

No. 706,943.

Patented Aug. 12, 1902.

A. HODGSON.
DERRICK.

(Application filed Mar. 14, 1902.)

(No Model.)

Fig. 1.

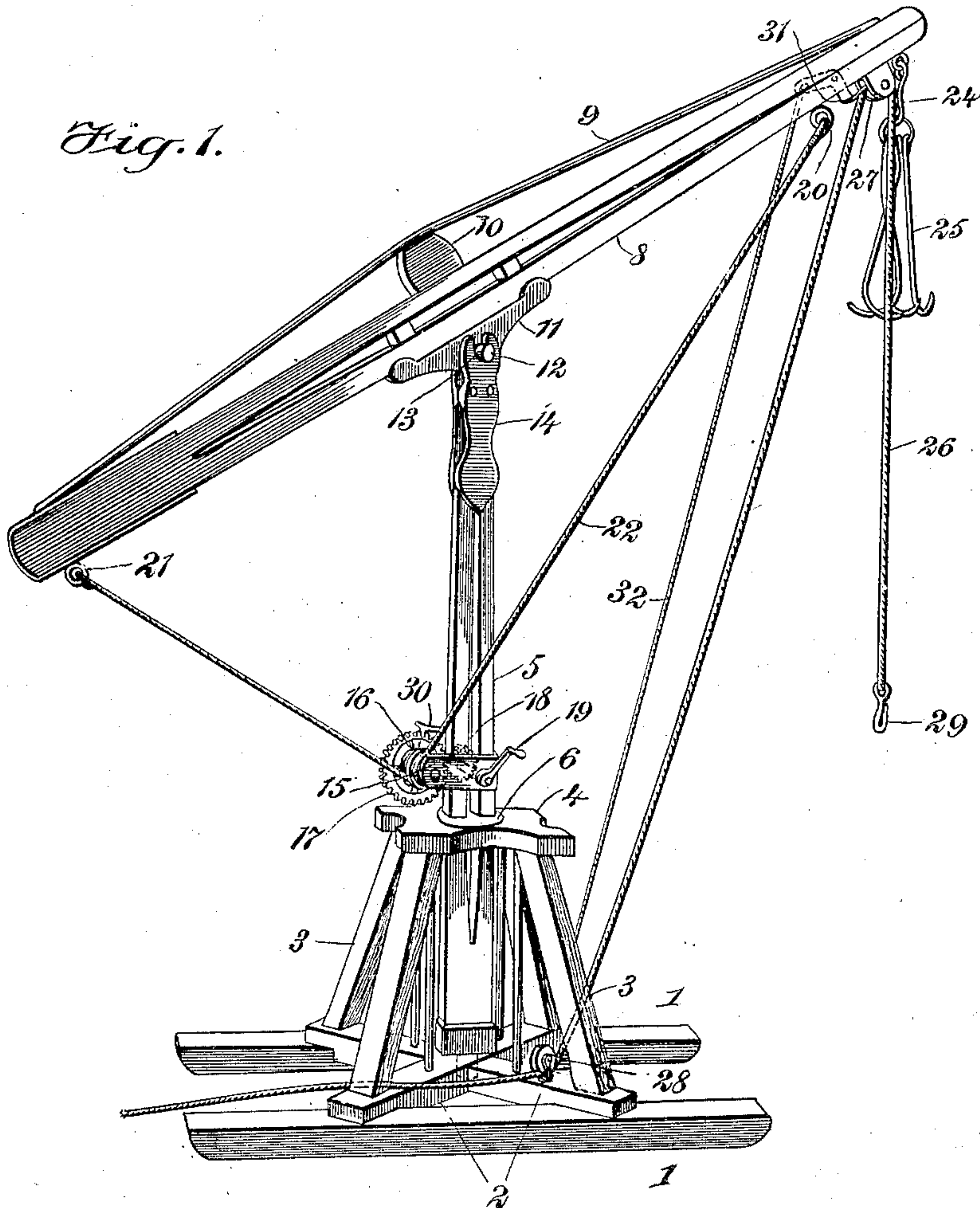


Fig. 2.

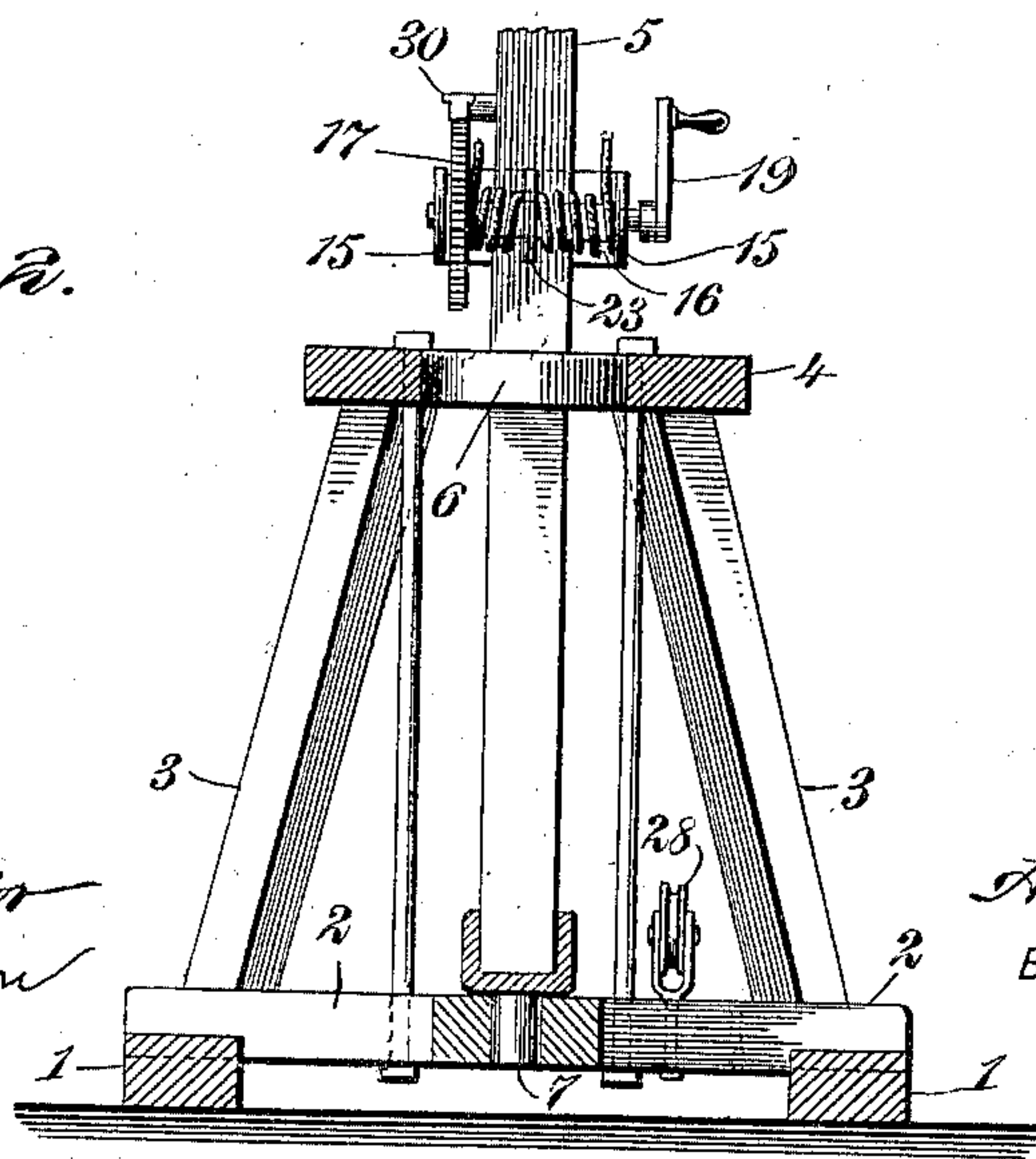
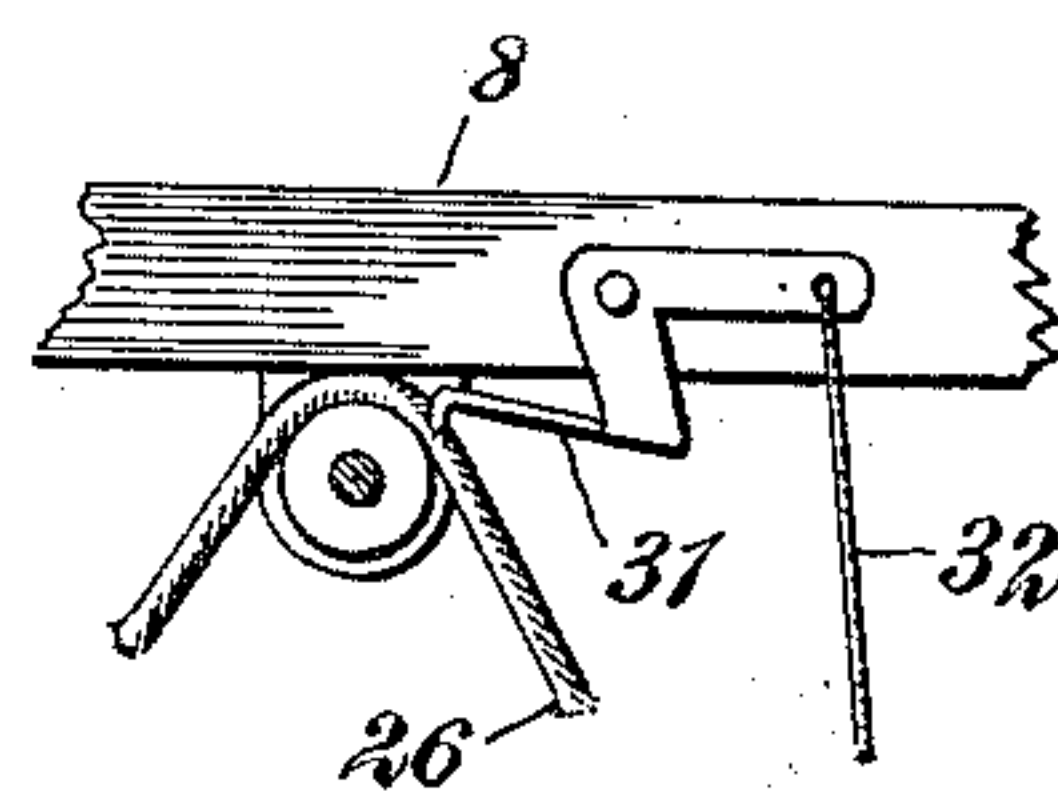


Fig. 3.



WITNESSES:

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DERRICK.

SPECIFICATION forming part of Letters Patent No. 706,943, dated August 12, 1902.

Application filed March 14, 1902. Serial No. 98,186. (No model.)

To all whom it may concern:

Be it known that I, ALVIN HODGSON, a citizen of the United States, and a resident of South Ottumwa, in the county of Wapello and State of Iowa, have invented a new and Improved Derrick, of which the following is a full, clear, and exact description.

This invention relates to improvements in derricks; and the object is to provide a derrick of simple construction that will be found comparatively useful on a farm for lifting and moving heavy weights, such as hay-racks, wagon-bodies, suspending slaughtered animals for dressing, lifting timbers, and, in fact, all articles too heavy to be manually lifted.

I will describe a derrick embodying my invention and then point out the novel features in the appended claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a derrick embodying my invention. Fig. 2 is a vertical section of the lower portion thereof, and Fig. 3 is a detail showing a rope-gripping device employed.

The base of the derrick comprises the bottom rails 1, connected by crossed timbers 2, from the ends of which standards 3 extend, and to the top of the standards is attached a table 4. It will be noted that the ends of the base or bottom pieces 1 are curved upward, so that they practically form runners, whereby the derrick may be easily drawn over the ground. The derrick-post 5 has secured to it a metal plate 6, arranged to rotate in an opening in the table 4, and at the lower end the post has a step-bearing 7 in the crossed timbers 2. By this means the post can be readily lifted out when the derrick is to be dismembered for packing away.

Mounted to swing on the post 5 is the derrick-beam 8, which is longitudinally braced by a rod 9, connected to the beam near its ends and arched upward at the center, and between this central portion and the beam is a block 10. A casting 11, secured to the under side of the beam, has trunnions 12 for engaging in outwardly-opening bearings 13 in the upper ends of metal plates 14, secured to the post 5. Therefore the derrick-beam may

be readily removed from the post when desired.

Having bearings in plates 15, attached to the post 5 just above the table 4, is a winding-drum 16, on one end of the shaft of which is a gear-wheel 17, meshing with a pinion 18, and on the shaft of this pinion is an operating-crank 19. From eyes 20 and 21 at opposite ends of the derrick-beam a rope 22 extends to the drum 16. The two stretches of this rope are turned in opposite directions around the drum, so that upon rotating the drum one end of the rope will serve to move the opposite end of the beam upward, the rope-section connecting with the upwardly-moving portion of course unwinding from the drum. The rope may be made of a single length, in which case it is passed through an opening in a disk 23 at the center of the drum. By this arrangement the rope may be adjusted as to the lengths of its ends.

One end of the derrick-beam is provided with a hook 24 for engaging grappling-hooks 25, designed for use in lifting barrels, boxes, bales, or the like. A hoisting-rope 26 passes over a pulley 27 on the derrick-beam and thence down underneath a pulley 28 on the base. This rope 26 is designed for use in moving hay from a wagon to a stack or hay-mow—that is, a horse may be hitched to the free end of the rope 26 and a load attached to the hook 29. Then when the load is sufficiently elevated the derrick may be rotated to carry the load to a stack or other place, where it is dumped. When the device is thus used, the derrick-beam is to be held in its elevated position. For this means I provide a dog 30, pivoted to the post 5 and designed to engage with a tooth of the gear-wheel 17, and during the rotary movement of the derrick with a load the rope 26 is held from slipping with the load by means of a locking-latch 31, pivoted to the beam and having at one end a tooth or point adapted to engage in the rope, while from the other end a releasing-cord 32 extends downward to be in convenient reach of an operator. Obviously after moving the load to the proper place to be dumped by pulling downward on the cord 32 the holding-latch will be moved out of connection with the rope, so that the load may be lowered.

It will be noted that the pivotal point of the

beam is at one side of its center. The short end may be used in lifting heavy loads, while the long end may be used for lifting a load to a high elevation.

5 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

10 In a derrick, a base comprising bottom rails, standards on the rails, a table supported on the standards and having an opening, a post having a step-bearing in the bottom rails, a plate secured to the post and having a bear-

ing in said opening, a beam mounted to swing on the post, a winding-drum carried by the post, and rope connections between said drum 15 and the end of the beam, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALVIN HODGSON.

Witnesses:

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