# R. A. YOUNG & W. CARROLL.

## HAY-ELEVATOR.

No. 182,012. Patented Sept. 5, 1876.

Fig. 1.

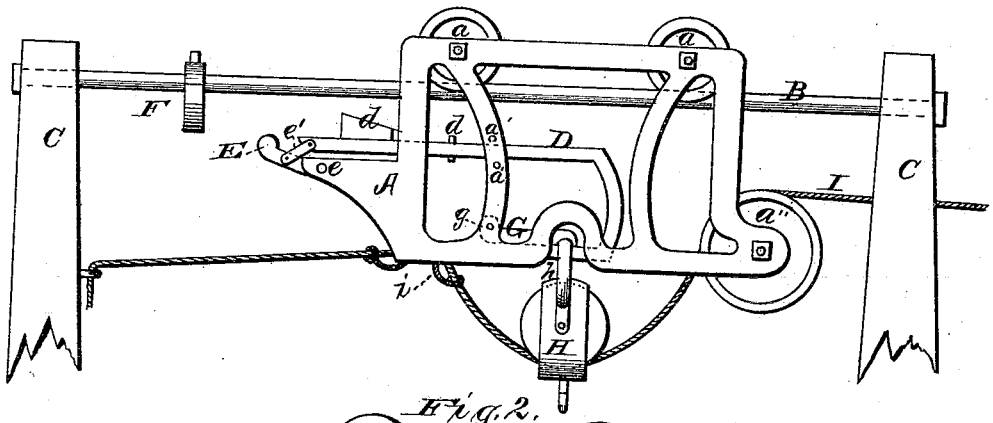



Fig. 2.

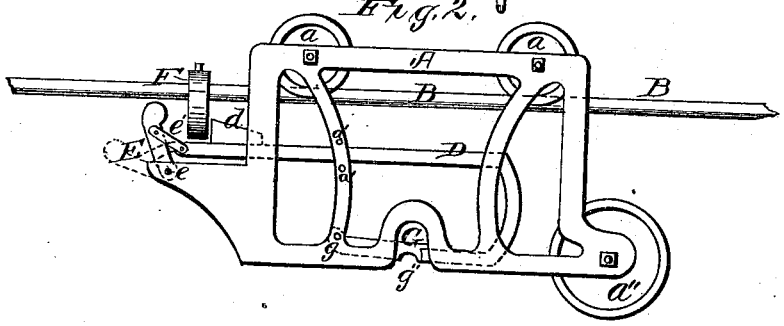
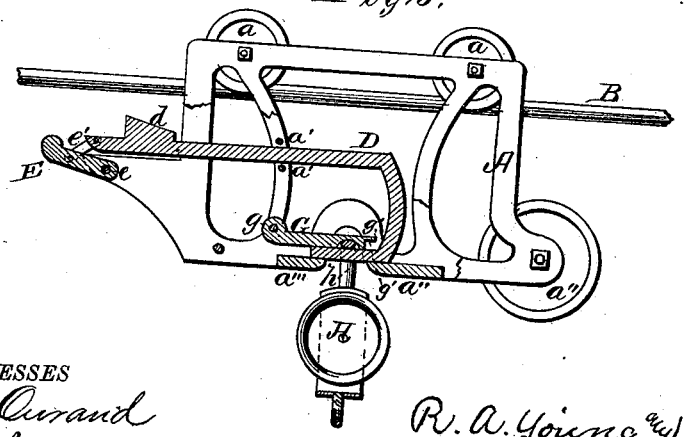



Fig. 3.




WITNESSES

F. L. Durand

P. McNickle

INVENTOR.

R. A. Young and W. Carroll

By L. Deane,

Attorney.

# UNITED STATES PATENT OFFICE.

ROBERT A. YOUNG AND WILLIAM CARROLL, OF INDIANA, PENNSYLVANIA.

## IMPROVEMENT IN HAY-ELEVATORS.

Specification forming part of Letters Patent No. **182,012**, dated September 5, 1876; application filed August 11, 1876.

*To all whom it may concern:*

Be it known that we, ROBERT A. YOUNG and WILLIAM CARROLL, of Indiana, in the county of Indiana and State of Pennsylvania, have invented certain new and useful Improvements in Hay-Elevators; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 shows a side elevation of the elevator and carrier with the load on. Fig. 2 shows a side elevation of the elevator with catch or latch turned up to engage on the stop. Fig. 3 is a detail showing in section the latch or catch and locking-bar.

The present invention is an improvement in hay-elevators, and the design is to afford a simple, strong, and effective catch or latch, that will easily engage upon the stop and securely hold the carrier thereto, and at the same time be readily adapted for disengagement therefrom when it is desired to move the carrier back for the purpose of taking the load toward the place of deposit; and to this end it consists more particularly in a tongue hinged upon the projecting end of the locking-bar, and pivoted in the carrier-frame, so that it is adapted to take a horizontal, or nearly horizontal, position, conforming with the position of the locking-bar when the carrier is moved back and forth along the sustaining-rod, and when said bar strikes the stop, or any convenient means adapted for this purpose, it shall draw back and turn upward said tongue, so that it shall form, by means of the aforesaid construction, a catch or latch to hold said carrier securely to the stop, while the lower vent end or heel of the locking-bar is engaged with a trip so as to be held firmly.

When it is desired to detach the latch or catch from the stop, it is only necessary to raise the hoisting-pulley till its lifting-strap or handle strikes under said trip, by which means the heel of the locking-bar is released and a backward motion of the carrier causes the stop to act on the tongue hinged and pivoted as aforesaid, and turn it down, and thus the carrier is wholly disengaged from said stop—all as will now be more in detail set out and explained.

In the drawings, A denotes the carrier mounted by means of wheels *a* on the rod B, in the usual manner, so as to be capable of free motion to and fro along said rod. This rod is securely fixed at each end in standards or posts C in any of the well-known ways. The locking-bar D is capable of forward and backward movement in the carrier-frame between guides $a'$, and upon the strip $a''$ $a'''$, which unite at the bottom the two sides of the carrier-frame. The tongue E, pivoted at *e*, in the rear part of the carrier-frame, is also hinged to the end of the locking-bar by straps $e'$, or in any suitable way, so that it can be freely raised or lowered on said pivot *e*. The locking-bar has a shoulder or stud, *d*, on its upper side and near its rear end, which in the rearward motion strikes upon the stop F. In this instance the continued movements of the carrier serves to throw the frame farther on, while the locking-bar, being detained or thrust back, as aforesaid, operates at the rear end to draw upon straps $e'$, and raise the tongue E to a vertical, or nearly vertical, position, and in the rear of said stop, and at the forward or lower and heel end, it is withdrawn from the lifting-strap or handle *h*, by which the hoisting-pulley H is suspended upon it, and then the pulley and its weight will fall. At this time the trip G, pivoted at *g*, in the lower part of the frame, has fallen down, and the shouldered end $g'$ has engaged on the end of the heel of the locking-bar. Thus at the upper and lower ends, at the rear and in the front, the said locking-bar is securely locked or stopped. The pin $d'$ in the locking-bar, engaging against the guides $a'$, will also help stay the motion of the bar. When it is desired to elevate the hay-fork, which is attached in any suitable way to the pulley H, said pulley is raised till its lifting-strap or handle *h* strikes against the under side of the trip G. This raising movement, effected by means of rope I moving over pulley $a''$, and attached at *i*, also serves to communicate motion to the carrier. The trip G being raised, the forward end of the locking-bar is free to move, and

when now the hinged tongue E meets the stop F it is bent outward and down, while the forward end of the bar is brought into the the lifting-strap or handle *h* of the pulley, and in this position of the several parts the carrier, with the pulley and its load, is ready to be moved to the opposite end of the rod. To hold more securely the lifting-strap, loop, or handle of the hoisting-pulley upon the heel of the locking-bar, the end of the trip G is hollowed out at *g''*, so that when it rests upon the loop it will serve to prevent its movement on said heel.

It will be observed that the hoisting-pulley is not detached from the carrier-frame when it has reached the end of the rod B, opposite that on which the stop is placed—the load can here be freed from the pulley by means of a trip-cord, or by any like or suitable device.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent—

1. In a hay elevator and carrier, the locking-bar D, having stud *d*, and constructed as shown and described, combined with trip G, and hinged and pivoted tongue E, to operate in frame A, substantially as set forth.

2. The combination of hoisting-pulley H *h*, with the trip G, and locking-bar D *d*, substantially as and for the purposes described.

3. The combination of carrier-frame A, having locking-bar D *d*, and trip G, adapted to be operated by hoisting-pulley H *h*, with stop F, substantially as and for the purposes set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

ROBERT A. YOUNG.
WILLIAM CARROLL.

Witnesses:
A. B. CLARK,
WM. EARL.