

(No Model.)

2 Sheets—Sheet 1.

JAMES W. PROVAN & JOHN W. PROVAN.
HAY CARRIER.

No. 495,756.

Patented Apr. 18, 1893.

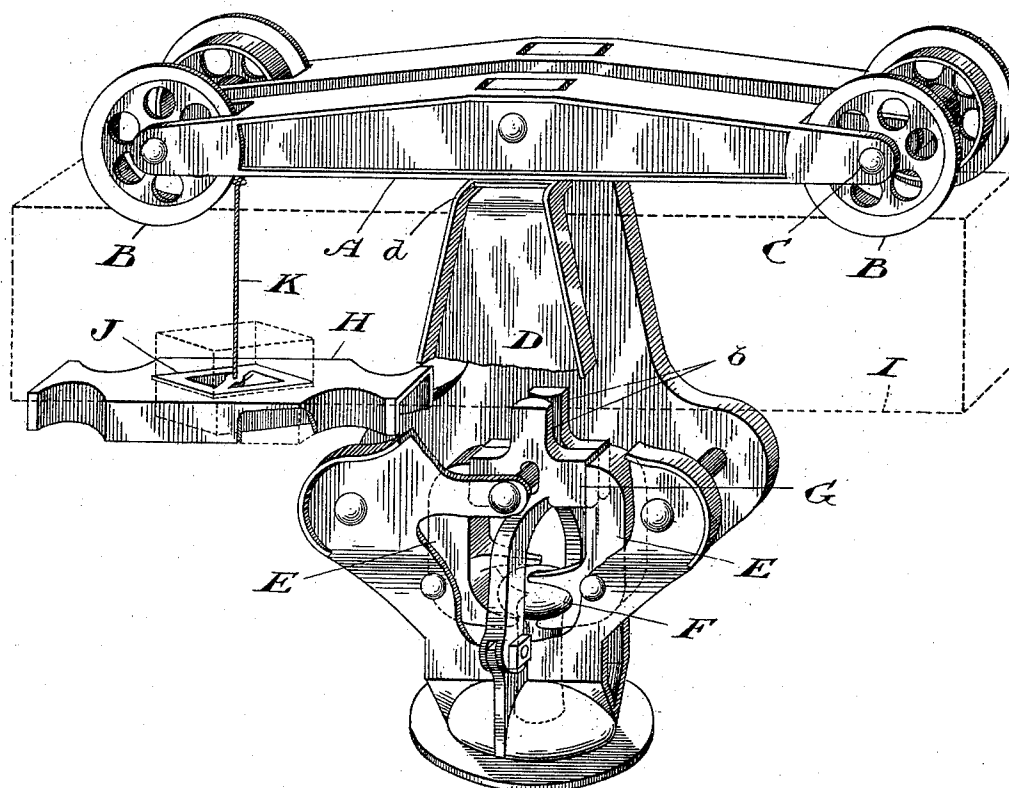


Fig. 1

Witnesses

J. Edw. Maybee
W. J. McMillan

Inventors

James W. Provan
John W. Provan
by Donald G. Ridout & Co.
Attys.

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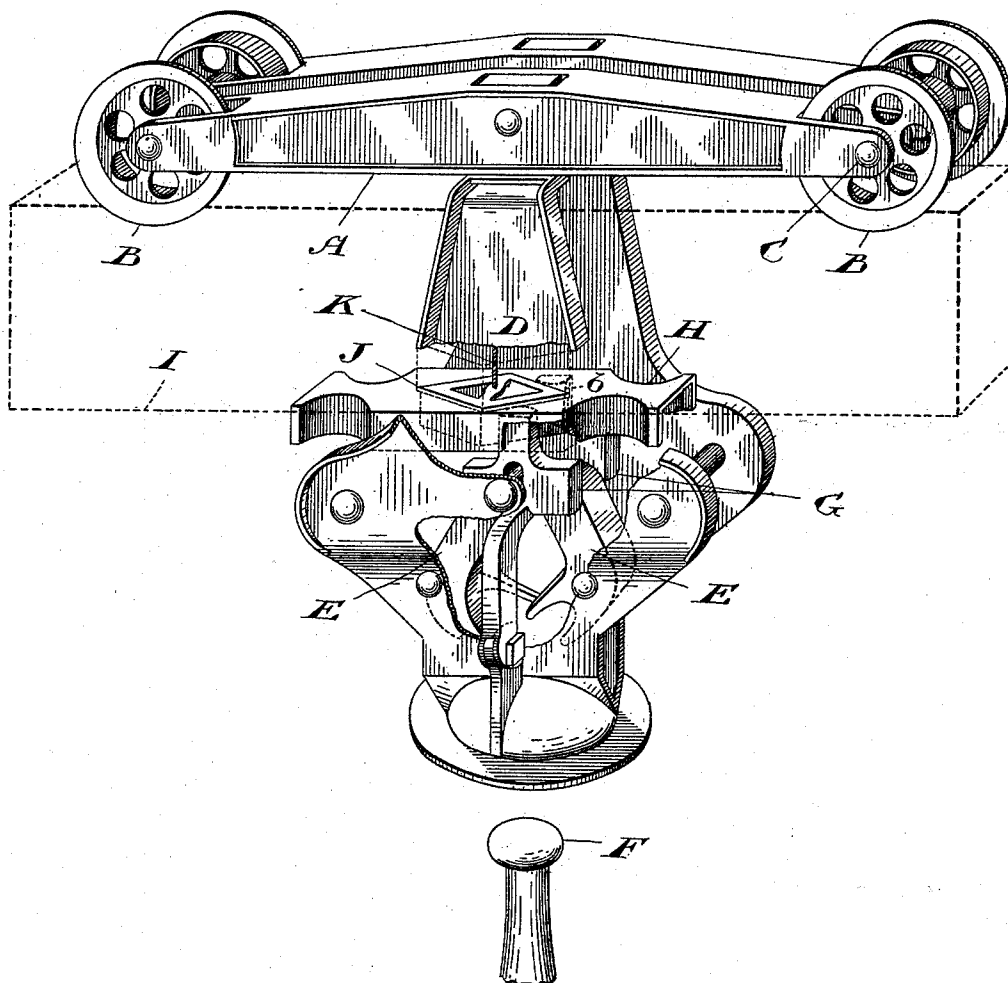


Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

JAMES W. PROVAN AND JOHN W. PROVAN, OF OSHAWA, CANADA.

HAY-CARRIER.

SPECIFICATION forming part of Letters Patent No. 495,756, dated April 18, 1893.

Application filed December 1, 1892. Serial No. 453,742. (No model.) Patented in Canada May 9, 1891, No. 36,568.

To all whom it may concern:

Be it known that we, JAMES WHITE PROVAN and JOHN WHITE PROVAN, of the town of Oshawa, in the county of Ontario, in the Province of Ontario, Canada, have jointly invented a certain new and useful Improvement in Hay-Carriers, (for which we have obtained Letters Patent of the Dominion of Canada No. 36,568, dated May 9, A. D. 1891,) of which the following is a specification.

The invention relates to that class of hay-carriers carried on a track suspended on jointed rods from the rafters of the barn, the stop-block being bolted to the bottom of the track, the button of the bail-pulley being gripped between two dogs pivoted opposite to each other above the bell-mouth of the carriage.

The object of our invention is—first, to provide a simple carrier in which the wheels will accommodate themselves to any irregularities of the track, and in which the locking dogs are arranged in connection with a stop-block so that the carriage may be conveyed past the stop-block without dropping its load; and it consists in the peculiar construction, arrangement and combinations of parts herein-after more particularly described and then definitely claimed.

Figures 1, and 2, are perspective side views of a hay-carrier, partially broken away to expose its improved construction.

In the drawings, A, represents a beam having bifurcated ends into which the wheels B, are placed, each wheel being journaled on a spindle C, which is fixed to the beam A. D, is the main body of the carrier which is shaped so as to project through a slot made in the center of the beam A, to which it is pivoted. We only refer to one beam A, and one pair of wheels B, which is all that is required to support one side of the carrier D, the other side of the carrier D, being supported by a similar beam with like wheels, each beam being independent of the other, so that each will adjust itself independent of the other to accommodate any unevenness or twist in the track. It will be noticed that these carriers D are peculiarly formed, so that, although the lower ends of the carrier are wider than the upper ends, the latter are placed in the slots

in the beams on a line corresponding to a line drawn through the treads of the wheels. To accomplish this, we form the carriers with straight upper ends which enter the beams and are there pivoted, and at that point they are bent outwardly, as shown at *d*, and then downwardly. This allows the pivoted ends of the carrier to be on a line with the treads of the wheels as above described, and at the same time, the lower ends do not bear against the track-beam and thus cause friction and wear the beam away. From this it will be seen that the carrier will always be evenly supported by its four wheels, thereby relieving the carrier of any twisting strain which it would be subject to were it not so supported.

The bail-holding dogs E, are shaped in the usual manner and are pivoted between the sides of the carriage, their pivot being at right angles to its sides. In Fig. 1, they are shown grasping the button F, of the bail, and are locked in that position by the dogs G, which are pivoted at right angles to the dogs E, in such a manner that they will fall toward each other between the dogs E, when the said dogs have been rocked on their pivots by the bail entering the carrier.

H, is a plate bolted to the bottom of the track I, and having a downwardly-projecting flange formed on each side curved at each end toward each other, but leaving a bell-shaped opening at each end. A diamond-shaped hole is made in the center of the plate H, into which is fitted a diamond-shaped block J, which is made detachable from the plate, so that it may be readily withdrawn when desired; the block J, with the plate H, forming the stop-block. The bell-shaped opening at each end of the plate H, is wide enough to permit the projecting ends *b*, of the dogs G, to enter when the said dogs are together, as indicated in Fig. 1. When the projecting ends of the dogs G, enter the said opening in the flanged plate H, they are brought in contact with the pointed end of the block J, which enters and forces them apart into the position indicated in Fig. 2, thereby releasing the button F of the bail pulley. While the dogs G, are in the position shown in Fig. 2, the tails of the dogs E, are between them, con-

sequently they cannot come together, and are therefore held within the flanged plate H, until the button F, of the bail-pulley is brought up against the dogs E, causing them to rock on their pivots away from the dogs G, when the said dogs G, will fall by their own gravity or be brought together by contact with the curved flanges of the plate H, so that they will pass through and be free of the stop-block. The block J, is made detachable from the plate H, so that it may be raised from the plate out of the track of the dogs G, thereby permitting the carriage to be drawn past the stop-block without being interfered with. In order to readily accomplish this desired end, we connect a rope K, to the block J, and pass it through the beam forming the track I. We also cut a recess in the bottom of the said beam to permit the block J, to be raised sufficiently high to be out of the track of the dogs.

From this description it will be seen that we secure a stop-block possessing the essential feature of rigidity, that is to say—the portion of the stop-block for holding the carriage and which has to resist all the strain of the team moving the load, is perfectly solid, and as the portion of the block which releases the bail is not called upon to resist any appreciable strain, it can be made movable without detracting from the value of the stop-block; the simple removal of the block J, merely making the stop-block useless for the time being so that the carriage may be moved past it without being operated and it makes it possible to put stop-blocks in different points in the barn without being operative except when desired.

What we claim as our invention is—

1. In a hay carrier, the combination of two beams carried on a track and each beam supported by a pair of wheels, and carriers hav-

ing their upper ends inserted in said beams on a line with the treads of said wheels and pivoted to said beams above the track, substantially as described.

2. The combination in a hay carrier, of a pair of bail holding dogs, a pair of dogs pivoted at right angles to said bail-holding dogs and designed to drop in between the said bail-holding dogs when the latter are pushed apart by the button of the bail-pulley; substantially as and for the purpose specified.

3. In a hay carrier, a pair of bail holding dogs, a pair of dogs pivoted at right angles to said bail-holding dogs, in combination with a diamond-shaped block located in the center of an open-ended flanged plate; substantially as and for the purpose specified.

4. In a hay carrier, a plate having a downwardly-projecting flange formed on each side, and having an opening at each end, in combination with a diamond-shaped block connected to and projecting below the bottom surface of the said plate; substantially as and for the purpose specified.

5. In a hay carrier, a stop-block composed of two parts, one part for holding the carriage being rigidly fastened in position, the other part for releasing the bail being detachably connected to the fixed part; substantially as and for the purpose specified.

Toronto, November 23, 1892.

JAMES W. PROVAN.

In presence of—

A. M. NEFF,

J. EDW. MAYBEE.

Oshawa, November 24, 1892.

JOHN W. PROVAN.

In presence of—

C. A. JONES,

CHARLOTTE JONES.