

(No Model.)

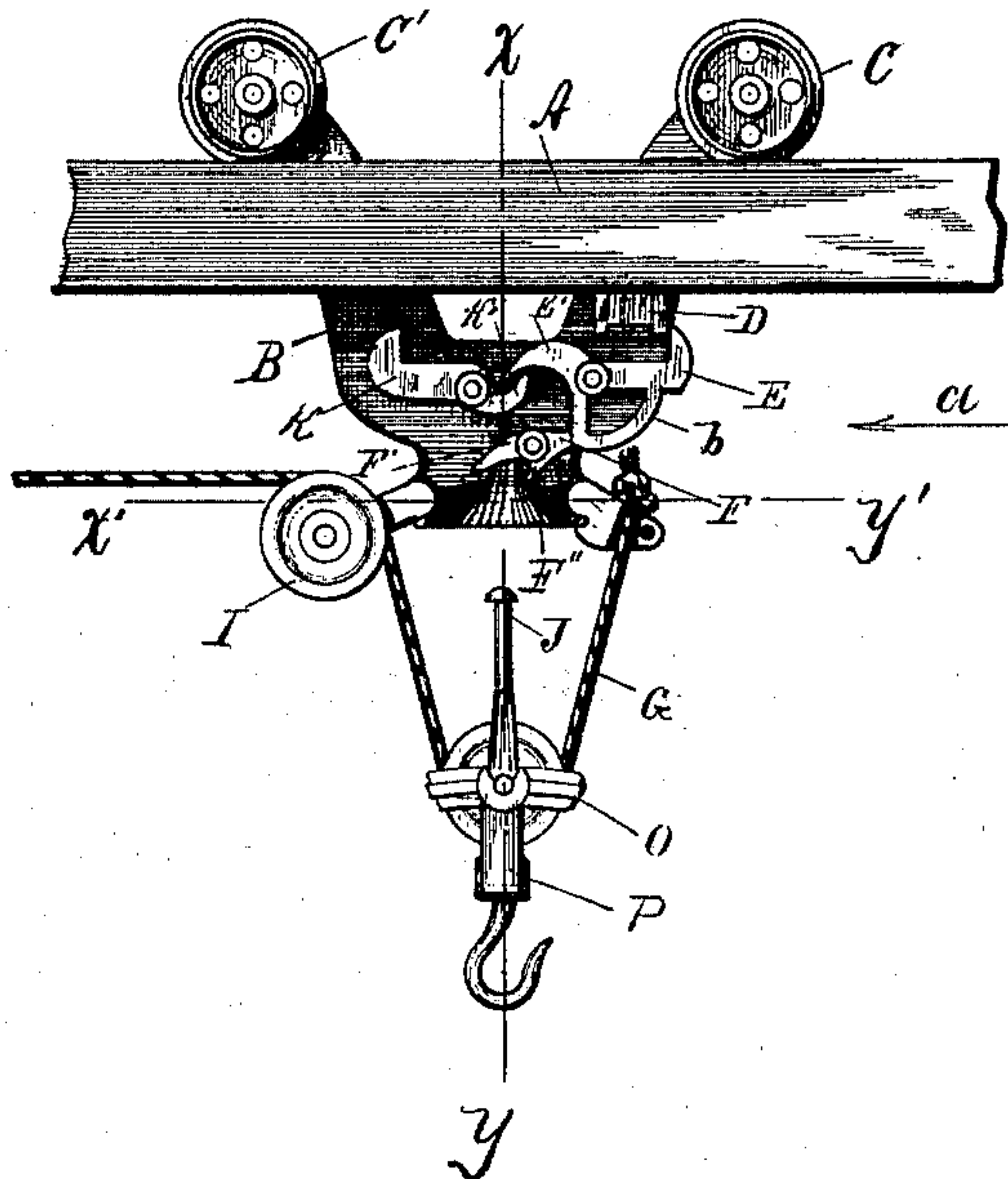
C. E. HUNT, N. B. HELM & H. L. FERRIS.

HAY CARRIER.

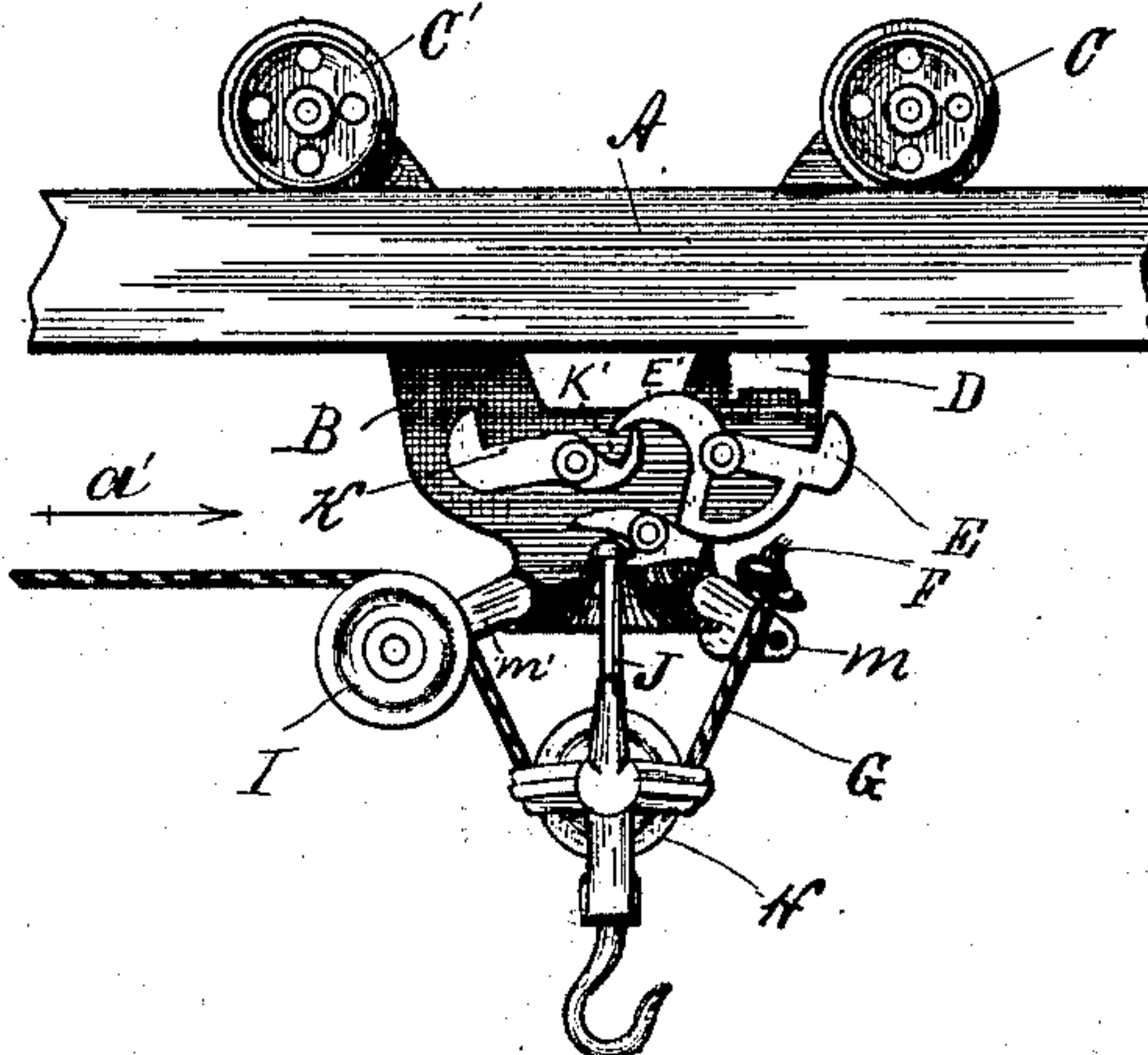
No. 316,463.

Patented Apr. 28, 1885.

*Fig. 1.*



*Fig. 2.*



*Fig. 3.*

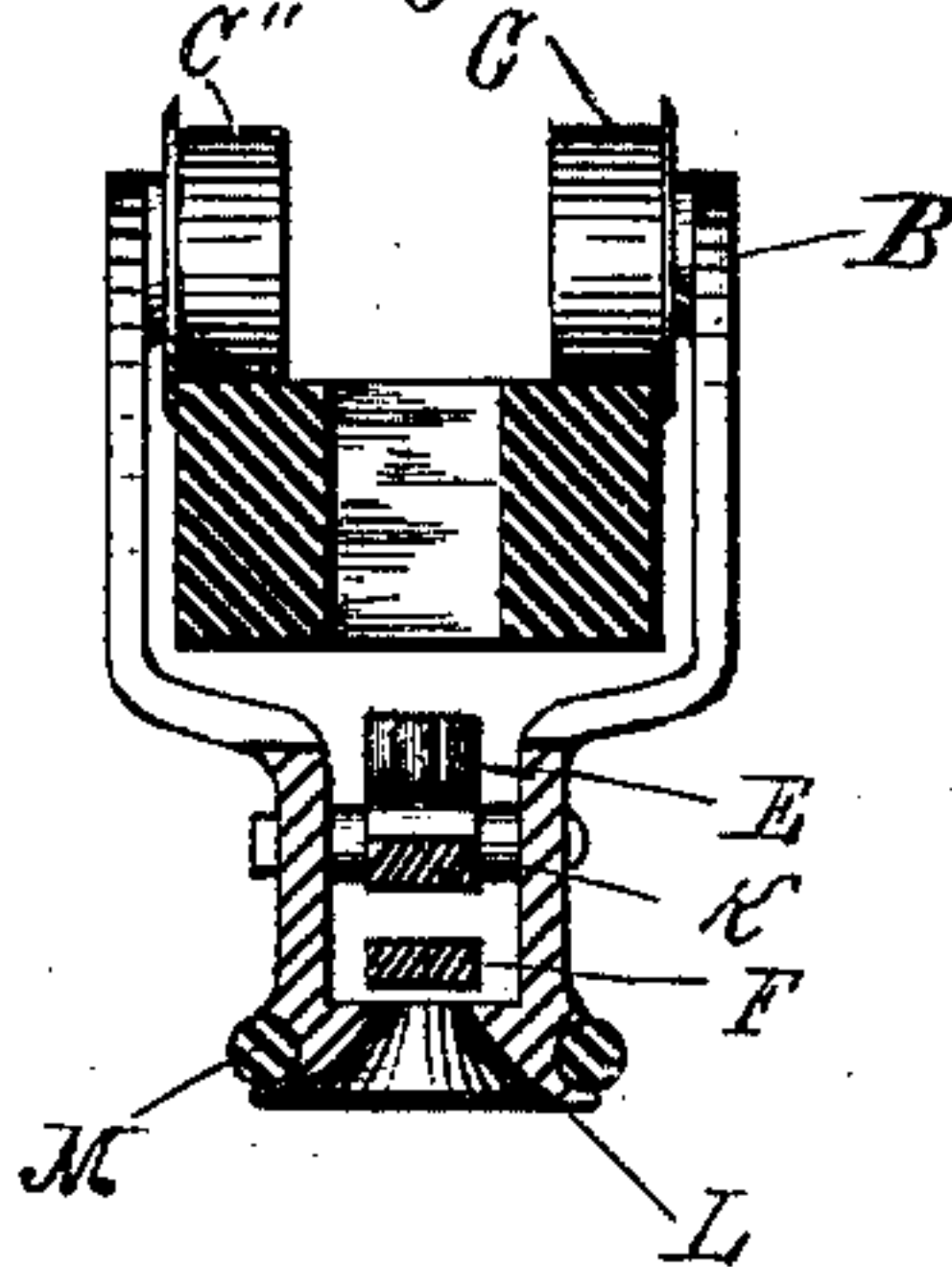
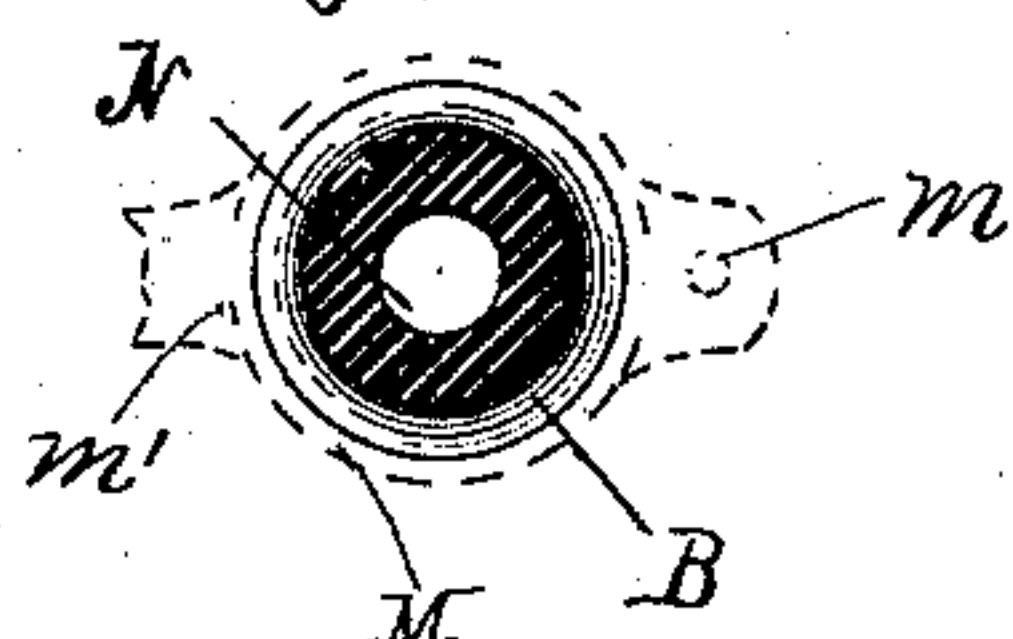


Fig. 4.



**WITNESSES:**

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# UNITED STATES PATENT OFFICE.

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## HAY-CARRIER.

SPECIFICATION forming part of Letters Patent No. 316,463, dated April 28, 1885.

Application filed February 24, 1885. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES E. HUNT, NATHAN B. HELM, and HENRY L. FERRIS, all residents of Harvard, in the county of McHenry and State of Illinois, have invented certain new and useful Improvements in Hay-Carriers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

Our invention relates to improvements in hay-carriers, and is fully described and claimed in the following specification, and shown in the accompanying drawings, in which—

Figure 1 is an internal elevation of one-half of the carrier-frame in position on the track-beam, the locking parts being attached thereto and shown in the position which they assume when the carrier is locked with reference to the beam, but unlocked with reference to the hanging pulley; Fig. 2, a similar view of same parts in the position assumed when locked with reference to the hanging pulley, but unlocked with reference to the beam; Fig. 3, a transverse vertical section passing through the line  $xy$ , Fig. 1; Fig. 4, a horizontal section of the carrier through the line  $x'y'$ , Fig. 1.

In these views, A is a suitably-suspended track-beam of any desired form, but preferably consisting of two parallel timbers connected at suitable intervals by stay-blocks, the beam, whatever its form may be, being suspended by means of rods passing through its center. On the lower face of the track is fastened at any desired point a tripping-block, D, and on the upper surface thereof roll freely four anti-friction wheels or rollers,  $C C' C''$ , two of which are fastened to each half of a two-part carrier-frame, B, the parts of the frame being on opposite sides of the beam and bolted or otherwise fastened together. At its lower end the carrier-frame terminates in an annular neck having a horizontally-grooved periphery, and in the groove turns freely a swiveling ring, M, provided with two diametrically-opposite projections or arms,  $m m'$ , the arm  $m$  being adapted to receive and retain the knotted end of a rope, G, and the arm  $m'$  being provided with a grooved sheave, I, over which said rope passes. A sheave, H, rests on and

is supported by the rope G, between the arms  $m m'$ , the sheave being hung in a hanger, O, provided with a dependent hook, P, adapted to receive a hay-fork, and with an integrally-formed vertical shank, J, having a hemispherical head at its upper end. From the sheave I the rope passes to a stationary pulley at any point along the line of the beam in the usual manner, and thence to the barn-floor.

Between the two parts of the carrier-frame, and supported on horizontal pivots passing through both the parts, are two locking-hooks, E K, of such form and location that when in the position shown in Fig. 1 their points are higher than the lower face of the tripping-block D, their inner faces, when in that position, being vertical, while their outer faces are rounded or beveled. On the inner ends of the hook-castings, respectively, are formed spurs  $E' K'$ , one concave on its lower and the other concave on its upper face, the point of each of said spurs being in contact with the concave face of the other. Each of the locking-hooks EK is heavier than the spur formed integrally with it, and the tendency of each of said hooks is to fall from the position shown in Fig. 1 to that shown in Fig. 2.

Below the spurs  $E' K'$  is pivoted a tripping-lever,  $F'$ , the pivot being at one side of the center of the frame, while the lever extends across the center, and a locking-lug, F, is formed integrally with the tripping-lever, the outer end of the lug abutting (when the parts are in the position shown in Fig. 1) against the inner end of a stop,  $b$ , formed integrally with the hook and spur  $E E'$ . The lever  $F'$  is heavier than the lug F, and thus tends to assume the position shown in Fig. 1; but if the lever be raised the lug is depressed until it releases the stop  $b$ . The hook E falls, and the stop  $b$  swings inward and rests on the upper face of the lug, thus locking the lug and lever in the position shown in Fig. 2. As the hook E falls, the spur  $E'$  rises until its convex upper face is higher than the lower face of the tripping-block D, and the rise of the spur  $E'$  permits the simultaneous rise of the spur  $K'$  and the corresponding fall of the hook K.

On the lower face of the trip-lever casting  $F'$  is formed integrally a latch,  $F''$ , whose inner end, when the tripping-lever is down, as in



Fig. 1, is farther from the center of the carrier than the margin of the head of the vertical shank J; but when the tripping-lever is raised the inner end of the latch moves inward sufficiently to reach the face of the shank, and thus support the head thereof. If the shank J be raised from its position in Fig. 1 until it strikes the tripping-lever F', it is evident that the latch F'' will swing inward under the head of the shank, and at the same time the lug F will drop inward and release the stop b. The stop will swing inward over the lug F, locking it down, and the hooks E K will drop down below the lower face of the tripping-block D.

Fig. 2 shows the position of all the parts as the carrier approaches the tripping-block after the fork has discharged its load, the direction of motion of the carrier being indicated by the arrow a'. The hooks E K being lower than the lower face of the tripping-block D, the hook E passes under the block. The spur E' strikes the block, however, and is pressed downward, raising both of the hooks E K and swinging the stop b outward. This releases the lug F, which rises and locks the stop b, and at the same time the latch F'' swings outward, releasing the head of the shank J and permitting the hanger O to descend to the floor or load below. When the fork has been loaded, the drawing of the rope first moves the carrier in the direction indicated by the arrow a, Fig. 1, until the hook E strikes the block D. The hanger O then rises until the head of the shank J strikes the tripping-lever F', when the latch F'' catches it, and the hooks E K are dropped down to the position shown in Fig. 2, thus releasing or unlocking the car-

rier with reference to the beam and the block D, as hereinbefore explained.

We are aware that some of the features of this carrier are shown and described in our Patent No. 307,950, dated November 11, 1884, and we hereby disclaim any novelty in this application for the features so shown and described.

What we do claim as new, however, and desire to secure by Letters Patent, is—

1. The combination, with the track A and the carrier-frame B, moving thereon, of the tripping-block D, the opposite hooks, E K, provided with the coacting spurs E' K', respectively, means, substantially as shown and described, for locking said hooks in position, and the hanger O, provided with the headed shank J, adapted to trip said locking devices, substantially as shown and described, and for the purpose set forth.

2. The combination of the track-beam A, carrier-frame B, locking-hooks E K, provided with spurs E' K', respectively, the stop b, the lug F, having formed integrally with it the tripping-lever F' and latch F'', and the hanger O, provided with the headed shank J, substantially as shown and described, and for the purpose set forth.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

CHARLES E. HUNT.  
NATHAN B. HELM.  
HENRY L. FERRIS.

Witnesses:

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