E. L. CHURCH.

HAY-ELEVATOR.

No. 191,568. Patented June 5, 1877.

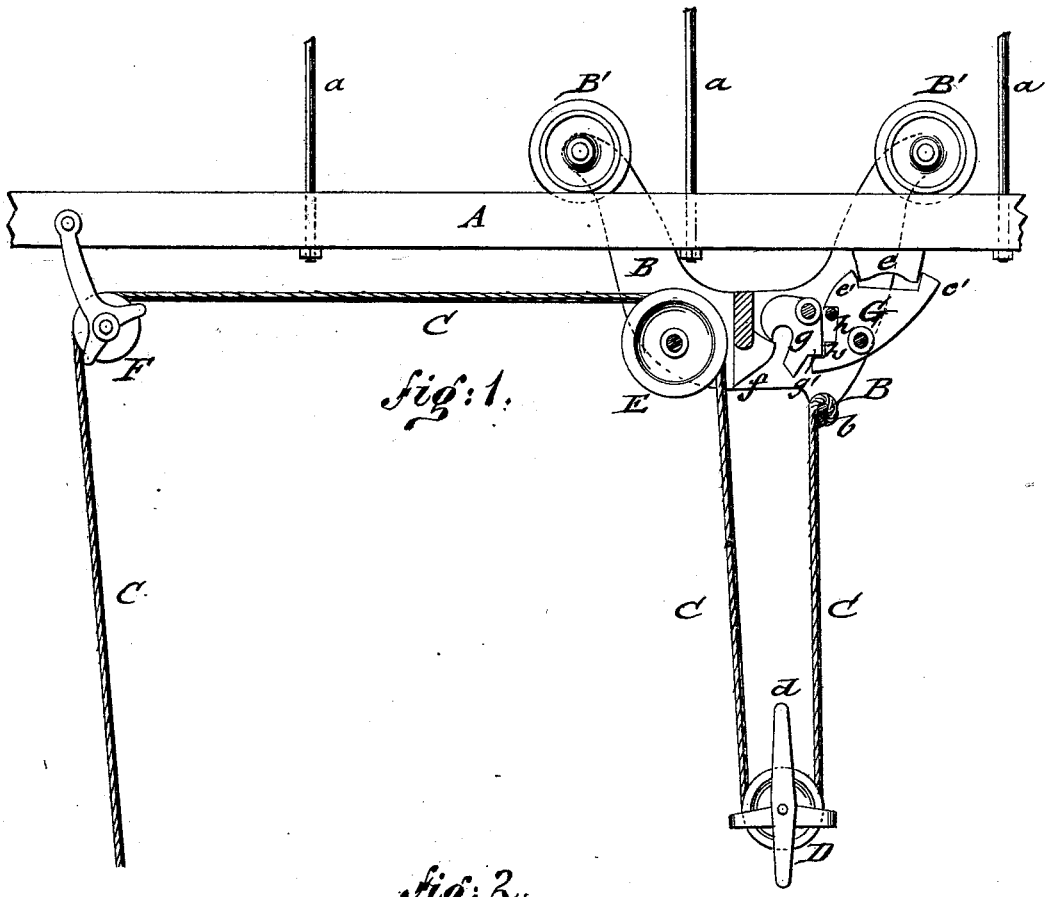
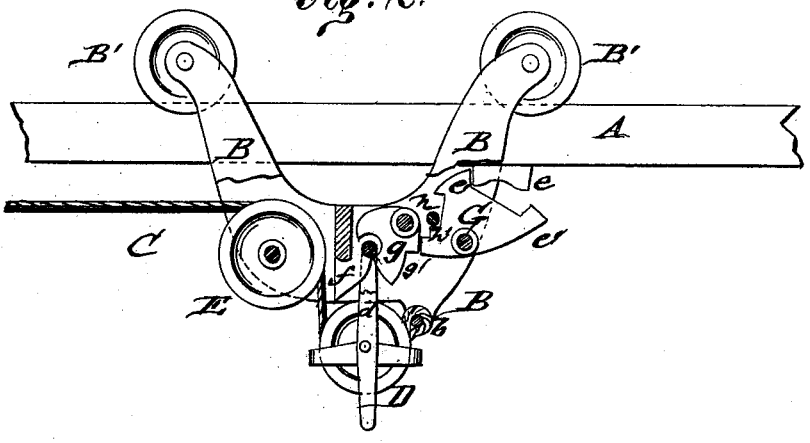


Fig: 1.

Fig: 2.



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EUGENE L. CHURCH, OF WALWORTH, WISCONSIN.

IMPROVEMENT IN HAY-ELEVATORS.

Specification forming part of Letters Patent No. **191,568**, dated June 5, 1877; application filed April 16, 1877.

To all whom it may concern:

Be it known that I, EUGENE L. CHURCH, of Walworth, in the county of Walworth and State of Wisconsin, have invented a new and Improved Hay Elevator and Carrier, of which the following is a specifiation:

In the accompanying drawing, Figure 1 represents a sectional side elevation of my improved hay elevator and carrier, showing the same in position above the loaded wagon and before the fork is drawn up to it; and Fig. 2 is a side view of the same after the fork reaches the carriage and is ready to start off on the track.

Similar letters of reference indicate corresponding parts.

This invention is designed to provide an improved hay elevator and carrier of simple and effective construction; and it consists, essentially, of a traveling-carriage locking, by a tilting catch, on a fixed stop-block of the track, from which it is released by the action of the bail of the sheave-frame of the hay-fork on a pivoted grappling-hook, the sheave being held in suspended position by the joint action of a fixed hook, of the pivoted hook, and of the tilting catch.

In the drawing, A represents a track-beam, which is suspended from the rafters of a barn or other building by means of eyebolts *a* passing through the center of the track-beam. B is a carriage that runs along the track-beam by a pair of flanged wheels, B′, at each end of which the wheels of one pair are set at such distance from each other that they clear readily the suspension-bolts as they pass along the same.

The hoisting-rope C is attached, in the customary manner, to a fixed point, *b*, at one end of carriage B, and passed then through the sheave-frame D of the hay-fork, and over a pulley, E, of the carriage, and through a sheave, F, at the end of track-beam, and down to the ground, where a horse is hitched to its free end.

The carriage B is provided with a fixed and curved or tapering hook, *f*, and a second pivoted hook, *g*, that acts by a shoulder, *g′*, on the lower end of a tilting catch, G, pivoted to carriage, so as to keep the same, by its projecting lugs or points *e*, in contact with a stop-block, *e*, that is secured to the under side of the track-beam, directly over the place where the loaded wagon is desired to stand.

When the bail *d* of the ascending sheave-frame D approaches the carriage it is first guided along the stationary hook *f* upward, and then brought in contact with the top part of the pivoted grappling-hook *g*, so that the lower part of the same is forced over to the fixed hook, and through the bail of the sheave-frame D, locking the same thereto, as shown in Fig. 2.

The tilting catch G is released at the same time from the shoulder of the swinging hook *g*, and tilted, by its outer heavier part, so as to disengage from the stop-block *e*, and allow the carriage to move off over the mow. The catch G, in disengaging from block *e*, bears against the back of the pivoted grappling-hook *g*, and locks the same tightly against the fixed hook *f*, supporting thereby the sheave-frame D until the carriage has passed over the mow and the fork has dropped its load. When the carriage is drawn back again on the track-beam, the highest point, *e′*, of the tilting catch strikes against the block *e*, and throws up the catch, so as to bind, with the other point or lug *e′*, on the other end of the block, and admit the opening of the grappling-hooks, and the descending of the sheave-frame to the loaded wagon for recharging the fork.

The motion of the tilting catch G is controlled by a stop-pin, *h*, of the carriage, the same forming, alternately, contact with point *e′* and a lower shoulder, *h′*, of the catch, and preventing the catch from tilting too far. The carriage is drawn back from over the mow by means of the rope attached to, and used for tripping the load from, the fork, while it is moved in opposite direction by the hoisting-rope and horse, in the usual manner in hay-elevators.

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

1. The combination of the bail of the

sheave-frame of the hay-fork with the stationary guide-hook *f*, the pivoted grappling-hook *g*, and the locking-catch G of the carriage B, substantially as and for the purpose set forth.

2. The combination of the swinging grappling-hook *g*, having shoulder *g'*, tilting catch G, having end lugs or points *e'*, and the carriage B with the fixed stop-block *e* of the track-frame, substantially as and for the purpose specified.

EUGENE L. CHURCH.

Witnesses:
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