M. M. DURHAM.

HAY STACKER.

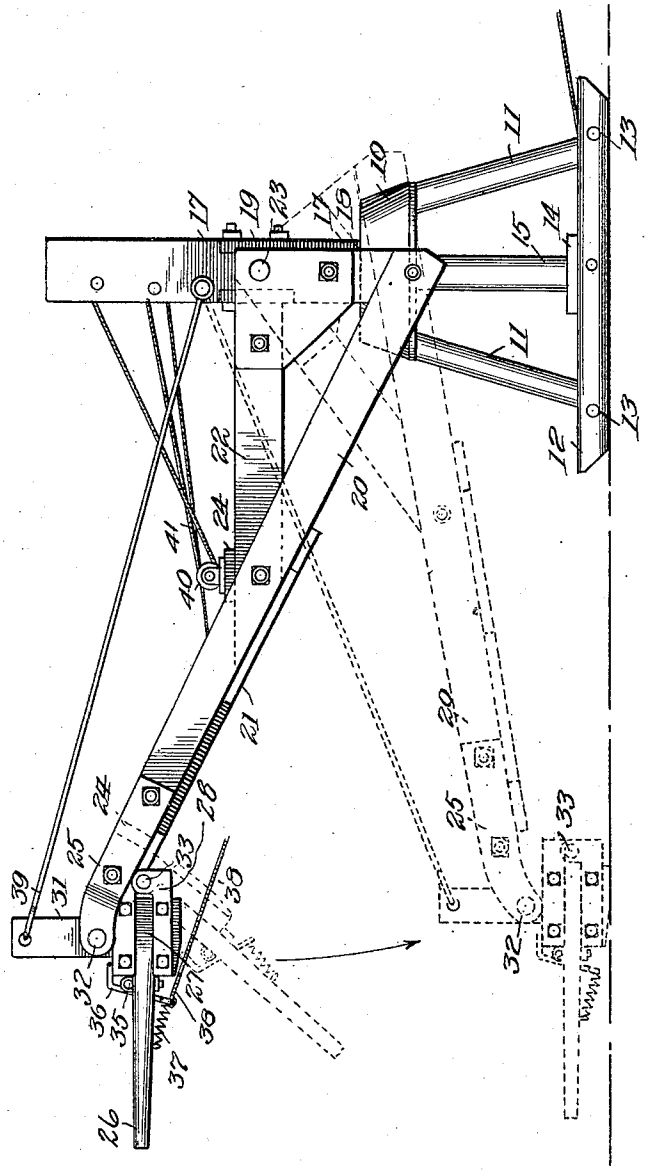
APPLICATION FILED MAR. 22, 1911. RENEWED DEC. 31, 1912.

1,054,681.

Patented Mar. 4, 1913.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

H. C. Barry

M. M. Durham

INVENTOR

Marcus M. Durham

BY Miller & Thurman & Co.

Attorneys

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

M. M. DURHAM.

HAY STACKER.

APPLICATION FILED MAR. 22, 1911. RENEWED DEC. 31, 1912.

1,054,681.

Patented Mar. 4, 1913.

2 SHEETS—SHEET 2.

Fig. 2.

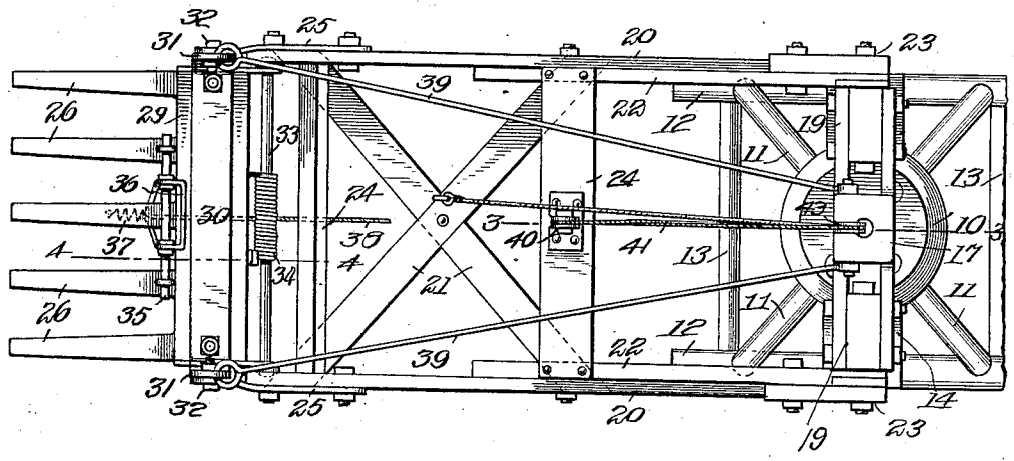


Fig. 3.

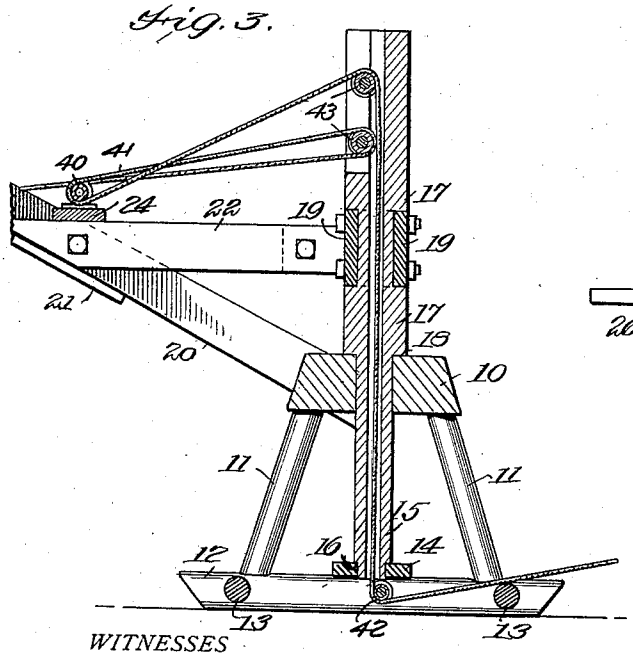
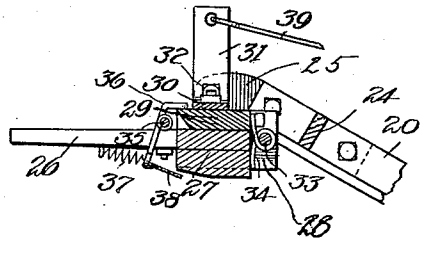


Fig. 4.



WITNESSES

Y. C. Barry

INVENTOR

Marcus M. Durham

BY Thos. W. Stevens & Co.

Attorneys

UNITED STATES PATENT OFFICE.

MARCUS MITCHELL DURHAM, OF HANCOCK, MISSOURI.

HAY-STACKER.

1,054,681. Specification of Letters Patent. Patented Mar. 4, 1913.

Application filed March 22, 1911, Serial No. 616,214. Renewed December 31, 1912. Serial No. 739,513.

To all whom it may concern:

Be it known that I, MARCUS M. DURHAM, a citizen of the United States, residing at Hancock, in the county of Pulaski and State of Missouri, have invented certain new and useful Improvements in Hay-Stackers, of which the following is a specification.

This invention relates to hay stackers having a rotatable and vertically swinging frame carrying a fork on which the load is supported, the fork being pivoted so that the load may be dumped after it has been elevated to the top of the stack.

It is the object of the present invention to provide a stacker of the kind stated which can be easily manipulated to elevate and dump the load, novel and improved supporting and elevating means and other structural details to be presently described and claimed, being provided.

In the accompanying drawings forming a part of this specification—Figure 1 is a side elevation of the invention. Fig. 2 is a plan view thereof. Fig. 3 is a vertical section on the line 3—3, and Fig. 4 is a vertical section on the line 4—4 of Fig. 2.

Referring specifically to the drawings, the supporting frame of the apparatus comprises a platform 10 which is mounted at a suitable elevation on posts 11 rising from a base consisting of runners 12 so that the apparatus may be readily transported to and from the place of use. The runners are connected across by braces 13 and also carry a platform 14 located beneath the platform 10.

The platforms 10 and 14 support a tubular post 15 which is rotatable, and carries the supporting frame of the fork to be presently described. The post passes through alined openings in the platforms, and the lower end of the post is shouldered as indicated at 16, said shoulder being in engagement with the top of the platform 14. The post is enlarged and squared in cross section above the platform 10, as indicated at 17, whereby a second shoulder 18 is had which engages the top of said platform. The shoulders 16 and 18 limit the downward movement of the post and hold it in proper position. The post is free to rotate, and the fork may therefore be swung in various directions.

The enlarged upper portion 17 of the post carries arms 19 extending outwardly from opposite sides thereof, and to the outer ends of these arms is pivoted a frame which carries the fork. This frame comprises parallel arms 20 connected by suitable cross braces 21, and having connected to its free ends upwardly extending and converging bars 22 which are pivotally connected at their meeting ends, as indicated at 23, to the ends of the arms 19, whereby the pivotal connection between said arms and the fork-carrying frame is made, said frame swinging in a vertical plane. The arms 20 are also connected across by braces 24.

To the free ends of the arms 20 are secured brackets 25 which carry the fork, said fork comprising tines 26 extending from a head 27 which is connected by a hinge 28 to a cross bar 29 so that it may swing in a vertical plane to dump the load. To the top of the cross bar is secured a cross strip 30 having upturned ends 31 which are pivoted to the brackets as indicated at 32.

The hinge connection between the fork head 27 and the cross bar 29 is made by a rod 33 carried by the latter at its rear end. Around this rod is coiled a spring 34, one end of which bears against the rear edge of the fork head and holds the latter in carrying position, in which position the head is in contact with the bottom of the cross bar 29. On the teeth of the fork, close to the head, is mounted a cross rod 35, to which is pivoted a latch 36 which is normally held in engagement with the cross bar 29 by a spring 37, whereby the fork is locked in carrying position.

To dump the load, the latch 36 is disengaged, which unlocks the fork, whereupon it is swung downwardly by the weight of the load, and the load is automatically dumped. After the load is dumped the fork automatically swings back to carrying position, this being effected by the spring 34, and the latch snaps over the cross bar 29, and again locks the fork in carrying position. The release of the latch is effected by a line 38 connected to its tail end.

To the portion 17 of the rotatable post, above the pivots 23, are pivotally connected rods 39 which extend forwardly and are loosely connected to the parts 31 above the pivots 32. By thus connecting the rods above the pivots, the fork is held always in horizontal position when the arms 20 are swung to elevate or lower the fork, thus preventing the load from slipping off the fork when it is elevated.

The following means are provided for

raising and lowering the fork: On one of the braces 24 is mounted a pulley 40 around which is carried a line 41, one end of which is connected to the cross braces 21, and the other end of which passes downwardly through the rotatable post 11. Beneath the platform 14 is mounted a guide pulley 42 around which the hauling end of the line passes. Near the top of the portion 17 of the post are two pulleys 43. That end of the line which is connected to the cross braces 21 passes to one of the pulleys 43 and thence passes to the pulley 40, and from the latter back to the other pulley 43, and then downwardly through the post to the pulley 42.

I claim:

1. A hay stacker comprising a support, a vertically swinging frame carried thereby, said frame including spaced arms, a cross bar pivotally connected to the arms at the extremities thereof, a fork hinged to the cross bar and having its head located beneath the same, a latch for locking the fork to the cross bar, releasing means for the latch, and means for operating the swinging frame.

2. A hay stacker comprising a support, a vertically swinging frame carried thereby, means for operating the frame, a cross bar carried by the free end of the frame, a rod carried by the cross bar, a fork hinged to the rod, a spring coiled around a rod and engageable at one end with the fork, a latch for locking the fork to the cross bar, and means for releasing the latch.

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

MARCUS MITCHELL DURHAM.

Witnesses:

W. T. GOODMAN,

B. H. DAVIS.