J. ANDERSON.

HAY-ELEVATOR.

No. 183,104. Patented Oct. 10. 1876.

Fig. 1.

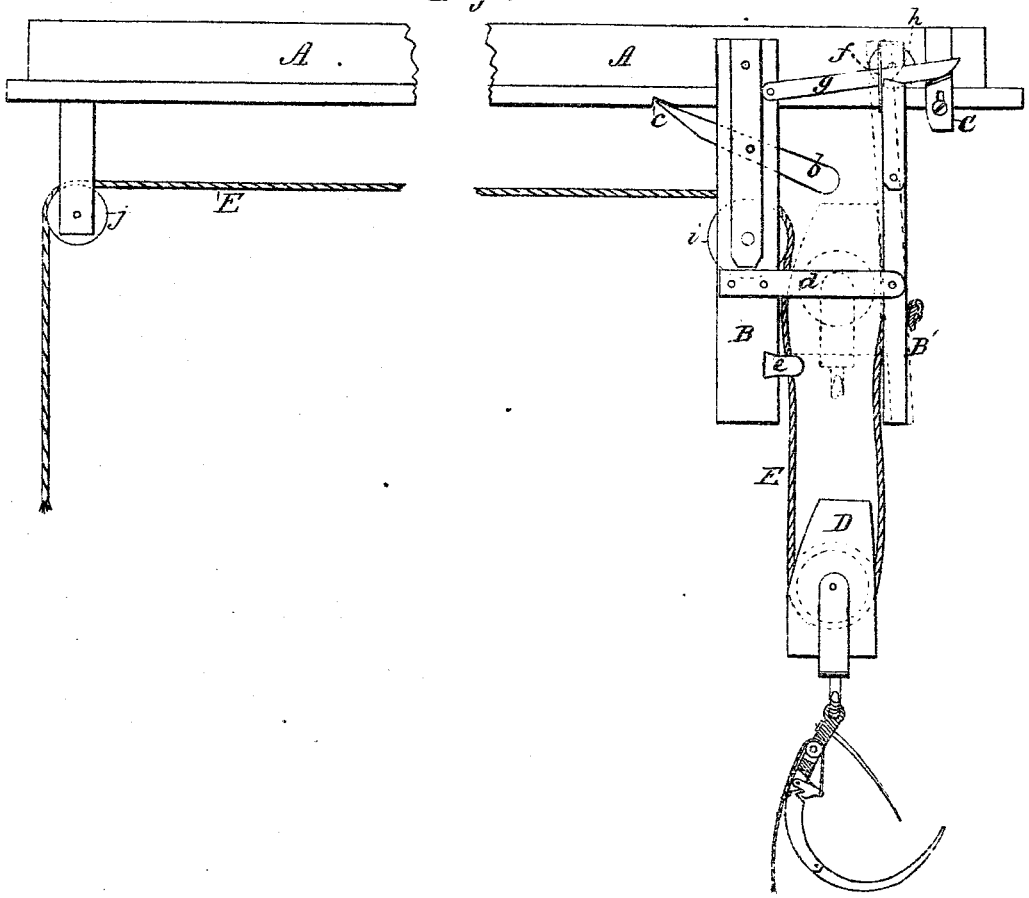
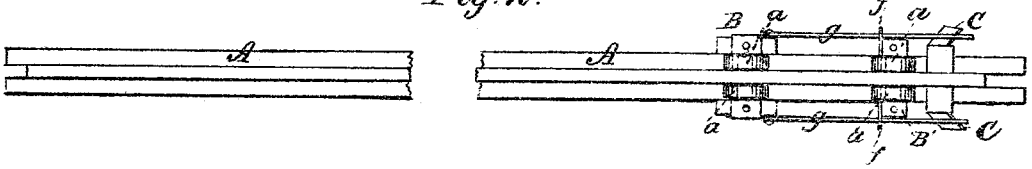


Fig. 2.



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JOSHUA ANDERSON, OF SHORT CREEK, OHIO.

IMPROVEMENT IN HAY-ELEVATORS.

Specification forming part of Letters Patent No. **183,104**, dated October 10, 1876; application filed September 14, 1876.

To all whom it may concern:

Be it known that I, JOSHUA ANDERSON, of Short Creek, in the county of Harrison and State of Ohio, have invented a new and Improved Hay Elevator and Carrier; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a side view, and Fig. 2 a plan.

My invention relates to certain improvements in hay elevators and carriers, designed to lift the hay-fork with its load and transport it to any suitable place within the range of its movement. It consists in the construction of the carriage and its arrangement to the track or way upon which it runs, the same being so constructed and arranged that the elevation of the load of hay in the fork trips the carriage and allows it to move upon the ways, and the load is held in its position near the carriage by a retaining device independently of the draft-rope, so that it cannot sway to the floor again when the carriage is set free, all as hereinafter more fully described.

In the accompanying drawing, A represents the guideways or track upon which the carriage runs, which ways are attached in elevated position to the roof or ceiling of the barn or hay-loft. Upon these ways runs the carriage, which is composed of the two frames B B′, both of which are bifurcated at their upper ends, and provided each with friction-rollers *a a*, which rest and run upon the ways and hold the carriage in a suspended position. In the frame B is pivoted a detent, *b*, one end of which is made heavy, so as to cause it to operate from gravity, while the other end engages with a notch, *c*, upon the under side of the ways, to hold the carriage in position while the load is being elevated. To the frame B is also attached a projection, *e*, and a pair of rigid arms, *d d*, to the ends of the latter of which the frame B′ is pivoted so as to vibrate freely. The upper ends of the frame B′ are provided with keepers *f f*, through which pass the latch-bars *g g*, which are pivoted to the frame B, and are provided with notches *h*. C are inclined plates, arranged upon the tracks or ways in such a manner as to be struck by the curved ends of the latch-bar, to throw the notches out of the keepers and allow the frame B′ to vibrate upon its pivots. D is a block carrying the hay-fork, and having one side beveled, so as to pass readily by the projection *e*. E is the draft-rope, one end of which is fastened to the frame B′ of the carriage, and the other end of which is passed around a pulley in the hay-fork block, and from thence around a pulley, *i*, in the carriage-frame B, and thence horizontally to a pulley, *j*, located at the point to which the hay is to be transported, and thence to the ground to the draft attachment of the team.

Operation: The device being in the position shown in Fig. 1, with frame B′ free to vibrate, and the fork filled with a load of hay, the draft of the team upon the rope E elevates the fork and block D until the latter passes between the two frames forming the carriage. As it enters, the frame B′ vibrates, as shown in dotted lines, to allow block D to pass projection *e*. As it passes up then it strikes the detent *b*, and throws the same out of the notch *c* of the track, so as to allow the carriage to move laterally upon the track. At the same time, also, the upper end of frame B′ is thrown with its keeper into the notch *h* of the latch-bar *g*, and the carriage then holds the block D completely inclosed and resting upon the projection *e*, as shown in dotted lines, while it is being carried laterally over to the position where the load is to be dropped. It will thus be seen that the hay-fork is suspended independently of the traction or draft on the rope, and in consequence the carriage does not move rapidly to one side, nor does the load sway down to the ground when the carriage starts, but is held firmly suspended for all positions of its movement. After the load is dumped the hay-fork with the carriage is restored to its first position, and as it approaches the limit of its backward movement the latch-bars *g* strike upon the inclined plates C, and are lifted thereby, and by disengaging the notch of the latch-bar from the keeper of the frame B′ the latter is left free to move inwardly from the

impact, which permits the weight of the hay-fork to bring the block D down from off the projection *e*, ready for a second load.

Having thus described my invention, what I claim as new is—

1. The carriage composed of the frame B, having a retaining projection, *e*, and the loosely-pivoted frame B′, having a locking-latch connection with the frame B above, in combination with the rope E and a block, D, adapted to be supported between the frame-pieces, substantially as described, and for the purpose specified.

2. The combination of the ways A, having inclined plates C, with the carriage composed of frame B and loosely-pivoted frame B′, having a locking-latch connection, *g*, adapted to be disengaged by plates C, substantially as and for the purpose described.

3. The carriage composed of frame B, carrying detent *b*, pulley *i*, and projection *e*, and the loosely-pivoted frame B′, having a latch-connection with frame B above, combined with the ways A, having notch *c* and inclined plates C, the block D, and the rope E, arranged substantially as and for the purpose described.

JOSHUA ANDERSON.

Witnesses:
MILTON YOST,
ELLEN YOST.