(No Model.)

W. A. HOOPER & R. F. HAMBLEN.

HAY DERRICK.

No. 383,358. Patented May 22, 1888.

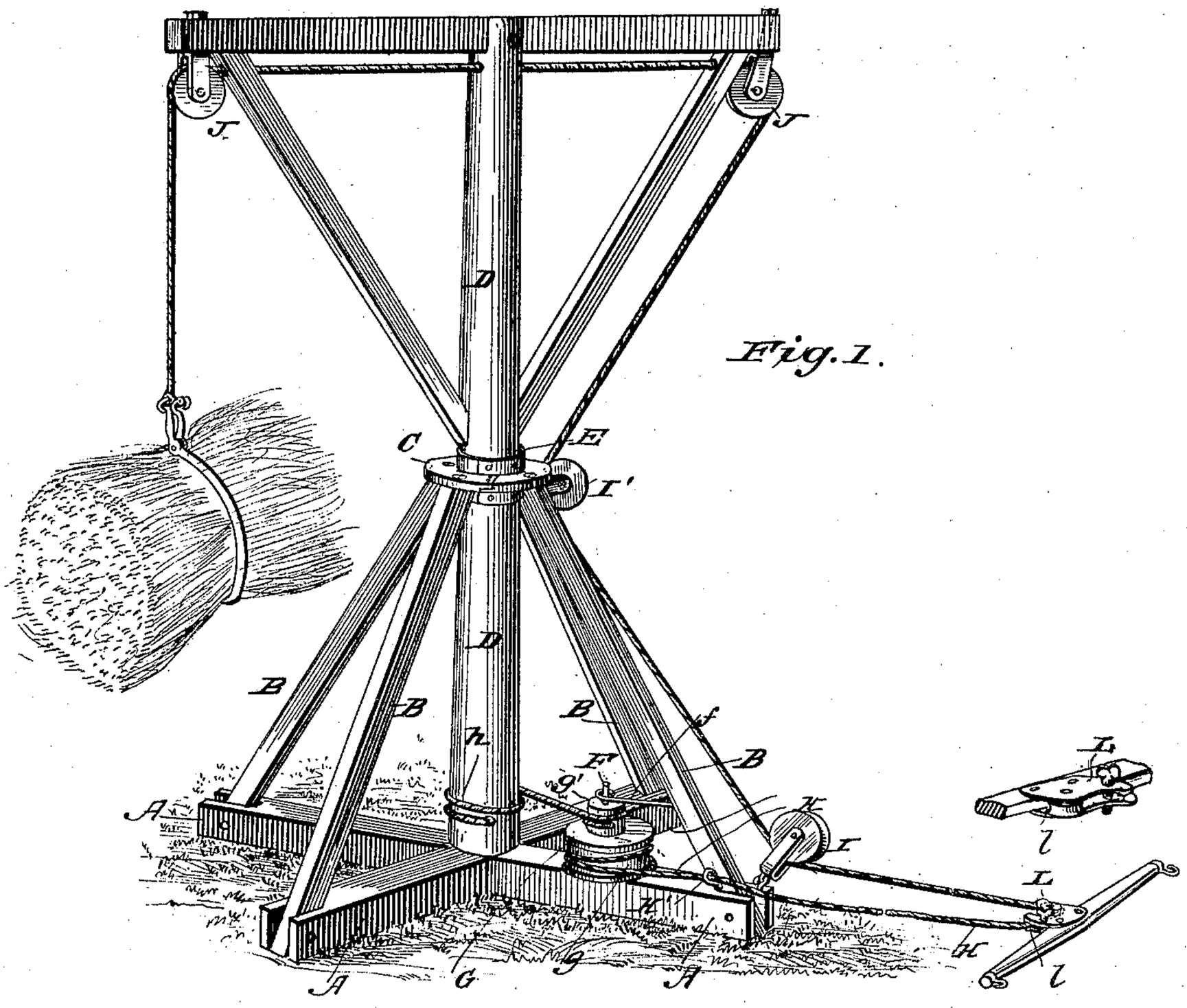

Fig. 1.

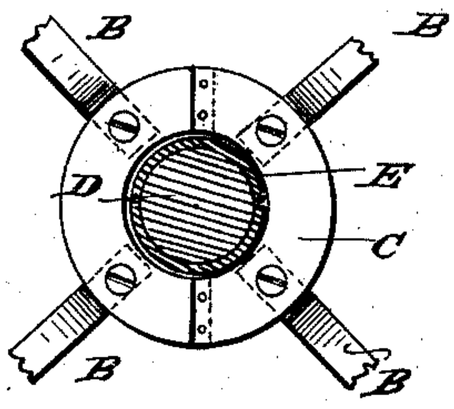

Fig. 2.

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WILLIAM A. HOOPER AND RODNEY F. HAMBLEN, OF MARYVILLE, MISSOURI.

HAY-DERRICK.

SPECIFICATION forming part of Letters Patent No. 383,358, dated May 22, 1888.

Application filed January 7, 1888. Serial No. 260,262. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM A. HOOPER and RODNEY F. HAMBLEN, of Maryville, in the county of Nodaway and State of Missouri, have invented a new and useful Improvement in Hay-Derricks, of which the following is a specification.

This invention is an improvement in hay-derricks; and it consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of the apparatus, and Fig. 2 is a detail view.

The base-frame comprises sills A A, braces B, and ring or collar C. The sills cross each other at right angles, and are provided at their juncture with a step or bearing for the lower end of the mast D. The braces B are secured at their lower ends to the sills at the outer ends of such sills, and are secured at their upper ends to the collar C. This collar forms a bearing for the mast D, which is provided with a re enforce sleeve, E, to fit within the collar C. The sleeve E is preferably formed in sections to facilitate its application to the mast, and it is also preferred to form the collar in sections for convenience in raising the mast.

The mast is journaled, as described, in and projects above the base-frame, and has the cross tree or beam fixed at its center to the upper end of the mast and projected equally on opposite sides of such mast. Brace-bars extend between the outer ends of the cross-beam and the mast and serve to strengthen such beam in position.

In the base-frame, and usually on one of the sills thereof, we support a short shaft, F, braced by rod *f*. On said shaft we journal drum G, having portion *g* and a smaller portion or hub, *g'*, the latter being connected by rope or chain *h* with the mast, and the portion *g* having the draft cord or chain H. By winding cords H *h* on the windlass and the cord *h* on the mast in the manner shown, draft exerted on the rope H will operate to turn the mast and consequently the cross-beam, as will be understood.

A guide, H', which may be an eye or loop, as shown, is provided on the base-frame in front of the windlass. An outer guide-pulley, I, is supported on the base-frame at the lower outer edge thereof in about line with the guide H' and the windlass, and an inner guide-pulley, I', is supported on the collar C in line with pulley I.

Guide-pulleys J J depend from the opposite ends of the cross-beam. The rope H, which passes outward through guide-eye H', passes through a guide on the whiffletree, thence back under the pulleys I I', and up over the pulleys J J, with its end depending and adapted to receive the load of hay, to which end it may be provided with a suitable horse hay-fork or other suitable device for securing the hay. By means of the pulleys J J, I', and I we secure practically a central draft, and the mast with its cross-beam may be turned to any desired degree and may be brought into position for elevating the hay. We provide on the whiffletree a guide, *l*, for the rope.

A suitable clamp, L, (it may be a screw-clamp, as shown,) may be provided for clamping the rope at will to the whiffletree, so that slack may be paid out between said whiffletree and the windlass, by the amount of which slack the operator may regulate the height to which the hay will be elevated before the mast will be turned to bring the hay over the rick or stack being formed.

Having thus described our invention, what we claim as new is—

1. The combination of the base-frame having an outer guide-pulley at its lower end and an inner guide-pulley at its upper end, the mast, the cross-beam secured centrally between its ends to the said mast and provided at its opposite ends with guide-pulleys, and the rope disposed over said pulleys, substantially as set forth.

2. The combination of the base-frame, the mast journaled therein, the cross-beam fixed thereto and having guide-pulleys for the hoisting-rope, the windlass journaled in the base-frame, a rope connecting said windlass and mast, whereby the turning of the former will effect a turning of the latter, and the draft-rope connected with said windlass, substantially as set forth.

3. The combination, with the base-frame, the windlass, the mast having a cross-beam, and the

guide-pulleys, of the rope connecting the windlass and the mast, the whiffletree having a guide and a clamp for the rope, and the rope secured at one end to the windlass passed through the guide of the whiffletree, thence disposed around the guide-pulleys, and depending at one end from the cross-beam, substantially as set forth.

4. The improved hay-derrick consisting of the base-frame having sills crossing each other at right angles, the diagonal braces and the collar supported at the upper end of the said braces, the mast having the cross-beam secured to and extended equally on opposite sides thereof, the diagonal braces supporting said cross-beam, the guide-pulleys, the windlass, the rope connecting the windlass and mast, and the draft-rope, all substantially as and for the purposes specified.

5. The combination, in a hay-derrick, of the base-frame, the mast suitably journaled and provided with the cross-beam having guide-pulleys, the windlass supported in the base-frame and connected with the mast, and the rope connected with said windlass and also disposed over the pulleys of the cross-beam, substantially as set forth.

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