(No Model.)

M. A. HEINLEN.

STACKER.

No. 372,147. Patented Oct. 25, 1887.

Fig. 5.

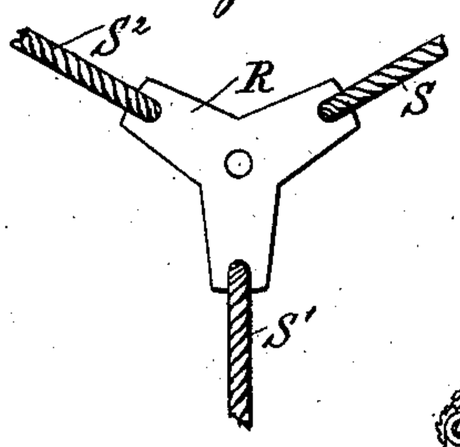

Fig. 4.

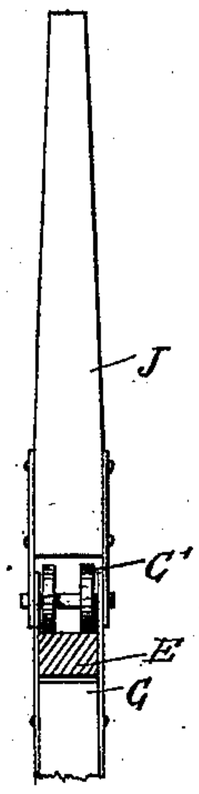

Fig. 1.

Fig. 3.

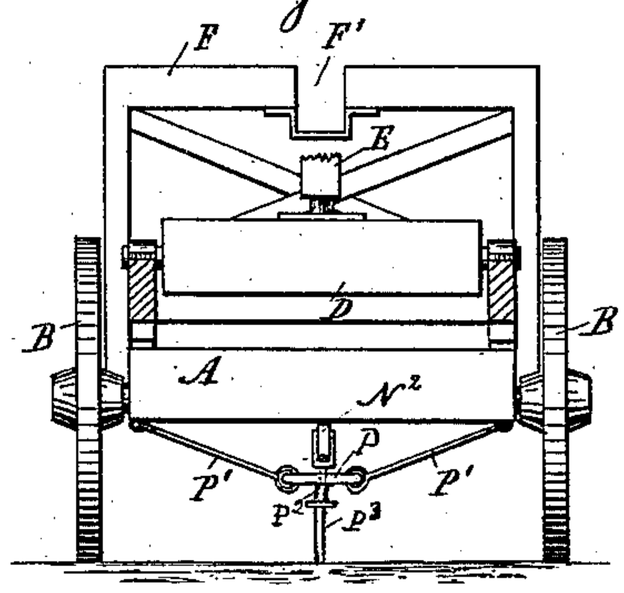

Fig. 2.

WITNESSES:

D. C. Reusch.

C. Sedgwick

INVENTOR:

M. A. Heinlen

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

MARION A. HEINLEN, OF LEMOORE, CALIFORNIA.

STACKER.

SPECIFICATION forming part of Letters Patent No. 372,147, dated October 25, 1887.

Application filed May 26, 1887. Serial No. 239,416. (No model.)

To all whom it may concern:

Be it known that I, MARION ALBERT HEINLEN, of Lemoore, in the county of Tulare and State of California, have invented a new and Improved Stacker, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved stacker specially adapted for stacking hay or grain in the field, being simple and durable in construction, effective in operation, and easily moved about and set up in place.

The invention consists in the construction and arrangement of various parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

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

Figure 1 is a side elevation of my improvement in a closed or folded position. Fig. 2 is a similar view of the same in a position ready for use. Fig. 3 is a rear elevation with parts broken out. Fig. 4 is a plan view of the derrick-arms with the post in section; and Fig. 5 is a plan view of the guy-ropes and the fastening-plate.

A suitably-constructed derrick is provided with the truck-frame A, mounted on the wheels B and B′, and adapted to be moved about by a team of horses hitched to the tongue C. Centrally above the axle of the rear truck-wheels, B, is placed the derrick base-plate D, provided with trunnions at its ends, said trunnions being adapted to turn in suitable bearings formed on the side beams of the truck-frame A. In the middle of the derrick base-plate D is mounted to turn the derrick-post E, adapted to rest, when in a closed position, in a notch, F′, formed in the middle of the U-shaped frame F, secured to the front part of the truck-frame A.

On the derrick-post E is adapted to slide up and down the frame G, of suitable construction and connected at its upper end with one end of the chain H, passing over the pulley H′, mounted near the upper end of the post E, and then the chain H passes downward on the other side of the post E to a windlass, I, of any approved construction, and mounted near the lower end of the post E and a short distance above the truck-frame A.

On the frame G is secured the transverse pin G′, on which is fulcrumed the derrick-arm J, to the outer end of which is fastened one end of the chain K, which passes over a pulley, K′, mounted on the post E, above the pulley H′, and then the chain K passes over the pulley K^2, mounted at the inner end of the frame G, and then the chain passes to a windlass, L, mounted opposite the windlass I on the derrick-post E. On the outer end of the derrick-arm J is also secured a downwardly-extending pulley, N, over which passes the rope O, which also passes over the pulley N′, fulcrumed on the pin G, and then the rope passes over the pulley N^2, hung on the link P, supported by the arms P′ P′, secured to the truck-frame A, and by a link, P^2, adapted to be secured to the stake P^3, driven into the ground under the truck A.

From the upper end of the derrick-post E extends a pin, Q, on which is placed the triangular guy-plate R, to the arms of which are secured the guy-ropes S, S′, and S^2, extending downward and adapted to be secured to stakes driven in the ground, so as to hold the derrick in an upright position.

On the rear truck-wheels, B, operates the brake T, of any approved construction, and connected by suitable means with the brake-lever U, adapted to be held in any desired position on the notched segment V.

The operation is as follows: When the stacker is to be moved about from one place to another, then the derrick-post E rests in an inclined position on the frame F, as shown in Fig. 1. When it is desired to erect the derrick-post E, then the guy-rope plate R is placed on the pin Q, and the ropes S′ and S^2 are extended to the sides of the truck and fastened to stakes driven in the ground. The other rope, S, is fastened in front of the truck A, at one side of the same, but is held in a slack position. The truck is then moved forward a short distance, whereby the guy-ropes S′ and S^2 cause the derrick-post E to swing upward on the forward motion of the truck until the post E is in a vertical position and the rope S is stretched very tight. The truck is then stopped by the operator applying the brake T to the rear wheels, B. The team used for pulling the ma-

chine is then attached to the lower end of the fork-rope O, and a fork of any approved construction is secured to the hook O′ of the rope O. The derrick-frame G is raised or lowered to any desired position by operating the windlass I, so that the chain H is wound up on or unwound from the said windlass until the desired position for the frame G is reached. The derrick-arm J is then moved into a horizontal or an up-and-down inclined position by turning the windlass L, so that the chain K is correspondingly wound up on or unwound from the drum or windlass L until the desired position for the derrick-arm J is attained. The fork and the rope O are then manipulated in the usual manner.

It will be seen that the stacker when in a closed position can be easily moved about from place to place, and when the derrick-post E is in an upright position, ready for work, then the truck is locked in position by applying the brake T, thus holding the truck securely in place. A stack of any desired height can be formed, as the derrick-arm can be moved up and down on the post E to any desired height. It will also be seen that the post E can turn on its base D, so as to give the necessary swinging motion to the fork and its load from the wagon to the stack, and vice versa. The guy-rope plate R and the ropes S, S′, and S^2 permit such a motion, as the guy-rope plate R is loosely mounted on the pin Q. The guy-ropes S, S′, and S^2 are extended sidewise sufficiently to permit the swinging motion of the frame G and the derrick-arm J.

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

1. In a stacker, the combination, with a pivoted and swiveled derrick-post, of the sliding frame G, the derrick-arm J, pivoted to the said frame, and means for raising and lowering the said frame and swinging the derrick-arm on its pivot, substantially as herein shown and described.

2. In a stacker, the combination, with a pivoted and swiveled derrick-post provided with pulleys H′ K′ at its upper end, and the windlasses I L, of the sliding frame G, provided with the pulley K^2, the derrick-arm J, pivoted to the said frame G and provided with the pulleys N N′, the rope H, secured to the frame G and to the windlass I, the rope K, secured to the derrick-arm J and to the windlass L, and the fork-rope O, substantially as herein shown and described.

3. In a stacker, the combination, with the truck A, a derrick mounted thereon, and the fork-rope O, of the arms P′, the links P P^2, and the pulley N^2 on the link P, substantially as herein shown and described.

MARION A. HEINLEN.

Witnesses:
R. E. McKENNA,
W. SMALLEY.