

J. Linderman,

Hay Elevator.

No. 107,695.

Patented, Sept. 27. 1870.

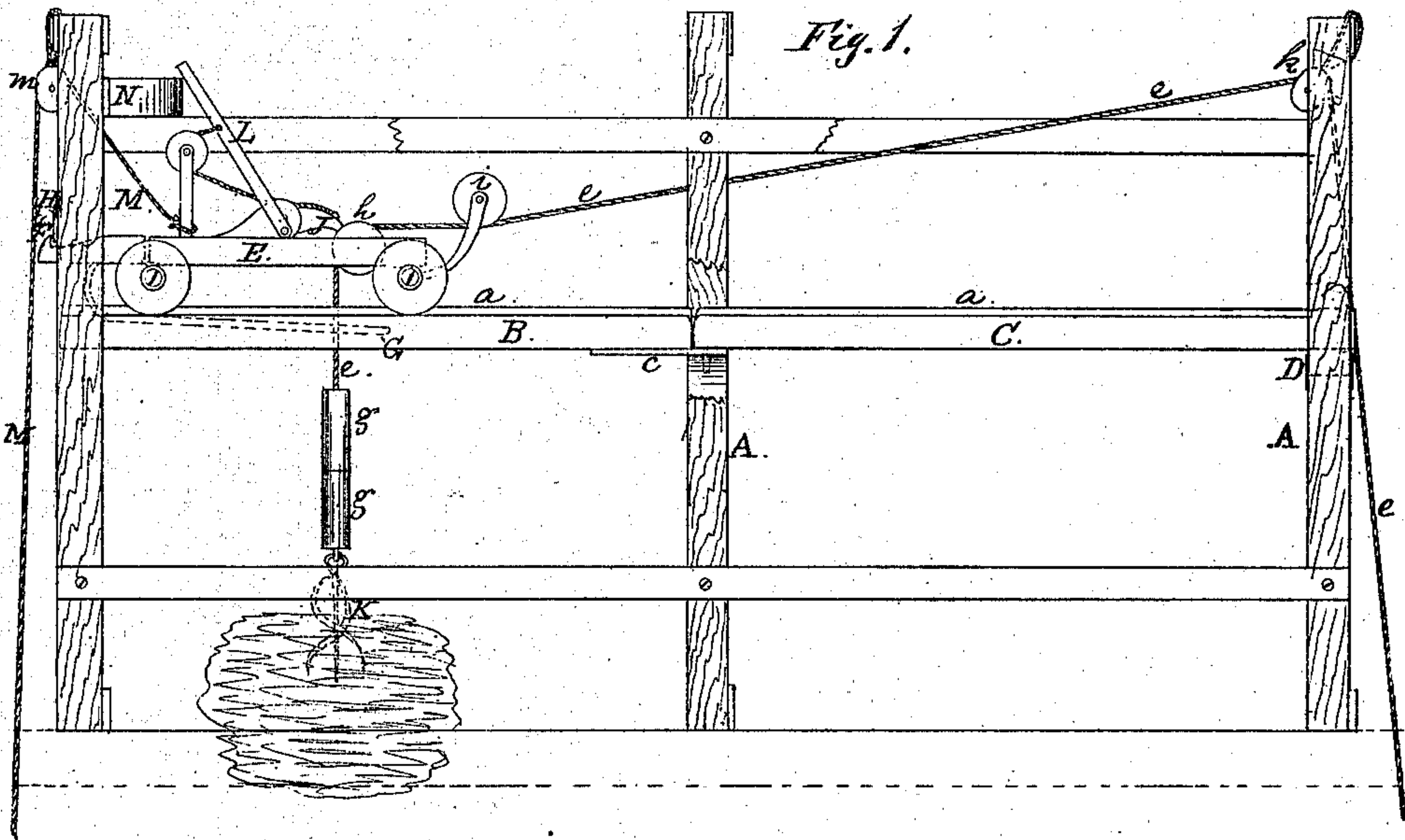
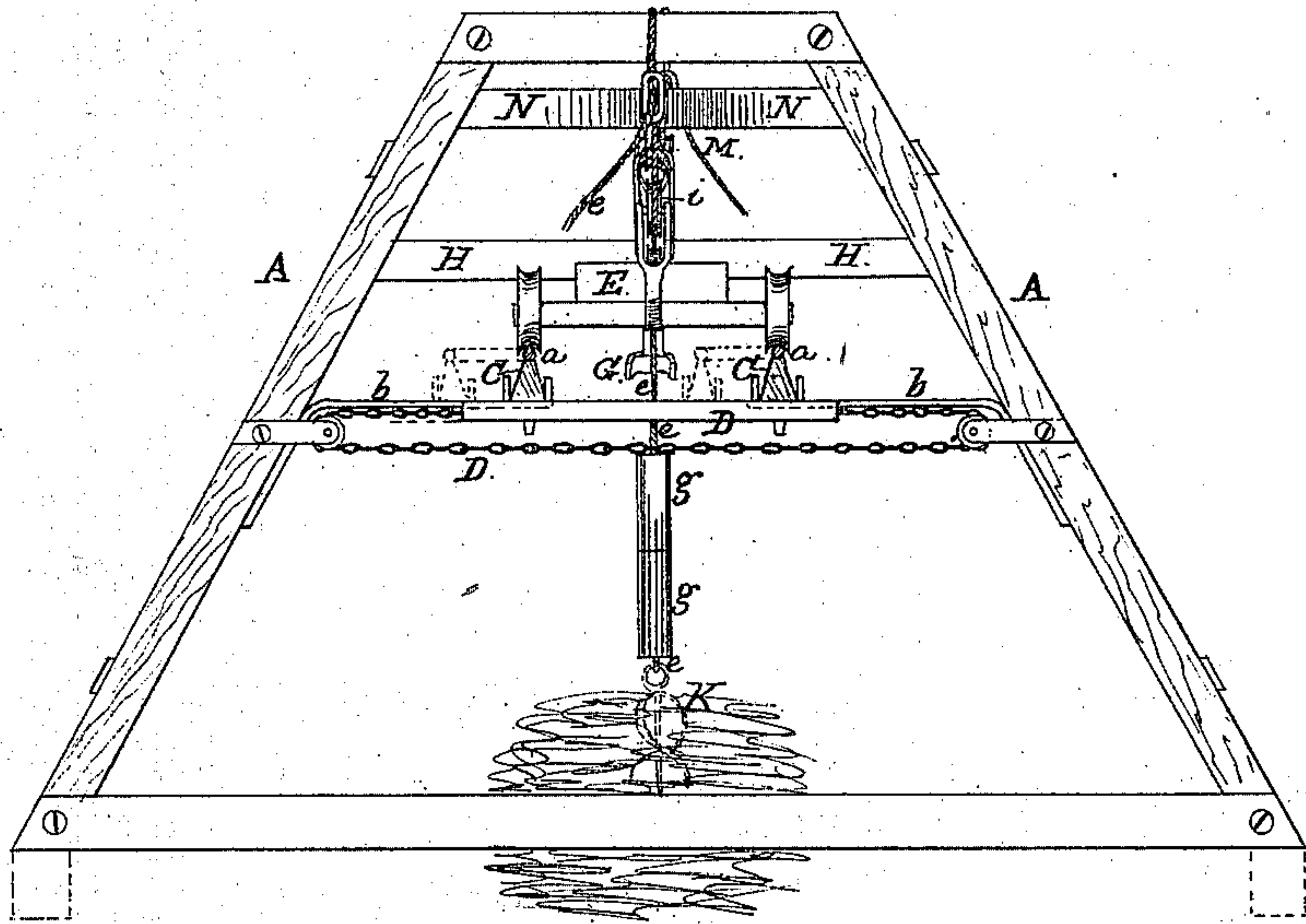


Fig. 2.



Witnesses:

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JAMES LINDERMAN, OF BULLVILLE, NEW YORK.

Letters Patent No. 107,695, dated September 27, 1870.

IMPROVEMENT IN HAY-ELEVATORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES LINDERMAN, of Bullville, in the county of Orange and State of New York, have invented a new and improved Hay-Elevator; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a side elevation.

Figure 2 is an end view.

Like letters in both figures of the drawing indicate like parts.

My invention relates to the class of hay-elevators in which a railroad track and truck, with block and tackle, is used for elevating the hay, and consists—

First, in pivoting or hinging a portion of the track, in combination with an endless belt, or its equivalent, so that the track may be shifted and the load deposited either to the right or left, as may be desired.

Second, in a brace secured to the beam of the building, in combination with a catch hinged to the rear of the truck, for holding the latter while loading the elevating-fork, the releasing of the catch from the brace, and consequent movement of the truck forward to drop the load, being accomplished by hollow blocks arranged on the hoisting-rope, to trip a forked lever connecting with catch.

Third, in an arrangement, on the truck, of the pawl and releasing lever, pulleys, adjustable axle, by means of the king-bolt, catch, and lever, provided with forked end, or its equivalent, in combination with the track, cross-brace, and curved bar, all for the purposes as will be hereinafter more fully explained.

A represents the frame-work of the roof of the building or barn in which the hay is to be stored.

B is the permanent track, the rails of which are of wood, and made V-shaped, and capped with round iron *a*, and rests upon the projecting supports *b*, attached by screws or otherwise to the beams of the frame-work.

C is the movable track, the rails of which are also made of a similar shape to the rails of the track B above mentioned, and capped with round iron.

The rails of these tracks B C are joined together on the projecting supports of the middle beam by the rails of movable track C resting upon projecting plates *c* attached to the under sides of the rails of permanent track B, which plates rest upon the projecting supports, the rails of movable track C being secured by bending down the ends of the round iron at right angles, and then passing them through the ends of the rails of the track, and thence through said plates and projecting supports, thus uniting the ends of the rails of tracks B C firmly together, and at the same time allowing the rails of track C to have a pivotal motion laterally.

The outer ends of the rails of track C rest upon the endless belt D, or its equivalent, and are secured thereon by a pin attached to the belt on each side of each rail, or in any suitable manner.

The endless belt D extends across and embraces a pulley attached to the inner sides of each opposite beam of the frame-work.

The outer ends of the rails of track B are secured to the outer projecting supports *b* by the ends of the round iron being bent down at right angles, and then passed through the ends of the rails, and thence through the supports.

The round iron at the inner ends of the rails of track B, or where they join those of track C, is simply bent over the ends, or inserted in the wood, to secure it to the rails, and so with the outer ends of the rails of track C. Of course I do not limit myself to the method described of pivoting the rails of track C, as it is obvious they may be secured in other ways, and yet accomplish the same result, that is, shifting the rails and dropping the load either to the right or left.

E is the truck, the front axle of which is secured by a king-bolt, so as to allow the wheels to accommodate themselves to the curve or shifting of the track C.

F is the catch, hinged to the rear end of the truck.

G is the lever, one end of which is attached to the catch, and then curved down under the truck, the opposite end being forked, to allow the hoisting-rope *e* to pass between the prongs thereof, and to permit of the hollow blocks G operating thereupon, to trip or release the lever and catch when the hoisting-rope is pulled on.

H is the cross-brace attached to the outer beams of the frame-work at a suitable distance above track B, so as to permit of the catch F engaging with it when loading.

J is the pawl which presses upon the hoisting-rope *e* by its weight, and prevents it from slipping back while it is being drawn over the pulley *h*.

The hoisting-rope will be attached to an elevating-fork or apparatus, K, represented in the drawing as being loaded with hay. This rope is arranged to pass up over the pulley *h*, and thence under the pulley *i*, attached by an arm to the forward end of the truck, and then through the pulley-block *k*, attached to the top cross-brace, from whence it is carried below, and connected in a suitable manner with horse-power.

L is the lever for releasing pawl J.

M is the pull-back rope, which is attached to the rear end of the truck, and then passed through the pulley-block *m*, attached to the top cross-brace, from whence it is carried below.

The removable hollow blocks *g*, herein referred to, are slipped on to the hoisting-rope *e*, (a sufficient number of them,) and their object is to regulate the distance to

which the load is to be elevated, and at the same time to trip or release the lever G automatically, and, consequently, the catch, when the load is at the required height, so as to allow the truck to move forward, and the load to be dropped at the point desired.

The lever G may be released by hand, but the blocks will be found to facilitate the operation of unloading.

As the load is elevated but a short distance in the beginning of the operation, it is obvious the full complement of blocks will be required to raise the load at that distance; hence, as the distance lengthens or increases by filling up of the mow with the hay, the blocks will be removed accordingly.

It will be seen, as the hoisting-rope is being drawn up between the prongs on the end of the lever G, these blocks will, of course, come in contact with them, and release the lever.

The operation is as follows:

When the truck is pulled back by the rope M, the catch F engages with and holds the truck to the cross-brace H, and at the same time the lever L, impinging against the inwardly-projecting curved bar N above, releases pawl J, and allows the hoisting-rope to descend with the elevating-fork or apparatus, when it is loaded, and on being elevated, the upper block, coming in contact with the prongs on the end of the

lever G, trips or releases it, and the catch automatically, so that the truck immediately starts forward, and, on releasing pawl J, the load is dropped at the point desired, and, on shifting track C, by moving the endless belt, it may be dropped either to the right or left.

Having thus fully described my invention,

What I claim therein as new and desire to secure by Letters Patent, is—

1. In a hay-elevator, the movable track C, in combination with the endless belt D, or its equivalent, and truck E, substantially as and for the purpose set forth.

2. The brace H, secured to the beams of the building, in combination with the hinged catch E of the truck, and its releasing-lever, substantially as shown and described.

3. The inwardly-projecting curved bar N, in combination with the releasing-lever L and its pawl, constructed and operating substantially as described.

As evidence that I claim the foregoing as my invention I have hereunto set my hand and seal in the presence of two witnesses.

JAMES LINDERMAN. [L. s.]

Witnesses:

A. VAN NESS POWELSON,
IRA B. MILLS.