No. 750,882. PATENTED FEB. 2, 1904.

R. S. MORSE.

HAY STACKER.

APPLICATION FILED JULY 23, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

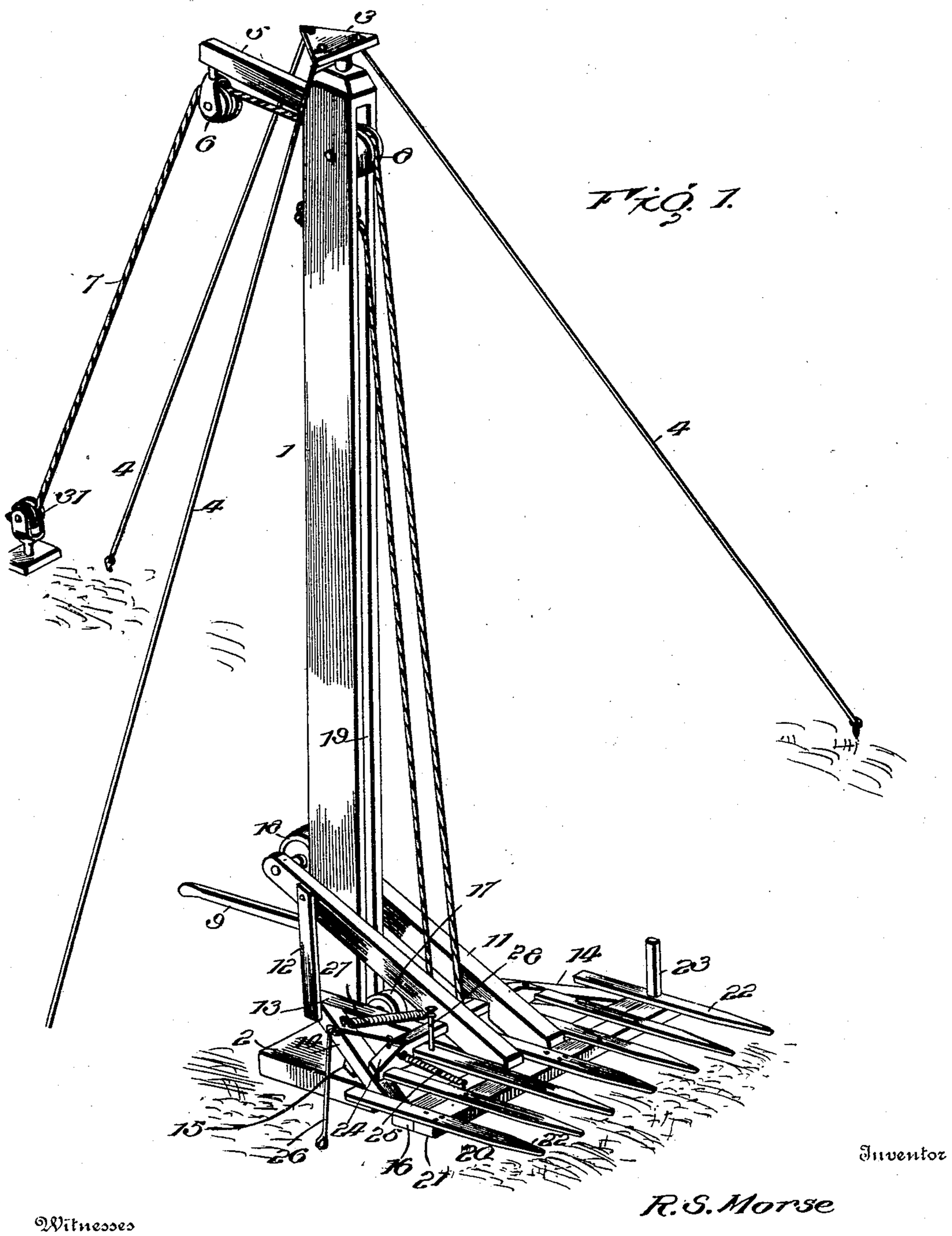

FIG. 1.

Witnesses

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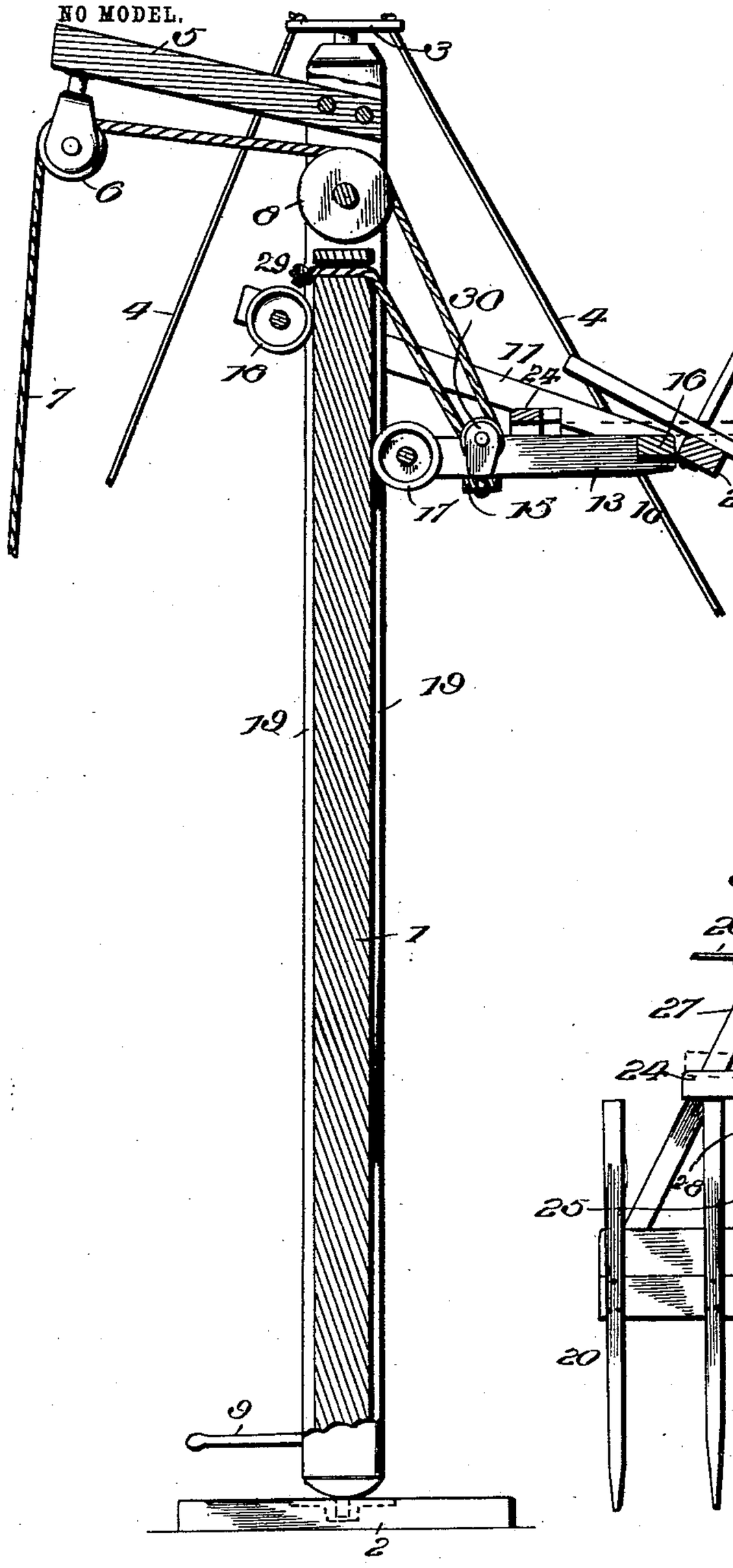

FIG. 2.

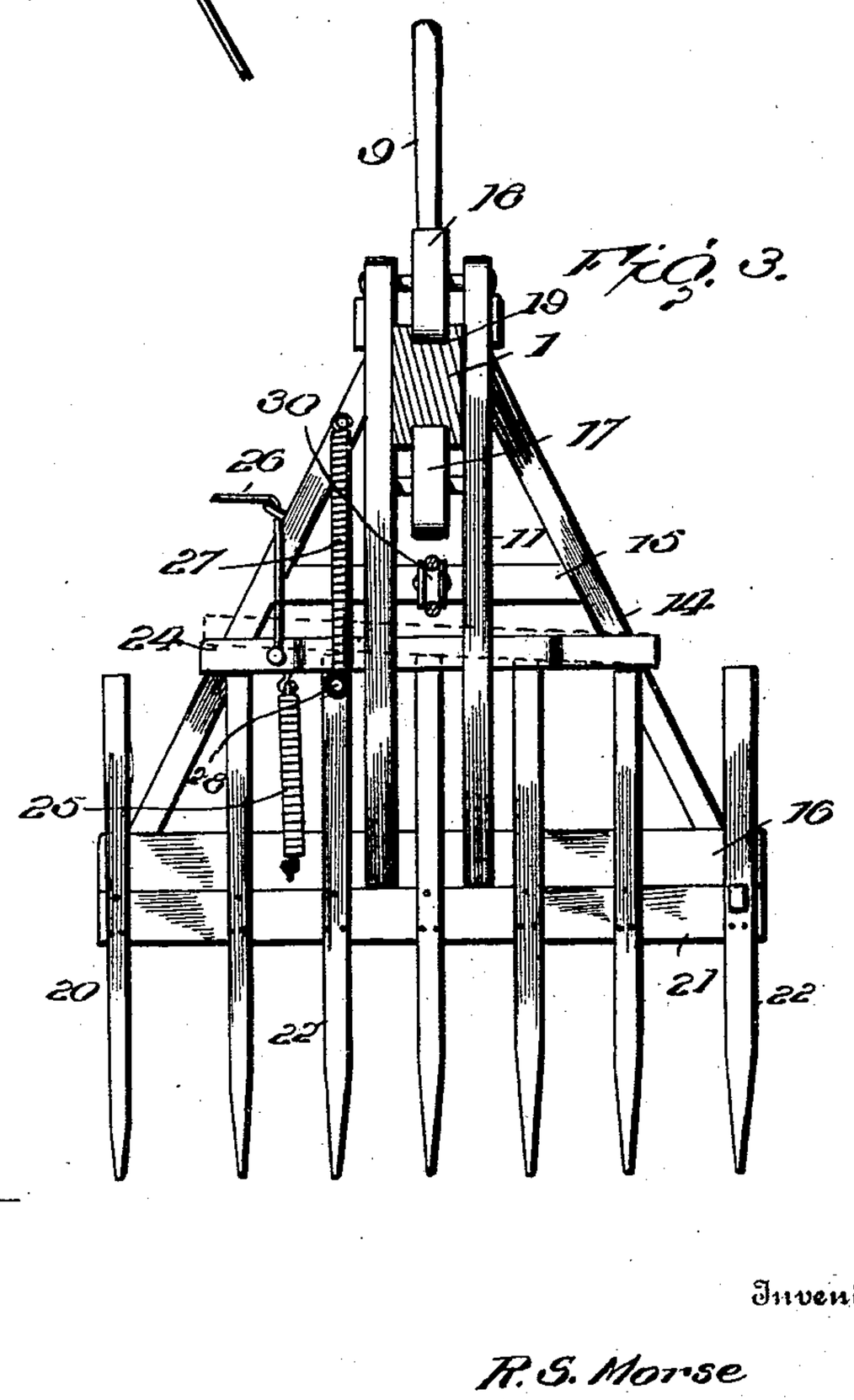

FIG. 3.

Witnesses

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No. 750,882. Patented February 2, 1904.

UNITED STATES PATENT OFFICE.

ROBERT S. MORSE, OF FORMOSO, KANSAS.

HAY-STACKER.

SPECIFICATION forming part of Letters Patent No. 750,882, dated February 2, 1904.

Application filed July 23, 1903. Serial No. 166,763. (No model.)

To all whom it may concern:

Be it known that I, ROBERT S. MORSE, a citizen of the United States, residing at Formoso, in the county of Jewell and State of Kansas, have invented certain new and useful Improvements in Hay-Stackers, of which the following is a specification.

This invention appertains to hoisting apparatus for lifting the load and dumping it upon a pile, and in its special adaptation relates to means for stacking straw, the mechanism comprising a vertical turn-post, a frame arranged to travel up and down upon the turn-post, hoisting-tackle for the frame, a fork or carrier pivoted to the frame, and a latch and trip mechanism coöperating therewith.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a stacker embodying the invention. Fig. 2 is a vertical central section thereof, the frame being elevated and the tilted position of the carrier or fork being shown by dotted lines. Fig. 3 is a top plan view of the frame and carrier, showing the turn-post in section.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The turn-post 1 may be of any height and construction and is mounted in any suitable way, so as to turn about a vertical axis. Journals or trunnions are provided at the upper and the lower ends of the turn-post, the lower journal being mounted in a step or bearing 2 and the upper journal being mounted in a plate 3, which is connected by guys 4 to the ground at a suitable distance from the foot of the post to insure stability. An arm 5 projects from the upper end of the post and is provided at its outer end with a sheave-pulley 6, around which the hoisting-rope 7 passes. A guide-pulley 8 is located in a slot provided at the upper end of the turn-post, and the hoisting-rope 7 passes thereover. A handle 9 projects from the lower end of the post and is grasped when it is required to turn the post about a vertical axis.

The frame pivotally supporting the carrier or fork comprises a platform 10, braces 11, and tie-rods 12. The platform 10 is approximately of triangular form, as shown most clearly in Fig. 3, and is composed of longitudinal bars 13, rearwardly-converged side bars 14, and transverse bars 15 and 16, the latter being connected to the bars 13 and 14 at their points of crossing in any substantial way. The longitudinal bars 13 are spaced apart a distance corresponding to the thickness of the turn-post 1, so as to embrace opposite sides thereof and support a pulley 17, which is arranged to travel upon the front side of the turn-post. The braces 11 are arranged in the plane of the longitudinal bars 13, and their rear portions embrace opposite sides of the turn-post and project beyond the same and support a pulley 18, corresponding to the pulley 17. The pulleys 17 and 18 are arranged upon opposite sides of the turn-post and at different elevations, and in the preferable construction the front and rear sides of the turn-post are grooved, as shown at 19, to form guideways or tracks for the pulleys 17 and 18.

The fork or carrier 20 comprises a bar 21, fingers 22, and uprights 23, the latter supporting the load and preventing rearward displacement thereof. The fingers 22 are spaced apart and are secured to the bar 21 in any substantial way. The carrier or fork is pivoted to the transverse bar 16 of the platform in any convenient way to admit of tilting of the carrier, so as to dump the load when required. The fingers project in the rear of the uprights 23 and are adapted to be engaged by a latch-bar 24, so as to hold the fork or carrier level for sustaining the load during the upward travel of the frame upon the turn-post. A spring 25 normally holds the latch-bar 24 in engagement with the rear extensions of the fork or carrier. A pull-cord 26 is connected at one end to the latch-bar 24 and is of suffi-

cient length to be drawn upon when the frame is elevated, so as to disengage the latch-bar from the fork or carrier and permit the latter to automatically tilt and discharge the load upon the stack. A spring 27 is connected at one end to the frame and at its opposite end to a pin or post 28, projected upward from the rear portion of the fork or carrier, and serves to return the carrier to a normal position after the load has been discharged.

The hoisting-rope 7 is secured at one end to the upper portion of the turn-post, as shown at 29, and passes downward and around a sheave-pulley 30, applied to the frame 10, thence upward and over the guide-pulley 8, thence around the feed-pulley 6, downward and around the sheave-pulley 31, and is adapted to be connected with any source of power for operating the frame. Fig. 1 shows the normal position of the carrier when receiving the load, the same resting upon the ground and the straw or load being thrown thereon from a wagon or pile, as the case may be. After the fork or carrier has received the load power is applied to the hoisting-rope 7, which causes the frame, with the carrier, to travel upward upon the turn-post, and when the carrier has reached the desired elevation the lifting power is checked and the post 1 turned, by means of the handle 9, so as to bring the straw over the stack, after which the carrier is released by a pull upon the rope 26. After the load has been discharged the carrier returns to a normal position under the influence of the spring 27, and the cord or rope 26 is released, thereby permitting the latch-bar to engage with the fork or carrier, and the post is turned to bring the frame to a given position, after which the hoisting-rope 7 is slackened, so as to permit the frame and carrier to descend and rest upon the ground for a repetition of the operation just described.

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

1. In combination, a vertical post having grooves in opposite sides, a frame arranged to travel vertically upon the post, pulleys applied to said frame and arranged at different elevations and upon opposite sides of the said post to enter the grooves thereof, a carrier pivoted to said frame, and a latch mechanism normally holding the carrier in working position, substantially as set forth.

2. In combination, a turn-post, an arm projected laterally from the upper end of the turn-post, a handle similarly projected from the lower end of said post, a platform arranged to travel vertically upon the post, braces connected at one end to the platform, tie-rods connecting the braces with the platform, said braces and corresponding longitudinal bars of the platform embracing opposite sides of the post, pulleys journaled to the braces and said longitudinal bars of the platform and arranged upon opposite sides of the turn-post, hoisting-tackle for effecting vertical movement of the platform, a carrier pivoted to the platform, and comprising fingers and uprights, a latch-bar arranged in the space formed between the braces and longitudinal bars and adapted to extend over the rear ends of the aforesaid fingers, and operating means for the said latch-bar, substantially as specified.

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

ROBERT S. MORSE. [L. S.]

Witnesses:
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N. G. MARTIN.