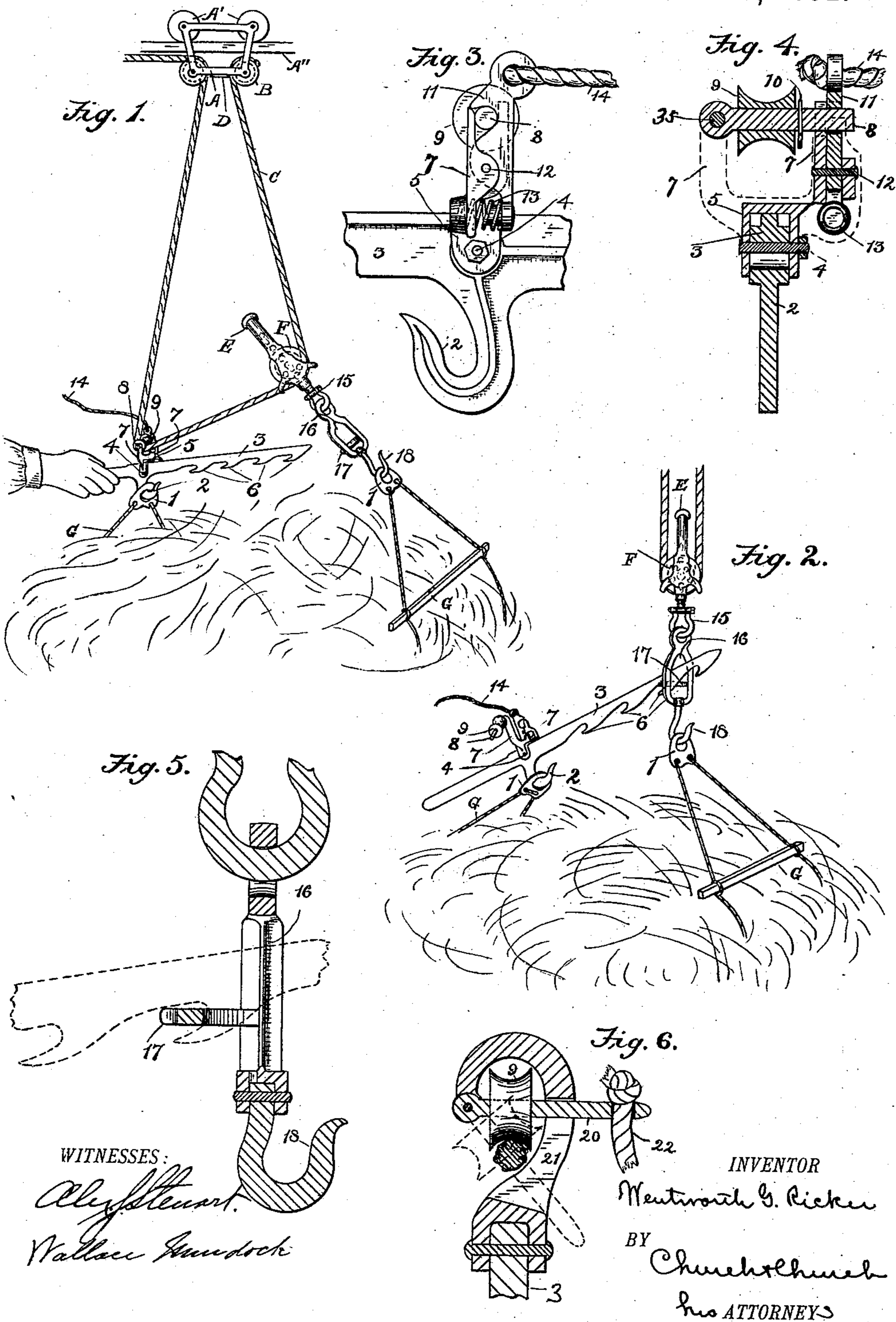


(No Model.)

W. G. RICKER.  
HAY CARRIER.

No. 487,856.

Patented Dec. 13, 1892.



# UNITED STATES PATENT OFFICE

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## HAY-CARRIER.

SPECIFICATION forming part of Letters Patent No. 487,856, dated December 13, 1892.

Application filed March 19, 1892. Serial No. 425,583. (No model.)

*To all whom it may concern:*

Be it known that I, WENTWORTH G. RICKER, of Rochester, in the county of Monroe and State of New York, have invented certain  
5 new and useful Improvements in Hay-Carriers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this  
10 specification, and to the figures and letters of reference marked thereon.

My present invention has for its object to provide an improved attachment for hay-carriers adapted to be used in connection with a  
15 hay-sling—such, for instance, as shown in Letters Patent No. 392,690, granted to me the 13th of November, 1888—whereby the sling may be raised with its load and transferred to the traveling carriage or similar device,  
20 and to provide an arrangement simple and cheap in construction and capable of application to carriers of the class now in general use; and to these ends the invention consists in certain improvements in construction and  
25 combinations of parts, all as will be hereinafter fully described, and the novel features pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is  
30 a perspective view showing the manner of using my invention when the ends of the sling are being brought together; Fig. 2, a similar view, showing the position of the parts when the sling is ready to be raised  
35 and transferred to the carrier; Fig. 3, a side elevation of the detachable fastening for one end of the sling; Fig. 4, a sectional view of the same; Fig. 5, a sectional view of the loop or ring attached to the supporting-pulley.  
40 Fig. 6 is a sectional view of a modification.

Similar reference letters and numerals in the several figures indicate similar parts.

A indicates a hay-carrier of any suitable or approved construction provided with trans-  
45 porting-wheels A' A', arranged to travel upon a suitable track or way A<sup>2</sup>, and with a stationary pulley B, over which the raising and transporting rope C passes, the end of said rope being secured to the carriage, as shown,  
50 or in any suitable manner; also, mounted on the carrier is the usual attaching or engaging

device, (indicated by D,) consisting generally of spring-operated jaws, with which the end E of the frame carrying the pulley F is automatically engaged, and the said frame and  
55 attached sling are moved with the carriage along the track A<sup>2</sup>, these parts being of the ordinary or any preferred construction and their operation well understood.

The sling G, which is preferably constructed as in my before-mentioned patent, is provided at its ends with suitable rings or eyes  
60 1 1, and with one of these is adapted to be engaged a hook 2, formed on or attached to a rod or bar 3, pivoted at 4 to a frame 5, said  
65 bar being provided on one side of the hook with a series of engaging teeth or projections 6, and its other end is extended somewhat and serves as a handle for manipulating it. The frame 5 is provided with upwardly-ex-  
70 tending arms 7 7, to one of which is pivoted, on a pin 35, a pintle or arbor 8, upon which is mounted a small grooved pulley or roller 9, held in position on the pintle by means of a  
75 pin 10, though permitted to rotate freely thereon, and the other arm 7 is provided with a seat or recess in which the end of the pintle is adapted to rest when in normal position, being held therein by means of a latch  
80 11, pivoted at 12, and held normally closed over the pintle by means of a spring 13. The upper end of the latch is inclined, as shown, so that when the free end of the pintle is pressed down it will throw the latch back and become locked in position. Attached to  
85 the end of the latch is a cord 14, by which it may be withdrawn and the end of the pulley-pintle released, when desired, permitting it to turn on the pivot-pin 35, as in Fig. 2. While I prefer to employ the small pulley or roller,  
90 it is obvious that the rope could run on the pintle, but with more friction.

Attached to the under side of the frame of the pulley F is a swivel connection 15, to which is loosely connected a ring or loop 16,  
95 preferably provided with a semicircular cross-bar 17, with which the hooks on the end of the bar 3 are adapted to engage; also, attached to the lower end of this casting is an open hook 18, which is arranged to engage  
100 one of the eyes or rings 1 on the end of the sling.

In operation the slings are, as usual, laid between the portions of the load on the wagon, and when desired to raise and deposit their contents the pulley F is lowered by slackening the rope, and the hook 18 is engaged with one of the eyes on the end of the sling, the hook 2 being engaged with the corresponding eye at the other end. Then the latch on the frame 5 is released and the pintle carrying the roller swung out, the rope placed in the recess between the arms 7, and the pintle returned to first position, the latch holding it securely. The horses are then started and the ends of the sling brought together by the rope passing over the pulley and roller, as in Fig. 1, when with one hand the operator directs the bar 3 through the loop 16, attached to the frame of the pulley F, and, when the desired degree of compression is obtained, releases it, when one of the hooks on the under side of the bar will engage the cross-bar 17. The latch is now opened by means of the cord 14, releasing the end of the pintle 8 and allowing the rope to draw out from between the arms 7 of the casting, the sling then being transferred to the pulley F on the rope and the parts being in the position shown in Fig. 2, when the pulley may be raised, transferred to the carrier A, and moved off to its destination in the usual manner, and when in the proper position the sling may be opened and the load dumped, as usual, and the parts of the sling may be detached, the carrier returned, and another sling and contents raised and transported in the same manner.

In Fig. 6 I have shown a modification in which, instead of employing a movable pulley on the frame 5, adapted to be released by a latch, the pintle of the pulley is pivoted at one end and is provided with an extension 20, passing through a slot 21 in the side of the casting, to which extension is connected a cord 22, the weight of the sling holding the pintle up, as in full lines, and when it is desired to release the rope from the frame 5, after the ends of the sling have been connected, it is only necessary to pull on the cord 22, bringing the pulley down to the position shown in dotted lines, when the rope will run out and the weight of the sling be transferred to the frame of the pulley F, as described.

Instead of providing a large ring with a laterally-extending rib attached to the under side of the frame of the pulley F, I may, and sometimes do, use a larger ring swiveled to the under side of the pulley-frame and provided with a hook at its lower end and engage the hooks on the bar 3 with said ring; but I prefer the arrangement shown, as it enables me to apply the device to the form of hay-carriers and slings now in general use without materially altering the parts, or the ring 1 on one end of the swing could be made larger and the hooked bar engaged with it; also, instead of forming the hook 2 on the bar 3, the hook may be located on the frame or casting 5, and the bar pivoted loosely to the casting

and independently of the said hook; but I prefer the arrangement shown, as it insures the engagement of the hooks on the bar with the co-operating ring when the sling is being raised.

It is obvious that the bar having the hooks could be applied to the end of the pulley-frame and the loop with which it engages fastened to the frame having the detachable pulley; but the arrangement shown is preferred.

Numerous other modifications in construction will at once suggest themselves to those skilled in the art, and I do not, therefore, wish to be confined to precisely the construction shown.

I claim as my invention—

1. The combination, with a hoisting-rope and a hay-sling, of a loop or ring engaged with the rope and adapted to be connected to one end of the sling and the bar adapted to be connected intermediate the ends to the other end, having an outwardly-extending steering end or handle, and a forward portion provided with downwardly and rearwardly extending hooks, arranged to be engaged with the loop and form a secure fastening by the weight of the bar and its load, said bar adapted to be engaged with said hoisting-rope, substantially as described.

2. The combination, with a traveling carriage, a movable frame, and a rope connecting the two, of a hay-sling, a movable frame connected to one end of the sling, having a detaching-pulley and a latch for securing it, the other end of the sling being connected to the first-mentioned movable frame on the rope, and connections for detachably connecting said frames between said two frames, whereby the ends of the sling may be drawn together and secured and the rope released from one of them, substantially as described.

3. The combination, with the traveling carriage, the rope, and the movable pulley on the rope, adapted to engage and be locked to the carriage, of a hay-sling, a movable frame connected to one end of the sling, having a detaching-pulley thereon and a latch for securing it, the other end of the sling being connected to the pulley on the rope, and connections for detachably connecting said frames between the pulley and the frame, whereby the ends of the sling may be drawn together and secured, the rope released from one, and the sling raised and locked to the carriage, substantially as described.

4. The combination, with the carriage, the rope, and the movable pulley on the rope, of the frame having the detaching-pulley and the latch for retaining it, and connections for detachably connecting said frames between the two pulley-frames, embodying a bar provided with a series of hooks or locking projections, and a co-operating ring, substantially as described.

5. The combination, with the carriage, the movable pulley, and the rope, of a frame

mounted on the rope, having the detaching-pulley, the hooked bar, and means for the attachment of a hay-sling, the ring on the movable pulley, with which the bar engages, and means for the attachment of a hay-sling, substantially as described.

6. The combination, with a hoisting-rope, a hay-sling, and the frame having the hooked bar thereon connected to one end of the sling, of the pivoted pintle, the pulley mounted thereon, the latch for retaining the pintle, and the frame with which the hooked bar engages, substantially as described.

7. In a hay-carrier, the combination of the frame having the upwardly-extending arms, the pintle pivoted on one of them, and the pulley mounted thereon, the other arm having the socket for the end of the pintle, the latch 11, having the beveled end pivoted on the pin 12, and the spring 13, said frame adapted for connection to one end of a sling, substantially as described.

8. The combination, with the rope, a pulley thereon having a ring or loop thereon, and means for connecting it with one end of a hay-sling, of a second frame having a detaching-pulley thereon, arranged to engage the rope, and a bar pivoted on said frame, having the attaching-hook for a hay-sling, the series of hooks or projections for co-operating with the loop or ring on the other pulley-frame, and the handle portion extending in rear of the pivot, substantially as described.

9. The combination, with the pulley F, the ring connected thereto, having the laterally-

extending portion, and the attaching-hook connected to the ring, of the frame having an attaching-hook, and the bar pivoted to said frame, provided with hooks or projections adapted to engage the lateral extension on the pulley F, substantially as described.

10. The combination, with the rope and a movable frame thereon, of a hay-sling, a movable frame connected to one end of the sling, having a detaching-pulley and a latch for securing it, the other end of the sling being connected to the first-mentioned movable frame on the rope, and connections for detachably connecting said frames between said two frames, whereby the ends of the sling may be drawn together and secured and the rope released from one of them, substantially as described.

11. The combination, with the rope and a movable frame thereon, of a hay-sling, a movable frame connected to one end of the sling, having a movable pulley pivoted thereon, under which the rope extends, the other end of the sling being connected to the first-mentioned movable frame on the rope, and connections for detachably connecting said frames between said two frames, whereby the ends of the sling may be drawn together and secured and the rope released from one of them, substantially as described.

WENTWORTH G. RICKER.

Witnesses:

A. A. DAVIS,

FRED F. CHURCH.