

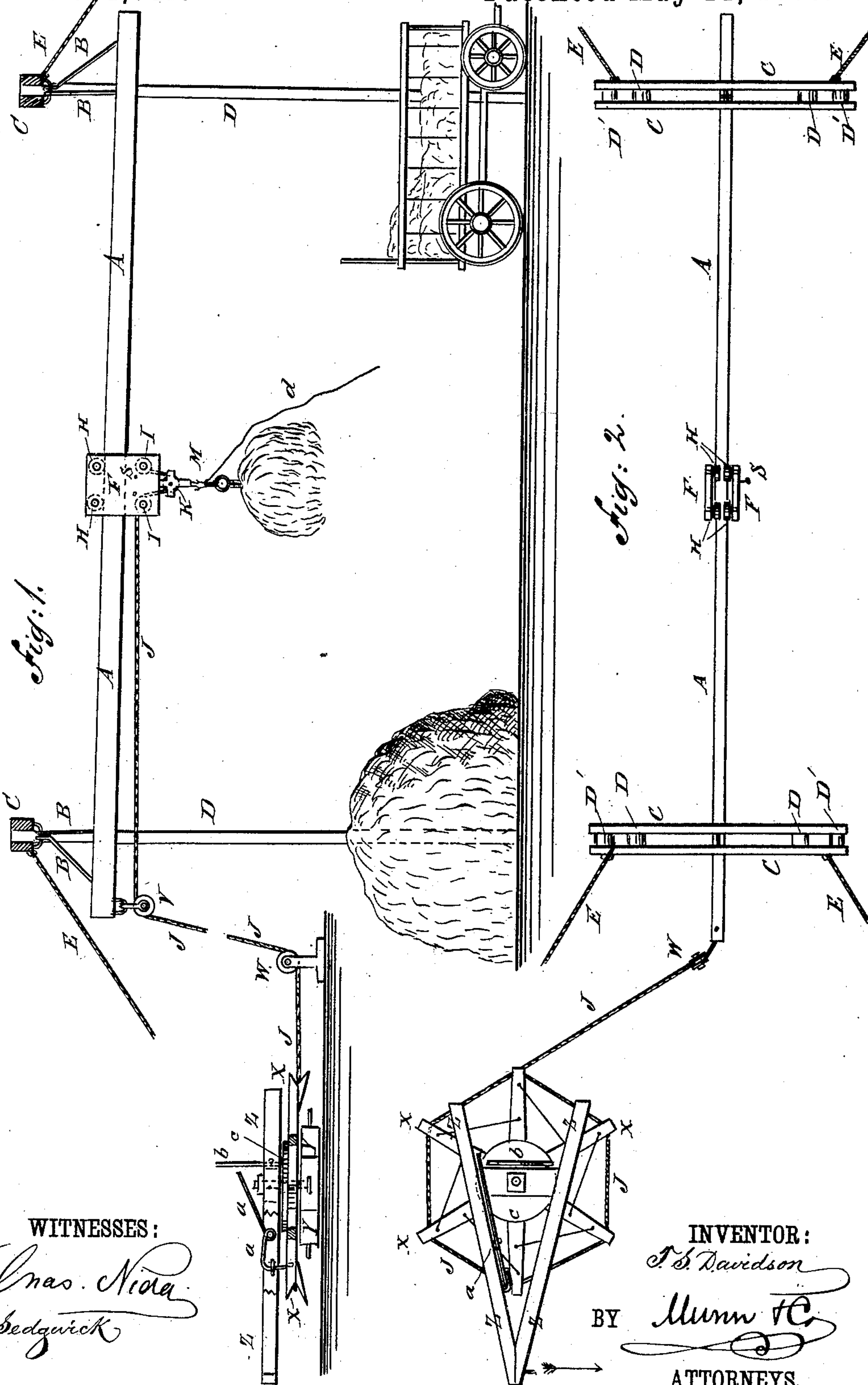
(No Model.)

2 Sheets—Sheet 1.

T. S. DAVIDSON.
HAY CARRIER.

No. 341,642.

Patented May 11, 1886.



WITNESSES:

Chas. Nida
C. Sedgwick

INVENTOR:

T. S. Davidson

BY

Munn & Co.

ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

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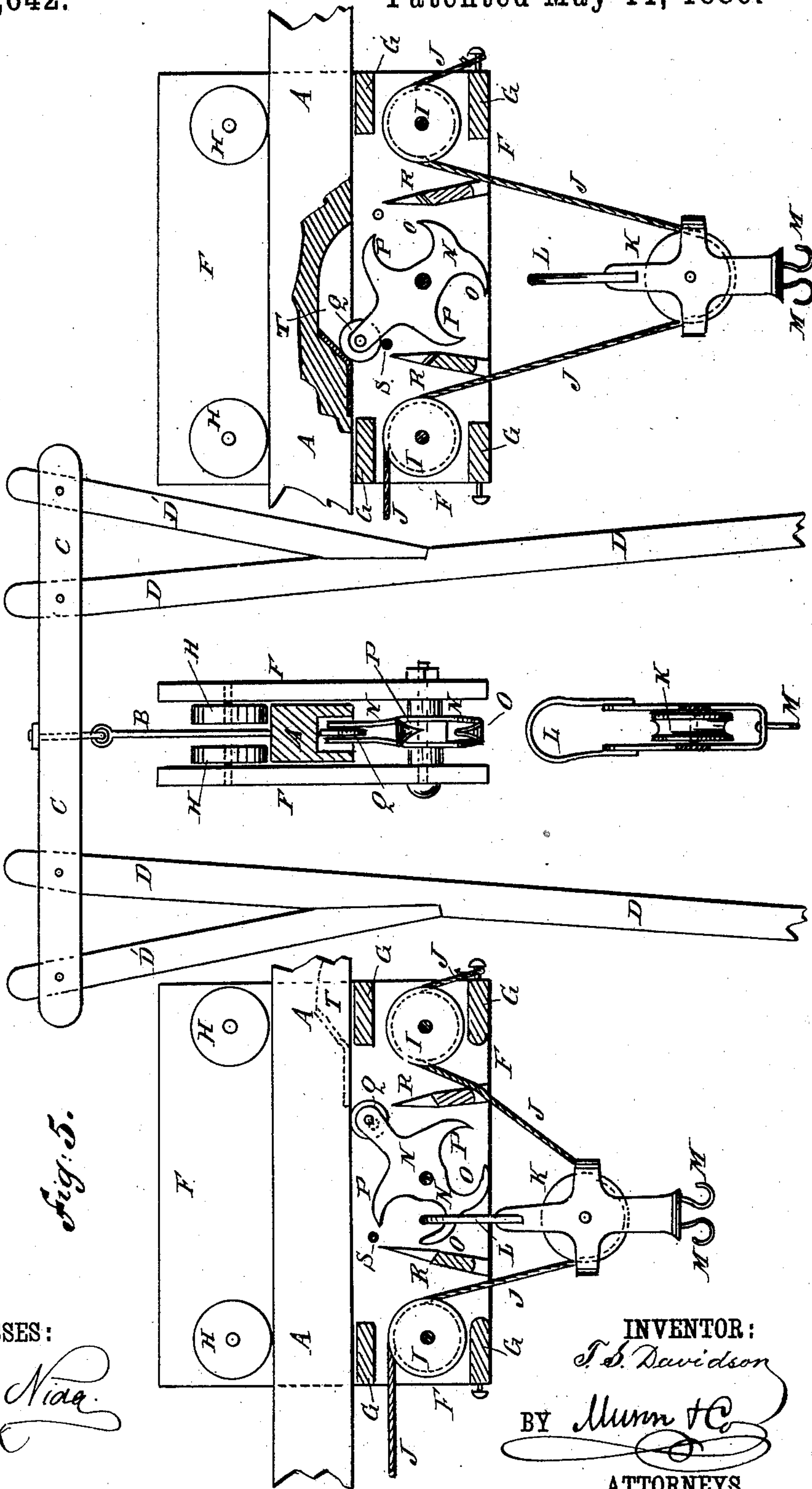
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Fig. 4

Fig. 3.

Fig. 5.



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UNITED STATES PATENT OFFICE.

THOMAS S. DAVIDSON, OF COLESBURG, IOWA.

HAY-CARRIER.

SPECIFICATION forming part of Letters Patent No. 341,642, dated May 11, 1886.

Application filed October 20, 1885. Serial No. 180,425. (No model.)

To all whom it may concern:

Be it known that I, THOMAS S. DAVIDSON, of Colesburg, in the county of Delaware and State of Iowa, have invented certain new and
5 useful Improvements in Hay-Carrier, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification,
10 in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation, partly in section, of one of my improved hay-carriers, illustrating its use. Fig. 2 is a plan view of the same.
15 Fig. 3 is a sectional end elevation of the same. Fig. 4 is a sectional side elevation of a part of the same, part being broken away, and showing the detaching-pulley approaching the catch-lever. Fig. 5 is a sectional side elevation
20 of a part of the same, showing the detaching-pulley in gear with the catch-lever.

The object of this invention is to provide a hay-carrier for use in taking hay from a wagon and depositing it in a mow or on a stack, and
25 which is simple in construction, convenient in use, and reliable in operation.

The invention consists in the construction and combination of various parts of the hay-carrier, as will be hereinafter fully described,
30 and then pointed out in the claims.

A represents the ridge-pole, which forms the track of the carriage, and which, when the invention is used for depositing hay in a mow, is connected with the ridge-pole or other suitable part of the frame of the barn by means of
35 brackets B, attached to the said ridge-pole A.

When the carrier is used for stacking hay, the brackets B are attached to cross-beams C, to the ends of which are secured the upper
40 ends of inclined posts D, the connection being strengthened by inclined braces D'. The lower ends of the posts D rest upon or are set in the ground, and the said posts are strengthened in upright positions by guy-ropes E, attached at
45 their upper ends to the cross-beams C, and secured at their lower ends to stakes driven into the ground or to other suitable supports.

The frame of the carriage is formed of two plates, F, placed at the opposite sides of the
50 ridge-pole A, and connected at their ends, just below the said ridge-pole, and at their lower

corners by cross-bars G, to prevent the said plates F from spreading.

To the inner side of the upper end parts of each plate F are pivoted two small wheels, H, 55 which roll along the upper side of the ridge-pole A, a sufficient space being left between the wheels of the two plates for the passage of the brackets B, as shown in Fig. 3.

To the lower end parts of the plates F, between the cross-bars G, are pivoted two grooved
60 pulleys, I, over which passes the hoisting-rope J. One end of the rope J is attached to the frame of the carriage, and upon the said rope J, between the pulleys I, is placed the detaching-pulley K, to the upper end of the block of which is attached or upon it is formed a rigid
65 bail, L.

To the lower end of the block of the pulley K are attached two hooks, M, upon the opposite
70 sides of the plane of the bail L, which passes through the center of gravity of the said pulley K to receive the hay-fork or other weight to be raised and carried, so that by
75 suspending the said fork or weight from one or the other of the said hooks, the bail L will be tilted to that side, and thus made to swing the catch-lever, hereinafter-described, in the desired direction.

N is the catch-lever, which is pivoted at a
80 point a little below its center to and between the lower parts of the plates F, midway between the pulleys I, as shown in Figs. 4 and 5. Upon the lower end of the catch-lever N are formed two hooks, O, curved upward and
85 projecting in opposite directions, to receive the bail L and support the detaching-pulley when the said pulley is carrying a load and when it is being returned to the place of loading. Upon the opposite sides of the catch-
90 lever N, a little above its pivot, are formed two hooks or thumbs, P, curved downward, for the bail L to strike against and swing the lever to one side, and swing a hook O through the said bail L, so that it will engage the said
95 bail and support the pulley K while carrying a load, and while being carried back to the place of loading.

To the upper end of the lever N is pivoted a small wheel, Q, to roll along the lower side
100 of the ridge-pole A, as shown in Fig. 5.

As the detaching-pulley K rises, the bail L

may be guided into proper position to engage with a hook, P, by inclined guide-plates R, attached to the plates F, (shown in Figs. 4 and 5;) but generally the guide-plates R will not be needed.

In the plates F, at the opposite sides of and equally distant from the vertical line passing through the pivot of the cross-lever N, are formed two holes, in one of which is inserted a pin, S, the said holes being at such a distance below the lower edge of the ridge-plate A that the friction-wheel Q cannot pass between the said pin and the said lower edge of the ridge-pole, so as to lock the carriage in place when the upper end of the catch-lever N is swung toward the pin, and allow the carriage to travel only when the upper end of the said lever is swung from the said pin. When the lever N is required to swing in the other direction, the pin S is withdrawn and inserted in the other hole.

In the lower side of the ridge-pole A, directly over the place of loading, is formed a recess, T, of sufficient depth to allow the lever N to take a vertical position and swing far enough in the other direction to allow the bail L to slide off the hook O.

The hoisting-rope J passes over a pulley, V, pivoted to supports attached to the lower side of the ridge-pole A, at the outside of the place of unloading, as indicated in Fig. 1, passes around a pulley, W, pivoted to a bracket, staked or otherwise secured to the ground or other suitable support, and passes thence around and is secured to the rope-wheel X. The rope-wheel X is pivoted to a base-frame, Y, staked or otherwise secured to the ground, and to the same pivot is pivoted the sweep Z, to which the draft is applied. The sweep Z is made to carry the rope-wheel X with it in its movement by a lever, *a*, pivoted to the said sweep, and which engages with a spoke of the said rope-wheel X, so that the said sweep and rope-wheel can be quickly thrown into and out of gear with each other. The movement of the rope-wheel X is controlled by a brake-lever, *b*, pivoted to the sweep Z, and which engages with a plate, *c*, attached to the middle part of the top of the rope-wheel X.

With this construction, when the rope J is drawn upon by being wound around the rope-wheel X the pulley K and its load are raised

until the bail L comes in contact with and tilts the catch-lever N, when the carriage moves forward until it is at the place of unloading, when the horse is stopped, and the load is discharged by means of a trip-rope, *d*, or a weight, in the ordinary manner. The lever *a* is then operated to throw the rope-wheel X out of gear with the sweep Z, and the carriage is drawn back by the means of the trip-rope *d* of a weight to the place of loading, when the upper end of the catch-lever N enters the recess T, which allows the bail L to slip from the hook O, and the detaching-pulley K descends by its own weight, the rapidity of descent being controlled by the brake-lever *b*. As the bail L slips from the hook O, it swings the upper end of the lever N toward the pin S, where it is held by its own weight, so that the wheel Q cannot pass out of the recess T in either direction, and thus serves as a lock to the carriage.

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

1. In a hay-carrier, the combination, with the ridge-pole A, having recess T, the carriage-frame F G, having wheels H and pulleys I, and the detaching-pulley K, having bail L, of the catch-lever N, having hooks O and P and pulley Q, and the guard-pin S, substantially as herein shown and described.

2. In a hay-carrier, the combination, with the ridge-pole A and the carriage F G H I, of the brackets B, the cross-beams C, the posts D, the inclined braces D', and the guy-ropes E, substantially as herein shown and described, whereby the said ridge-pole and carriage are securely supported, as set forth.

3. In a hay-carrier, the combination, with the ridge-pole A, the carriage F G H I, having catch-lever N, the detaching-pulley K, having bail L, and the hoisting-rope J, of the pivoted rope-wheel X, the pivoted sweep Z, the connecting-lever *a*, and the brake lever and plate *b c*, substantially as herein shown and described, whereby the detaching-pulley and its load are raised and carried forward, as set forth.

THOMAS S. DAVIDSON.

Witnesses:

JOSEPH CHAPMAN,
GEORGE WALKER.