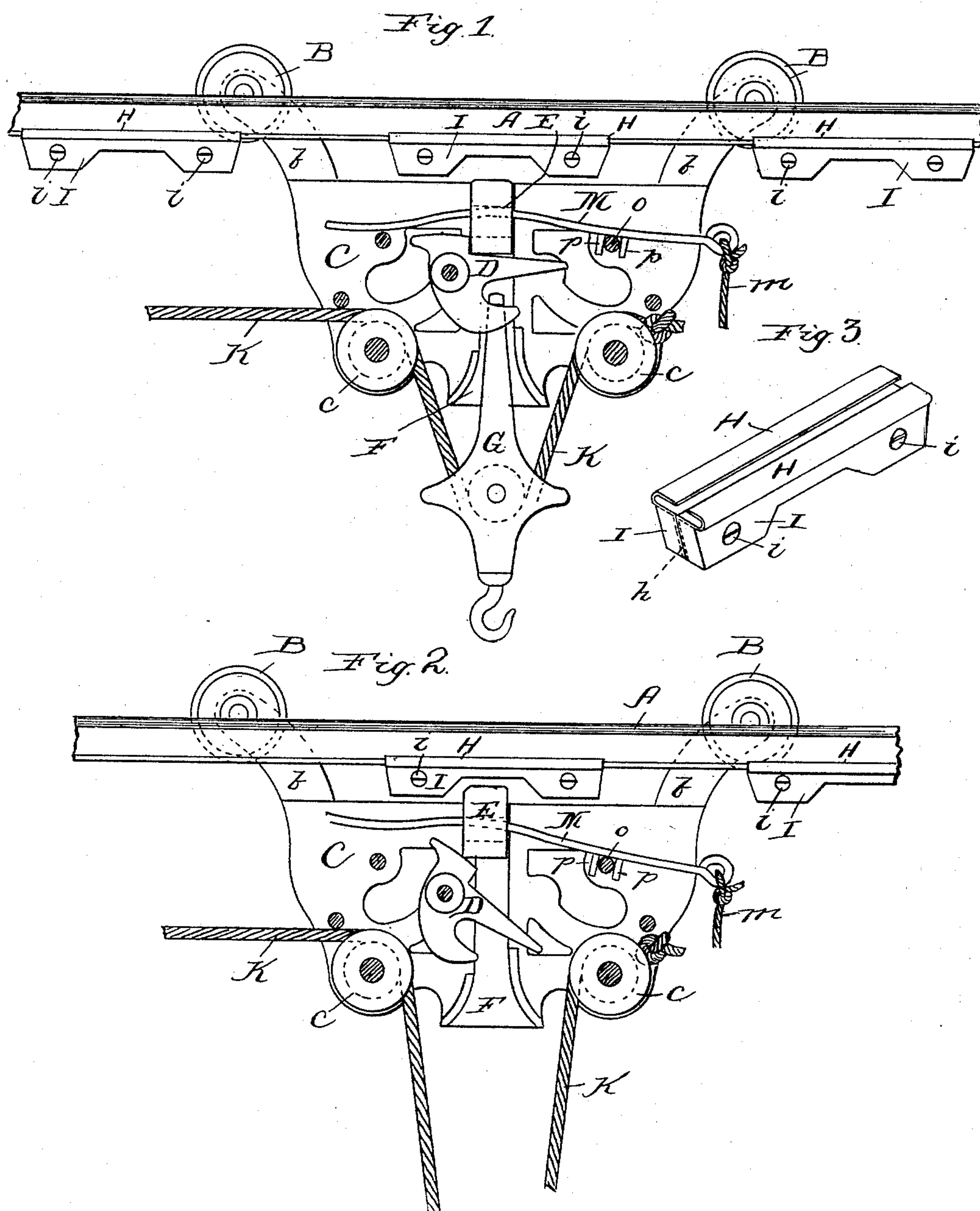


(No Model.)

J. E. PORTER.  
HAY CARRIER AND TRACK.

No. 482,412.

Patented Sept. 13, 1892.



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# UNITED STATES PATENT OFFICE.

JOSEPH E. PORTER, OF OTTAWA, ILLINOIS.

## HAY-CARRIER AND TRACK.

SPECIFICATION forming part of Letters Patent No. 482,412, dated September 13, 1892.

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*To all whom it may concern:*

Be it known that I, JOSEPH E. PORTER, a citizen of the United States, residing at Ottawa, in the county of La Salle and State of Illinois, have invented a new and useful Improvement in Hay-Carriers and Tracks, of which the following is a specification.

This invention relates to improvements in hay-carriers and tracks. In the prevailing construction of these devices the track is provided with a stop for locking the carrier in position at the loading-point only. As heretofore constructed the tracks have also been provided with stops adapted both to lock the carrier to the track and to release the fork or fall whenever the carrier comes in contact with such devices, and so far as my knowledge extends the carriers have not been so constructed as to be capable of passing these stops without being operated thereby. It is frequently desirable, however, to move the carrier from end to end of its track and to load at different points, and hence it will be seen that if the stops are not properly located for the work in hand they must be transferred to the proper points, and as these points are continually changing the stops are apt to need frequent removals.

In my present invention I have sought to provide the track with stops which will permit the carrier to move by them without engagement, so that the carrier may be moved in either direction and from one end of the track to the other, if necessary, without engaging with or being affected in any way by the stops which it passes *en route*. This feature enables me to employ any number of stops upon the track required by circumstances or convenience. My carrier is also provided with means whereby it may be stopped at will when it reaches any one of these stops and the fork be lowered for loading.

The invention consists in the combination, with the track and its stops, of a carrier provided with means adapted to engage the track-stops and to be thrown into such engagement at will.

The invention further consists in the combination of a track provided with stops adapted to permit the passage of the carrier without interference, a carrier having a movable catch adapted to engage said stops, and a de-

vice operable at will for throwing said catch into engagement with the stops.

The invention further consists in the combination of the track provided with stops with a carrier having a movable catch adapted to engage said stops, a device for throwing said catch into engagement with said stops at will, and a fall also adapted to throw said catch out of engagement when the fork is drawn up preparatory to transferring it to the point of unloading.

The invention further consists in the novel features of construction and the novel combinations of parts hereinafter set forth.

In the drawings, I show at Figure 1 a side elevation of my improved track and carrier, one of the side plates of the carrier being omitted to show the internal construction. Fig. 2 is a similar view showing the parts in different positions, and Fig. 3 is a perspective of one of the track-stops.

In said drawings, A represents the carrier-track constructed of I-rails in the customary manner and supporting the carrier upon its base-flanges. The carrier has the usual rollers B traveling upon the flanges of the track-rails and connected to the carrier by arms *b*. The body of the carrier is formed in the usual manner of two parallel plates C, of which one only is shown. Between these plates are supported the rope pulleys *c*, the pivoted hook D, and the sliding catch E. A vertical passage F, funnel-shaped at its lower end, admits the upper extension of the "fall" G, as it is sometimes termed, to which the hay-fork is hooked.

The track-stops are applied to the base of the track-rails and consist of pieces of thin metal H, hooked over so as to grasp both the base-flanges of the rails and to conform as closely as may be to the upper or tread surface thereof. I make these parts of thin metal in order that no injurious unevenness may be formed thereby in the path of the carrier-rollers. The parts H are either appropriately secured to blocks I by riveting, soldering, casting, or otherwise; or they may be provided with downwardly-extending flanges *h*, which may be clamped between the blocks I with such firmness as to retain them in position. The blocks I give the rigidity necessary, and being cut away at their under surfaces they are adapted to act as stops to the carrier. I



make the stops in two parts, as shown at Fig. 3, so that they may be put together at the time of application to the track and clamped thereon by the screws or rivets *i*. These screws or rivets should create such friction upon the track as will prevent the stop from sliding along the track, or in lieu thereof extraneous means may be employed to prevent such sliding. I find, however, that the stops when clamped by the screws or bolts *i* are rendered sufficiently firm without weakening the tracks by boring through them or cutting away the metal or attaching them in any such manner as will prevent or render laborious the moving of the stops from one position to another.

The fall-block *G* when it lifts the hook *D* allows the catch *E* to fall from the position given at Fig. 2 to that shown at Fig. 1, the former position being one in which the carrier is locked and the latter one in which the carrier is released.

To bring about the locking of the carrier, I provide it with special means for the purpose of moving the catch to the locking position. These means consist of a lever *M*, passing through an opening (shown by broken lines) in the catch, and a cord *m*, attached to the end of the lever and extending down to within reach of the attendant. The lever is fulcrumed upon the cross-bar *o*, so that when the cord is drawing the interior end of the lever will be lifted, and with it the catch. The lever *M* is held in position by lugs *p* at either side of said cross-bar or in some other suitable way. By reason of the presence in the carrier of means for lifting the catch at will I am enabled to stop the carrier at any one of the track-stops desired, passing any intermediate stops at which it is not desired to load without dropping the fork or in any way affecting the carrier.

*K* is the rope for lifting the fork.

This being the construction of the parts, their operation is as follows: Supposing the parts to be in the position shown at Fig. 2—that is to say, with the catch *E* in locking engagement with the track-stop—the horse attached to the rope *K* being now started draws upon said rope and raises the fork until the upper end of the fall enters the passage *F* and lifts the hook *D* to the position shown at Fig. 1. This results in the dropping of the catch *E* from its engagement with the track-stop and also the engagement by the hook *D* with the fall, as shown in Fig. 1, so that the fall and its load, if any, is retained in the elevated position to which it has been raised. The lock now being released, the carrier is moved along the track to the point where the load is to be dropped. The load is now released and the carrier is started back for a fresh load. In returning it passes all stops on the track until it reaches the point on the track where the operator wishes to reload. He then pulls on the cord to operate the catch-lever and locks the carrier, and in so doing

causes the dropping of the fork. In both movements of the carrier it will be noticed that it can move freely to the extremes of the track without interference, regardless of any intermediate stops upon the track. When constructed in the manner shown, these stops are readily movable from one place to another upon the track; but by employing a number of them sufficient for the work I avoid making numerous changes in the position of the stops.

It will be seen that I have omitted from the track the cams heretofore used for lifting the catch into operative position and substituted therefor a device which is operable at will and which is consequently more desirable than the previous construction, because it enables the carrier to be moved past the track-stops without being locked thereto.

I claim—

1. In a hay-carrier, the combination of a track provided with a series of positive shoulders or stops, a carriage mounted on said track and adapted to travel thereon past said stops, hoisting devices mounted on said carriage, a vertically-sliding bolt or catch *E* on and movable with said carriage and adapted to engage any of said stops, an operating device or cord connected with said catch and independent of the hoisting devices, and a support for said catch, operated by the hoisting devices, whereby the carriage is released by the hoisting of the load and may be caused to pass the intermediate stops of the said series or to engage any one of said stops and be locked in place at will irrespective of the hoisting devices, substantially as set forth.

2. In a hay-carrier, the combination of a track provided with shoulders or stops, a carriage mounted and adapted to travel thereon, a hoisting-rope supported by said carriage, a fall-block *G*, carried and operated by the rope, a hook on the carriage, adapted to engage and support the fall-block, a catch *E*, engaging the hook to sustain and lock it in its supporting position and movable away from said hook and into the path of the said stops on the track, and means, such as a cord, for operating the catch, substantially as set forth.

3. In a hay-carrier, the combination of a track provided with shoulders or stops, a carriage mounted and adapted to travel thereon, a hoisting-rope supported by said carriage, a fall-block *G*, carried and operated by the rope, a hook on the carriage, adapted in one position to engage and support the fall-block and in another position to support a catch, the said catch or bolt adapted to engage the said hook to sustain and lock it in its first-mentioned position and movable away from said hook and into the path of the said stop on the track, and means, such as a cord, for operating the catch, substantially as set forth.

4. In a hay-carrier, the combination, with a track provided with stops, of a carriage thereon, a hoisting-rope and fall-block on the carriage, a hook adapted to support said fall-



5 block, a vertically-movable catch for engaging said hook or said stops on the track, a lever connected with the catch, and means, such as a cord, for operating the lever, substantially as set forth.

10 5. In a hay-carrier, the combination, with the track, consisting of a rail having lateral base-flanges, a carriage having wheels running on the said flanges, hoisting devices on the carriage, a movable catch mounted on the carriage, and a stop for said catch, consisting of thin plates H, adapted to clasp said wheel-

supporting track-flanges and permit the free passage of the wheels and having vertical downwardly-extending flanges *h*, rigid stop-plates I, situated outside of the latter flanges, and means for forcing the stop-plates together to cause the plates H to clamp the rail, substantially as set forth. 15

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