

(No Model.)

2 Sheets—Sheet 1.

M. G. GROSSCUP.
HAY CARRIER.

No. 566,681.

Patented Aug. 25, 1896.

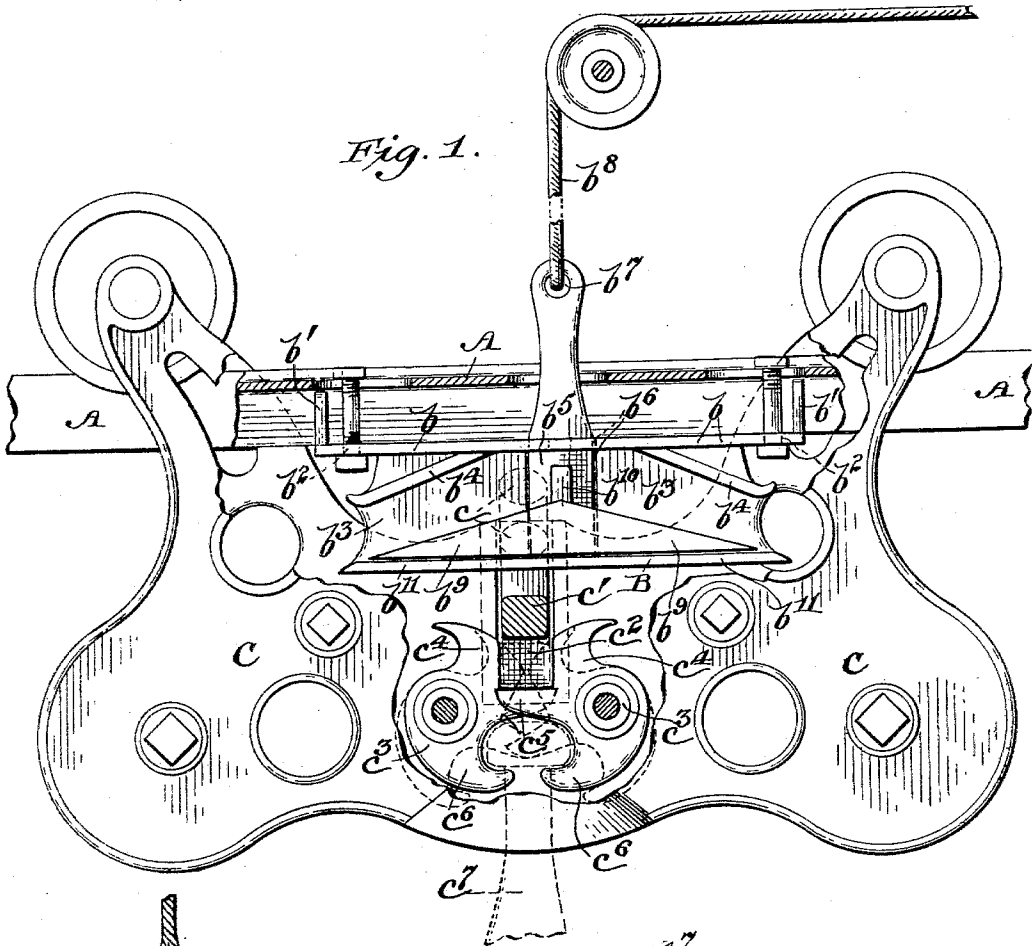


Fig. 1.



Fig. 6.

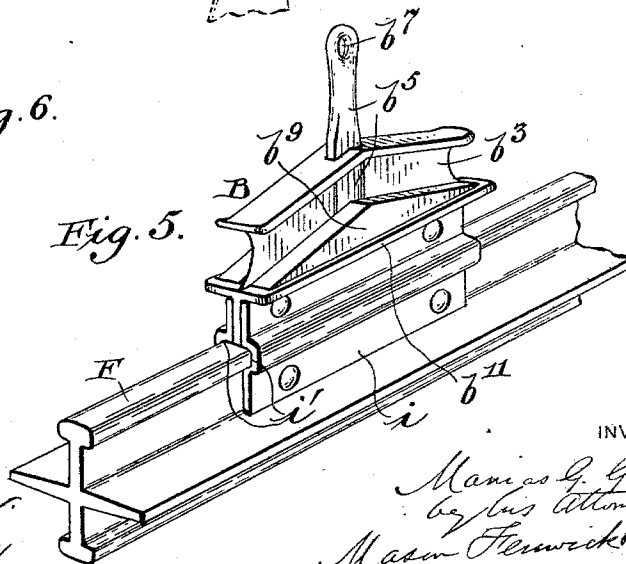


Fig. 5.

WITNESSES

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W. Henry Muzzy.

INVENTOR

Manias G. Grosscup
by his Attorneys
Mason Fenwick Lawrence

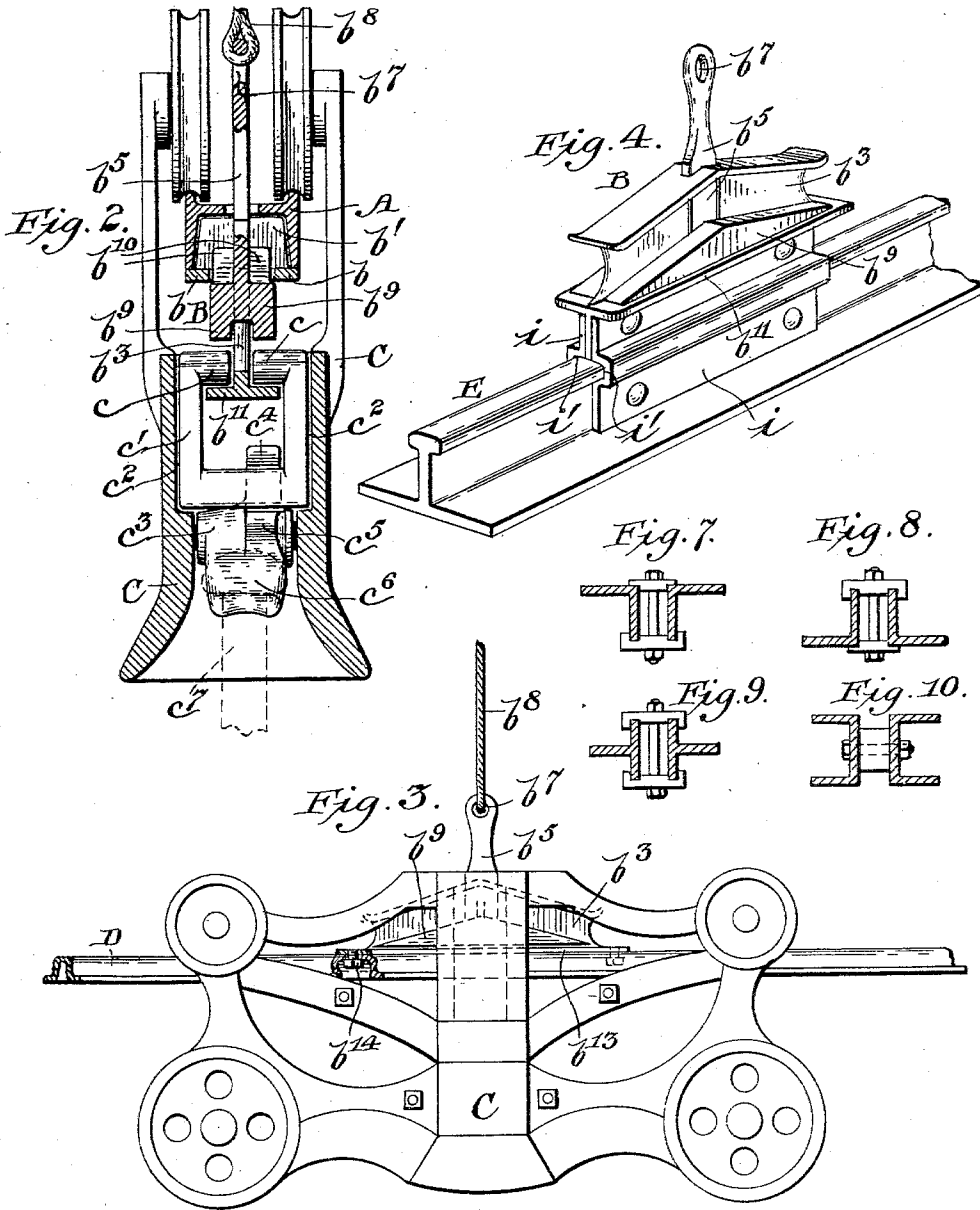
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2 Sheets—Sheet 2

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UNITED STATES PATENT OFFICE.

MANIAS G. GROSSCUP, OF CHICAGO, ILLINOIS.

HAY-CARRIER.

SPECIFICATION forming part of Letters Patent No. 566,681, dated August 25, 1896.

Application filed April 22, 1896. Serial No. 588,659. (No model.)

To all whom it may concern:

Be it known that I, MANIAS G. GROSSCUP, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hay-Carriers; and I 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 appertains to make and use the same.

My invention relates to improvements in hay-carrier apparatus, and has more particular relation to knocker-blocks adapted to be applied to the elevated ways for tripping the carrier-catches.

The invention consists of the combination with an elevated rail of a knocker-block adapted to be attached thereto and provided with movable inclined tripping-blocks, as hereinafter described.

It also consists of certain other novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more particularly set forth and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 represents a side elevation of my improved knocker-block attached to the under side of a channel-rail, also side elevation of the carriage in position on the rail. Fig. 2 represents a transverse section through the same. Fig. 3 represents a side elevation of my improved knocker-block and carrier, the former being applied upon the top of a U-shaped rail, and the tripping-blocks being in their raised position. Fig. 4 represents a detail perspective view of my improved knocker-block applied to the upper side of a T-rail. Fig. 5 represents a perspective view of the devices embodying my invention applied to a double-headed flange-rail. Fig. 6 represents a modification of my invention in which the inclined blocks are applied to one side only of the vertically-movable slide; and Figs. 7, 8, 9, and 10 represent, respectively, transverse vertical sections through different forms of rails to which my invention can be applied.

A in the drawings represents the channel-rail; B, my improved knocker-block applied thereto; C, the carrier; D, the U-shaped rail, and E the T-rail.

In the application of my invention shown

in Figs. 1 and 2 the knocker-block comprises a horizontal top plate b , provided with upwardly-extending lugs b^1 and bolt-apertures b^2 . These lugs are adapted to fit snugly into the under channel of the elevated rail when the knocker is secured to said rail by bolts passing through the apertures b^2 . A vertical web b^3 is pendent from the plate b , and is provided upon each side near the top with oppositely-inclined flanges b^4 , adapted to form stops to limit the upward movement of the link-catch hereinafter more fully described. A vertically-movable slide b^5 is mounted in the web b^3 , and projects upward through a suitable aperture b^6 in the plate b and an aperture in the rail, and is provided at its upper end with an eye b^7 for the attachment of an operating-rope b^8 . Inclined blocks b^9 are secured on the respective sides of the lower end of the slide b^5 , and are adapted to move up and down with the same. It is sometimes desirable to provide each of these blocks b^9 at its apex with an upwardly-projecting stud b^{10} , whose office is to prevent the carrier passing through or past the knocker-block. The inclined blocks b^9 when down in their normal position rest upon a horizontal plate b^{11} , attached to the lower edge of the web b^3 , and then occupy the same position as the immovable inclines of knocker-blocks now in use. When these blocks are in their lowered or normal position, they are adapted to be engaged by the projections c of the drop-link c' , mounted in vertical guideways c^2 of the carrier. Pivoted catches c^3 are mounted on the carrier-frame on each side of the ways c^2 , and are provided with vertical lugs c^4 , horizontal lugs c^5 , and lower hook ends c^6 . The lower hook ends c^6 are adapted to catch under the head of a sling or fork pulley-shank c^7 and thus support said pulley. The hooks are held closed under the head of the pulley-shank by the link c' , which is interposed between the lugs c^4 , and therefore when said link is lifted, as before described, the lugs c^4 are released, and the weight of the load on the hay fork or spring disengages the head of the shank c^7 from the hooks and allows the said load to drop. When the head of shank c^7 is again pulled up by the operating-rope c^8 , it contacts with the horizontal lugs c^5 , thereby forcing lugs c^4 apart and allowing the link to drop

and at the same time moving the hooks c^6 under the said head to support it. As before stated, the blocks b^9 when in their lower position trip the carrier-catches, but when raised by the slide b^5 the carrier can pass freely by the knocker-block without the link c being lifted. It will thus be seen that the action of the carrier is fully under the control of the operator, and he has only to pull the rope b^8 in order to allow the carrier to freely pass the knocker-block without depositing its load. The rope b^8 passes from the slide b^5 up and over a suitable pulley mounted on one of the rafters of the barn.

15 In the application of my invention shown in Fig. 3 the upper horizontal plate of the knocker-block is omitted, and the lower horizontal plate b^{13} is extended at each end and provided with bolt-holes, through which bolts b^{14} pass to secure said block to the top of the rail. The frame of the carrier and the drop-link are extended in this case to bring the projections of the link on the proper level with the inclined movable trip-blocks.

25 In the application of my invention shown in Fig. 4, I illustrate my knocker-block applied to the upper side of a headed T-rail. The knocker-block in this construction is similar to that shown in Fig. 3, with the exception that the lower horizontal plate is not extended at the ends and vertical clamping-plates $i i$ are pendent from the said plate. These clamping-plates are provided with grooves $i' i'$, adapted to fit over the head of the rail. They are also provided with suitable bolt-holes whereby they may be securely clamped to the rail.

It will be observed from the above that my improved knocker-block can be attached to any form of rail, either above or below the same, and will effectually trip the carrier-catches or allow the carrier to pass by freely without such tripping at the will of the operator.

45 There are many barns that have two or more spaced barn-floors on the same plane, and on which the hay or grain is to be deposited, and in such cases my improved knocker-block is of great assistance, as the carrier can be tripped at any point desired, and yet be able to pass any of the knocker-blocks without tripping, at the will of the operator.

In the application of my invention as shown in Fig. 5 the block is applied to the double-headed rail F in the same manner as in Fig. 4.

In the modified form of my invention shown in Fig. 6 I have provided the vertically-movable slide with the inclined block on one side 60 only. In this case the vertically-movable

link mounted in the carrier-frame would be engaged on one side only.

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

65 1. A knocker-block for an elevated hay-carrier track, consisting of a knocker-block portion proper adapted to be attached permanently to the rail and constructed with a passage-way between its top and bottom, and an adjustable slide provided with a lateral tripping or unlocking projection having a top inclined surface, substantially as described. 70

2. A knocker-block for an elevated hay-carrier track consisting of a knocker-block portion proper adapted to be permanently attached to the rail, and a vertically-moving slide provided upon each side with a lateral tripping and unlocking projection having a top inclined surface, substantially as described. 75 80

3. A knocker-block for an elevated hay-carrier track consisting of a knocker-block portion proper adapted to be permanently attached to the rail, a vertically-movable slide provided upon each side with a lateral tripping and unlocking projection having an oppositely inclined upper surface, and a stop projection at the apex of each incline to limit the movement of the carrier, substantially as described. 85 90

4. In combination with a hay-carrier having a vertically-movable releasing-catch, a knocker-block adapted to be permanently attached to the rail upon which the carrier runs and consisting of a knocker-block proper, a vertically-movable slide provided with a lateral tripping or unlocking projection having an inclined upper surface that is adapted to engage and raise the vertically-moving catch of the carrier when said slide is in its lower position, and allow the same to pass freely when in its upper position, substantially as described. 95 100

5. The combination with an elevated rail, of a knocker-block adapted to be attached thereto and comprising a knocker-block portion proper, a vertically-movable slide mounted therein and tripping or unlatching, lateral projections provided upon the respective sides of said slide and each having reversely-inclined upper surfaces, substantially as described. 105 110

In testimony whereof I hereunto affix my signature in presence of two witnesses.

MANIAS G. GROSSCUP.

Witnesses:

EDDIE BRINKMAN,
WALTON PERKINS.