E. A. WALTERS.
Hay-Carrier.

No. 206,987. Patented Aug. 13, 1878.

FIG. 1.

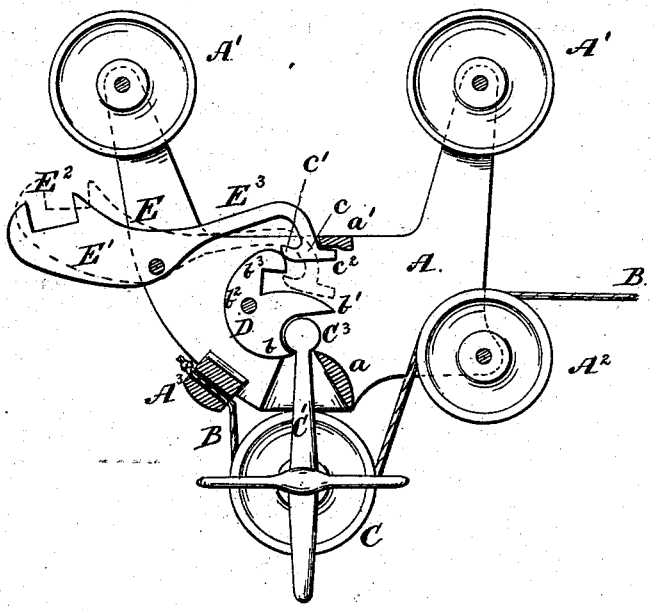
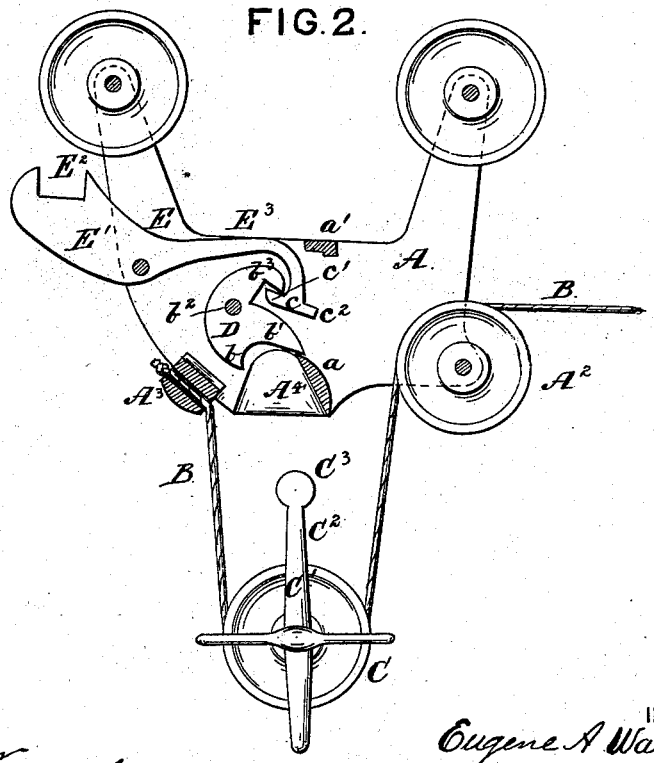


FIG. 2.



WITNESSES

Sam'l R. Turner

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UNITED STATES PATENT OFFICE.

EUGENE A. WALTERS, OF WALWORTH, WISCONSIN.

IMPROVEMENT IN HAY-CARRIERS.

Specification forming part of Letters Patent No. **206,987**, dated August 13, 1878; application filed April 20, 1878.

To all whom it may concern:

Be it known that I, EUGENE A. WALTERS, of Walworth, in the county of Walworth and State of Wisconsin, have invented certain new and useful Improvements in Hay Elevator and Carrier, of which the following is a specification, reference being made to the accompanying drawings, which form a part thereof.

In the drawings, Figure 1 is a vertical longitudinal section, showing the sheave-frame secured and held by the carrier; and Fig. 2 is a vertical longitudinal section with the sheave-frame detached from the carrier.

The object of my invention is to secure positive action in the expulsion of the head of the bail of the sheave-frame; and it consists in a grappling-hook having a central arm or projection, so arranged as to be acted upon by the head of the bail, and by the hammer or head of the tripping-catch, all of which will be hereinafter more fully explained.

A is the carriage, provided with the track-wheels A^1 A^1, pulley A^2, and fixed cable-holder A^3, to which the end of the hoisting-rope B is attached. C is the sheave, supported in the bail C^1, having a solid shank, C^2, and enlarged head C^3.

a is a fixed inclined guide and shoulder. Its upper end is made pointed, as shown, so that it will fit neatly against and under one side of the solid head C^3 of the bail C^1.

D is the pivoted grappling-hook, arranged within the carriage immediately over the opening A^4, through which the bail C^1 enters. It has the under point or hook, *b*, which catches under the head C^3 of the bail. It has the central arm, b^1, which extends over the opening A^4, its point resting on the top of the shoulder *a* when the bail is withdrawn, as shown in Fig. 2; and it has formed on its upper end, above the center of motion, the hook b^3, which is adapted to catch on one of the points on the inner end of the tripping-catch, hereinafter described. This grappling-hook is so constructed that it is nearly balanced on its pivot; for there is no necessity for its being constructed otherwise, since I do not employ its gravity to give it motion, but I cause it to act by positive action, as will be hereinafter fully explained.

E is the tripping-catch. It is pivoted near its center to the carriage A. Its outer end, E^1, is extended outward from the carriage-frame, and is provided with a suitable claw, E^2, which catches on a fixed projection on the carriage-track, and locks the carrier in position while the fork is let down to the loaded wagon for a charge of hay. Its inner end, E^3, extends to the center of the carrier, or to a point vertically over the opening A^4, and is then turned vertically downward, and is provided with the head *c*, having the opposite projections, c^1 c^2. The projection c^1 is a hook, which is engaged by the hook b^3, and locks the catch E in the position shown in Fig. 2. The projection c^2, when the head *c* is drawn up, as shown in Fig. 1, is engaged by a stop, *a'*, on the upper side of the frame A, and holds the end of the projection c^1 against the end of the hook b^3, as shown in Fig. 1, and locks the grappling-hook D under the head C^3 of the bail C^1.

When the forkful of hay is drawn up, the head C^3 of the bail C^1 enters the opening A^4, and is guided by the shoulder *a* upward till it strikes the arm b^1 of the grappling-hook D. The arm b^1 is forced up, bringing the hook *b* under the head C^3, and strikes against the head *c* and trips the lever E, so as to release the hold of the claw E^2 from the projection on the track, and bring the head *c* into the position shown in Fig. 1, with the head of the bail locked firmly between the hook *b* and the pointed shoulder *a*. The carriage is now run back on the track into the mow and the hay discharged, after which it is returned to its position over the loaded wagon. When it reaches its position over the wagon, a suitable device engages the end E^1 of the lever E, and forces it upward, as indicated in dotted lines, Fig. 1, and causes the claw E^2 to engage the fixed stop on the track and lock the carriage in position, and at the same time the head *c* is thrown forcibly downward, strikes the upper side of the arm b^1, and causes the grappling-hook to turn on its axis and release the head C^3 of the bail.

It will be seen that by this device I am enabled to support the bail C^1 on pointed supports under the head C^3, obviating the necessity of having inclined surfaces, from which the bail will be drawn by the weight of the sheave and fork. I thus provide a surer hold, and insure a more certain and rapid discharge. The arm

b^1, as it is faced downward, not only releases the hook b, but it presses on the head C^3, and forces the bail out of the frame A.

I am aware of the patent granted to E. L. Church, June 5, 1877, and therefore do not claim what is contained therein; but,

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with the frame A, provided with the stop a' and grappling-hook D, having the central arm, b^1, and the hook b^3 on its upper end, of the lever E, pivoted near its center to the frame A, its outer end provided with the claw E^2, and its inner end extended and turned down over the grappling-hook D, and provided with the head c, having projections c^1 c^2, arranged to operate substantially as and for the purpose set forth.

2. The combination, with the bail C^1, having the head C^3, frame A, provided with the stops a a', and lever E, having the head c, of the grappling-hook D, having the hook b, central arm, b^1, and hook b^3, for the purposes set forth.

EUGENE A. WALTERS.

Witnesses:
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