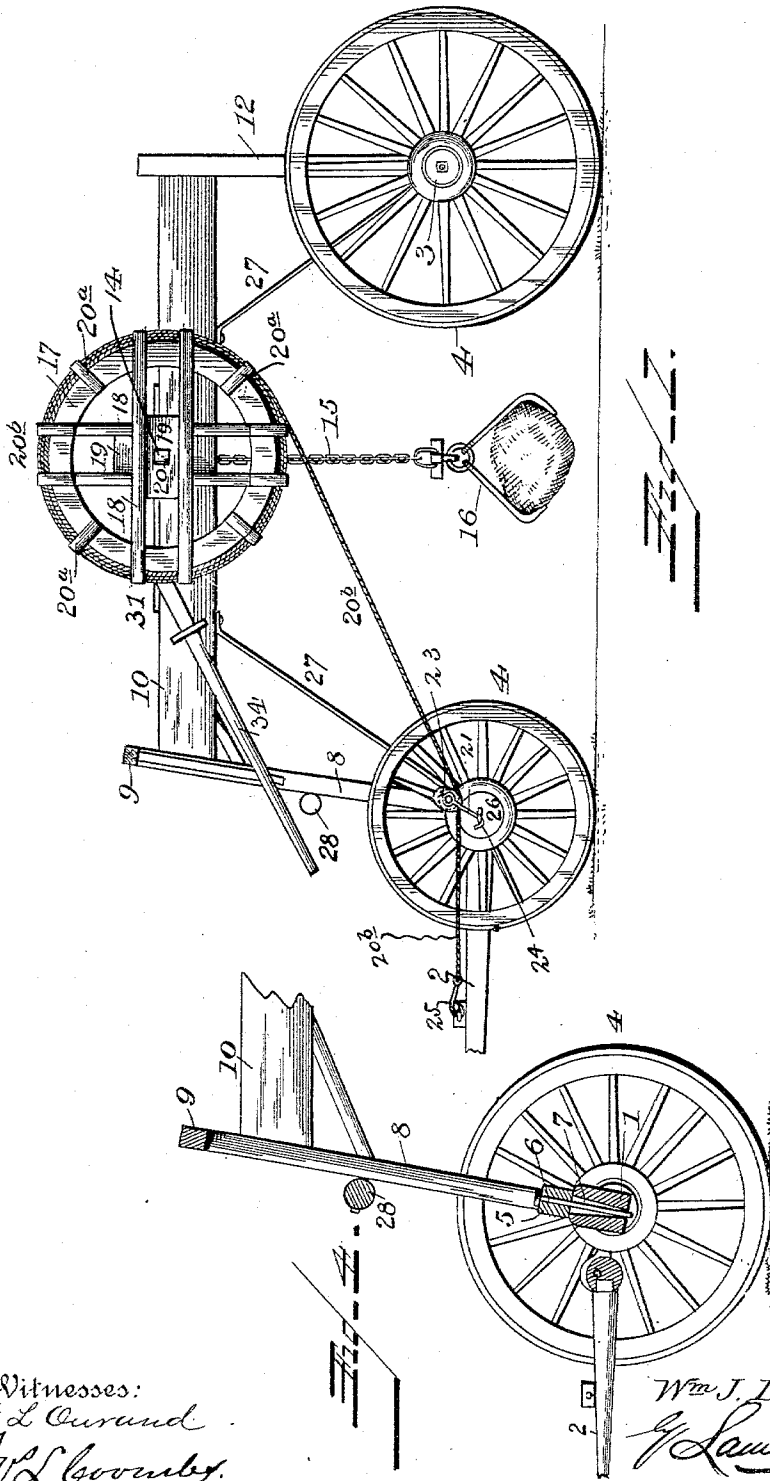
(No Model.)

2 Sheets—Sheet 1.

W. J. DOYLE.
STONE LIFTING MACHINE.

No. 566,745.

Patented Sept. 1, 1896.



Witnesses:
F. L. Curand
J. L. Coombs

Inventor:
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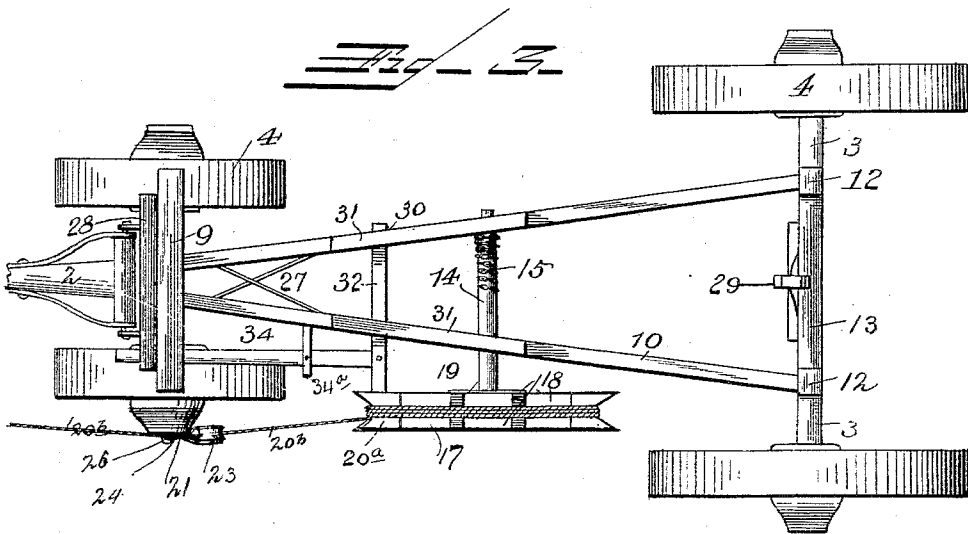
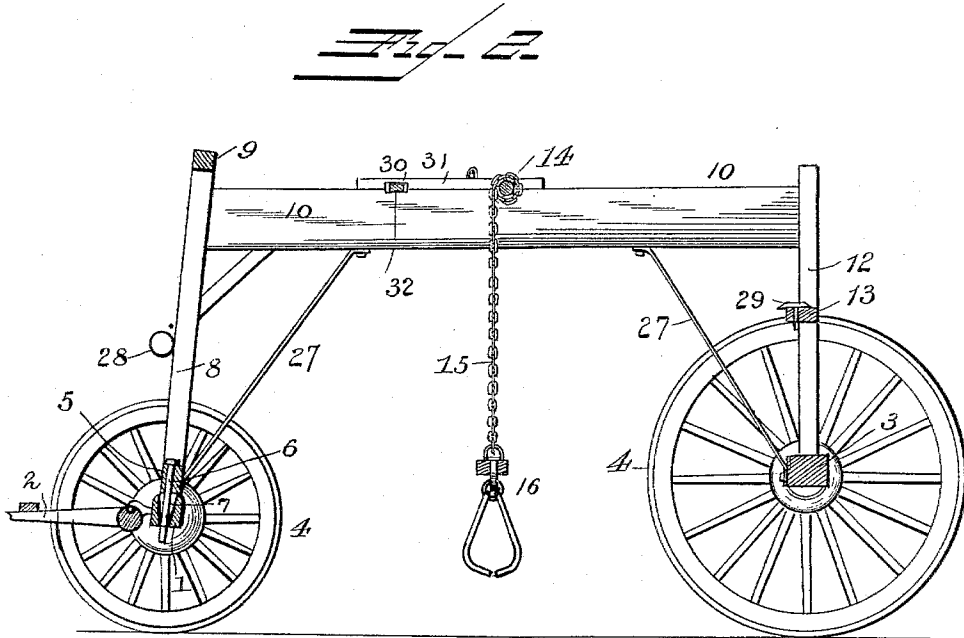
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W. J. DOYLE.
STONE LIFTING MACHINE.

No. 566,745.

Patented Sept. 1, 1896.



Witnesses:
F. L. Curand
W. L. Coombs

Inventor:
W. J. Doyle,
by Louis Duggan & Co
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM JOHN DOYLE, OF MERRICKVILLE, CANADA.

STONE-LIFTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 566,745, dated September 1, 1896.

Application filed September 3, 1895. Serial No. 561,267. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM JOHN DOYLE, a subject of the Queen of Great Britain, and a resident of Merrickville, in the county of Greenville, Province of Ontario, Canada, have invented certain new and useful improvements in Stone-Lifting Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in machines for lifting and transporting stones, and is designed more especially for use on farms, whereby large stones may be removed from the field and conveyed to any desired point to build a fence.

The object of the invention is to provide an improved construction of the same whereby I secure important advantages with respect to efficiency in operation.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a machine constructed in accordance with my invention. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a plan view. Fig. 4 is a detail sectional view of the front axle and bolster.

In the said drawings, the reference-numeral 1 designates the front axle, with which the tongue 2 is connected; 3, the rear axle, and 4 the wheels. At the front of the machine is a bolster 5, connected with the front axle by a king-bolt 6, which passes through a circular hole in the bolster and also through a tapering slot 7 in the axle. The object of this tapering slot is to allow the king-bolt to play therein, so that in turning on uneven ground there will be no liability of the king-bolt breaking, which is frequently the case when straight holes or holes of the same size throughout are used to receive the lower end of the king-bolt. Secured to the said bolster are uprights 8, inclined slightly to the rear and contracted at their upper ends, which are connected together by a cross-bar 9. Secured to said uprights are two rearwardly-

extending beams 10, the rear ends of which are separated or spread apart and are secured to standards or uprights 12, which incline slightly forward. These standards or uprights are connected together by a cross-bar 13 and their lower ends secured to the rear axle.

Journalled to the beams 10 is a windlass 14, to which is secured one end of a chain 15, the opposite or free end of which is provided with a hook or grapnel 16. Secured to one end of the windlass is a drum consisting of a ring 17, to which are secured on opposite sides two diametric bars 18. The bars on one side are at right angles to those on the other, and secured thereto at the centers thereof are metal plates 19, formed with angular holes 20, through which the correspondingly-formed end of the windlass passes, so that as the drum is rotated the windlass will rotate therewith. The ends of these bars project beyond the periphery of the ring, and are beveled on their inner sides to form guides for a rope secured thereto. Short bars 20^a are also secured to both sides of the ring at suitable points with their ends beveled and projecting beyond the periphery of the ring similar to the ends of the bars 18. The rope 20^b, secured to the drum, is wound thereon and its free end passes through a sheave or block consisting of the yoke 21, pulleys 23, and a hook 24, and at its extremity the rope is provided with a hook 25. The hook 24 is adapted to engage with an eye 26 on the end of the front axle, while hook 25 is adapted to engage with the whiffletree, to which the draft-animals are connected.

The numeral 27 designates brace-rods, 28 a transverse snubbing-bar on the front uprights upon which the rope is wound when a stone has been lifted or elevated, and 29 a pick carried by the cross-bar of the rear uprights or standards for drilling holes in rocks.

Passing through guides 30 in bars 31, secured to the beams 10, is a transverse locking-bar 32, one end of which is adapted to engage with one of the bars in the inner side of ring 17 and prevent rotation of the drum. A lever 34 is pivoted to this bar for throwing it into and out of engagement with the drum. This lever is fulcrumed to an arm 34^a, fulcrumed to one of the beams 31.

The operation is as follows: The grapnel of the windlass-chain is connected with the stone to be raised in any manner found convenient and the sheave of the block of the drum-rope connected with the eye on the frontaxle. The locking-bar 32 is then pushed back out of engagement with the drum and the hook 25 of the rope engaged with the whiffletree, to which the draft - animals are connected. By now driving the animals forward the rope will be unwound from the drum, rotating the windlass and causing the chain to be wound thereon, and the stone lifted. The locking-bar is then actuated by the lever to engage with and lock the drum, and the end of the drum-rope is disengaged from the whiffletree and wound several times upon the bar 28. The animals are then hitched to the machine and the stone transported to where the fence is to be built. The front wheel can be turned short around, so that the rear wheels need not travel over the place from which the stone was removed. When the machine reaches the point where the stone is to be deposited, the locking-bar is disengaged from the drum and the stone allowed to drop or fall gradually by slackening the rope wound around the snubbing-bar.

Having thus fully described my invention, what I claim is—

1. In a stone lifting and transporting machine, the combination with the axle, the wheels, the standards and the beams, of the windlass and chains, the drum consisting of the ring, the bars on opposite sides thereof, having beveled ends projecting beyond the periphery of the ring the plates secured thereto, the short beveled bars, the rope secured to the rim, the hook on the end of the rope, the pulley and its hook, substantially as described.

2. In a stone lifting and transporting machine, the combination with the axle, the wheels, the standards and the beams, of the windlass and chains, the drum consisting of the ring the bars on opposite sides thereof, having beveled ends projecting beyond the periphery thereof, the plates secured thereto, the short beveled bars, the rope secured to the rim, the transverse locking-bar and the lever connected therewith, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

WILLIAM JOHN DOYLE.

Witnesses:

AMY M. BARKER,

JOHN W. BARKER.