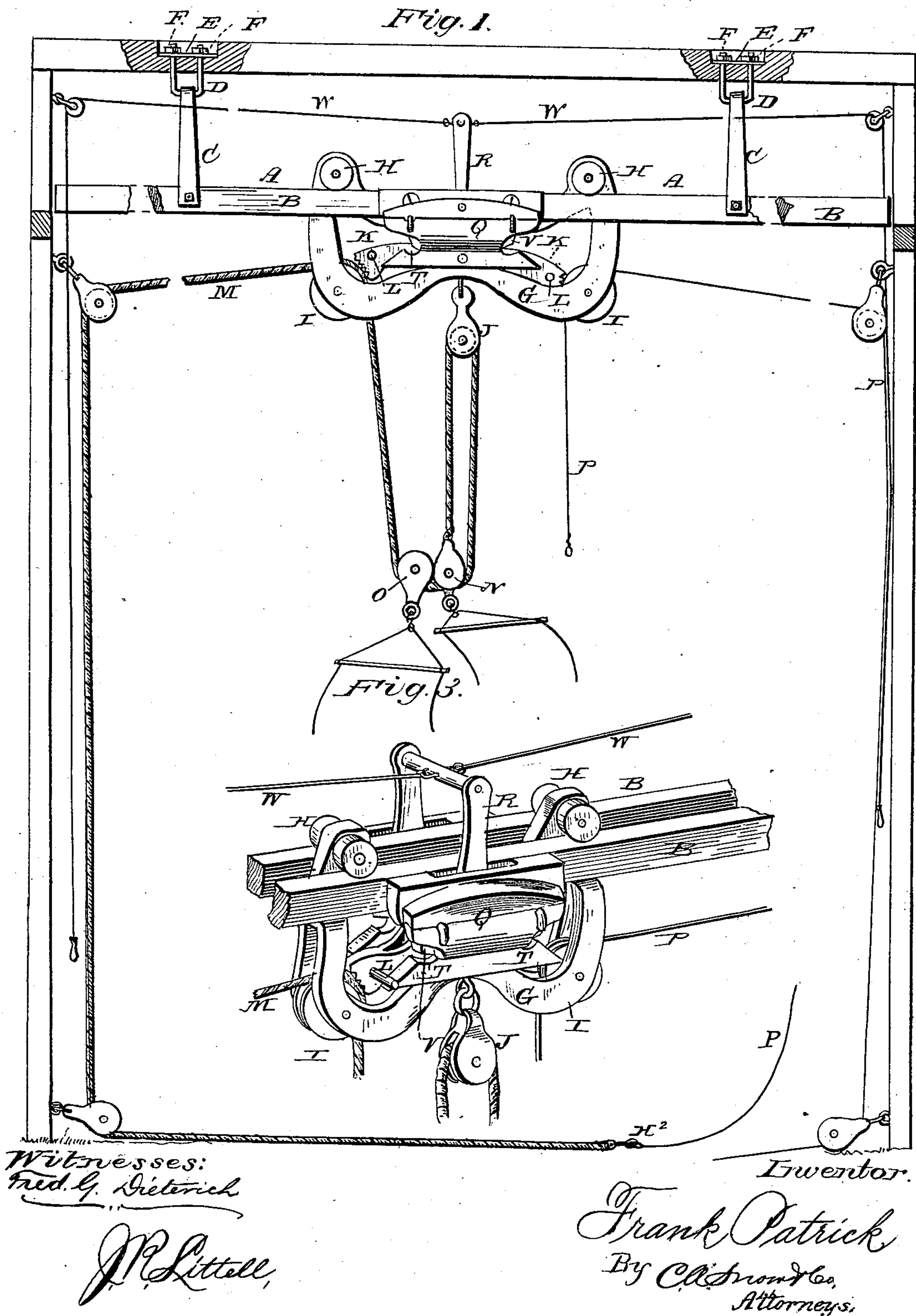


F. PATRICK.
Hay-Unloaders.

No. 226,457.

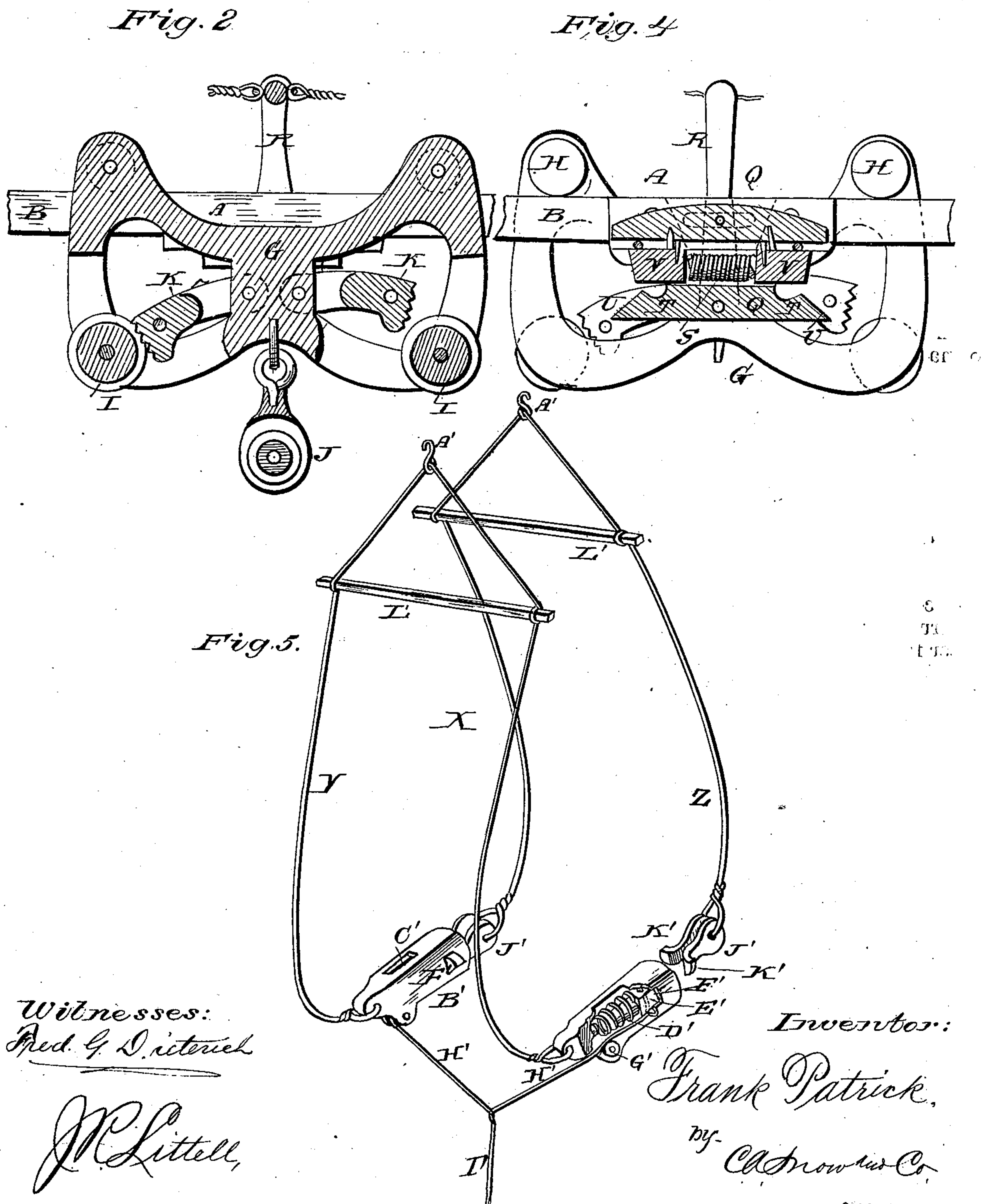
Patented April 13, 1880.



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UNITED STATES PATENT OFFICE.

FRANK PATRICK, OF BROWNVILLE, NEW YORK.

HAY-UNLOADER.

SPECIFICATION forming part of Letters Patent No. 226,457, dated April 13, 1880.

Application filed February 18, 1880.

To all whom it may concern:

Be it known that I, FRANK PATRICK, of Brownville, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Hay-Unloaders; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a side elevation. Fig. 2 is a longitudinal vertical sectional view. Fig. 3 is a view, in perspective, of the car and track. Fig. 4 is a detail view, and Fig. 5 is a view of the sling detached.

Corresponding parts in the several figures are denoted by like letters of reference.

This invention relates to hay-unloaders; and it consists in certain improvements in the construction of the same, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, A represents the track, which consists of two parallel beams, B B, united by bails or brackets C C in such a manner as to be held some distance apart, as clearly shown in the drawings. The lower ends of the brackets are bent to form shoulders, upon which the beams rest. The bails or brackets C hang upon staples D, one of which is secured to each pair of rafters of the barn, the ends of the staples passing on either side of the rafters and through a metal plate or washer, E, upon the upper side of which they are secured by nuts F.

G is the car. This consists of a metallic frame, the two upper corners of which are provided with rollers or casters H, adapted to run upon the track.

I I are pulleys arranged in the lower corners of frame G, and centrally under the frame, between the pulleys I I, is hung a pulley-block, J. K K are brake-levers pivoted centrally in frame G and extending to and bearing against the pulleys I I, respectively. The outer ends of said levers are provided with transverse cross-bars L.

M is the draft-rope. One end of this is secured to a pulley-block, N, from whence it

passes over the pulley in block J, under the pulley in block N, under the pulley in a loose block, O, and over one of the pulleys I at the corners of frame G. From thence it passes over pulleys suitably arranged at the ends of the barn to the point where the team is to be attached.

The free end of the draft-rope M is provided with a hook, H², by which it may be connected to one of two small ropes or cords, P P, one of which, while not in use, passes over one of the pulleys I and over one of the pulleys at the end of the barn.

Q is a frame adjusted at some suitable place upon the track A, and provided with a pivoted bail, R, projecting above the track a sufficient distance to permit the car to pass under it, and held in an upright position by suitably-arranged springs S S. At each end the frame Q is provided with notches T, approached by inclined guides U U.

V V are slides attached to the legs of the bail R and arranged to cover the notches T. It will be seen, however, that the said notches at either end of the frame may be uncovered, which may be done by rocking the bail R by means of suitably-arranged cords W W attached to the upper end of said bail.

X is the sling, which consists of two parts, Y Z, each consisting of a rope, which is doubled and provided at its central or doubled portion with a hook, A'. The ends of the rope Y are provided with the latch-boxes B', which consist of suitably-shaped castings, having longitudinal openings C', in which are placed springs D', working against bolts E', the front ends of which are beveled, as shown. The sides of the castings B' have openings F', and at their rear ends they have suitable bearings for the pulleys G'.

H' H' are ropes attached to the latch-bolts, passed over the pulleys, and connected to each other and to a trip-rope, I'. To each end of the rope Z are attached the catches J', which consist simply of plates provided with laterally-projecting studs K'. In operation said plates enter the latch-boxes, the studs K' passing into the openings F', where they are kept by the beveled bolt, which, by the spring, is forced forward between the plates. The parts of the sling which are in this manner connected may

be disconnected by pulling the trip-rope, thus drawing the bolts back and permitting the catches J' to withdraw from the latch-boxes. Rods L' are employed to space the sling-ropes, 5 as shown.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation of my invention and its advantages will be readily understood.

10 In loading the wagon the sling is placed in the bottom thereof in such a manner as to encircle the whole load. On reaching the barn the wagon is driven under the car, which is held in position by the cross-bar L upon one of 15 the brake-levers engaging one of the notches T in frame Q, where it is held safely by the slides V. The ends of the sling are then hooked into rings or eyes at the lower ends of the pulley-blocks N O, which now, by applying power 20 to the draft-rope, are elevated with the load to any desired height. The car is now released from the notch T in frame Q by operating bail R so as to withdraw the covering-slide V, and travels along the track until the place is reached 25 where the load is to be deposited. At this point the load is retained at the proper elevation by one of the brakes K. The parts of the sling are now disconnected in the manner described, thus allowing the load to drop, after 30 which the car is returned to frame Q, to be ready for another load.

To reverse the car I proceed in the following manner: First, the draft-rope M is drawn out through the several pulleys through which 35 it runs, together with the small rope or cord P, which is at the time attached to its free end. The said small rope is then detached, and the free end of rope M is then hooked or otherwise secured to the small rope P at the other 40 end of the car. By pulling the said (last) small rope the draft-rope is pulled over the pulleys at the end of the car opposite to those over which it was previously adjusted, thus adapting the car to be moved in an opposite 45 direction.

It should be observed that the small rope P, which remains in one of the pulleys I, is small enough to permit the brake-lever bearing against said pulley to come down far enough to permit its cross-bar L to pass under frame 50 Q, which would otherwise obstruct the passage of the car.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States— 55

1. The car consisting of the frame G, having rollers H, pulleys I I, and brake-levers K, having cross-bars L, substantially as and for the purpose set forth. 60

2. The combination, with the car G, having pulleys I I, and brake-levers K K, with cross-bars L L, of the frame Q, having spring-bail R, notches T T, inclined guides U U, and slides V V, substantially as and for the purpose set forth. 65

3. The combination, with the car G, having pulleys I I, brake-levers K K, and block J, of the draft-rope M, having hook H², small ropes P P, and pulleys N O, substantially as and for the purpose set forth. 70

4. The herein-described sling X, consisting of ropes Y Z, having latch-boxes B' B', catches J' J', and operating-ropes H' H', all constructed, arranged, and operating substantially as and for the purpose set forth. 75

5. The herein-described hay-unloading device, consisting of track A, frame Q, car G, sling X, draft-rope M, ropes P P, and pulleys N O, all constructed, arranged, and operating substantially as and for the purpose herein 80 shown and specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

FRANK PATRICK.

Witnesses:

JASPER OSBORN,
ADAM W. WATRATH.