

T. J. POWELL
HAY CARRIER.

No. 105,723.

Patented July 26, 1870.

Fig. 1

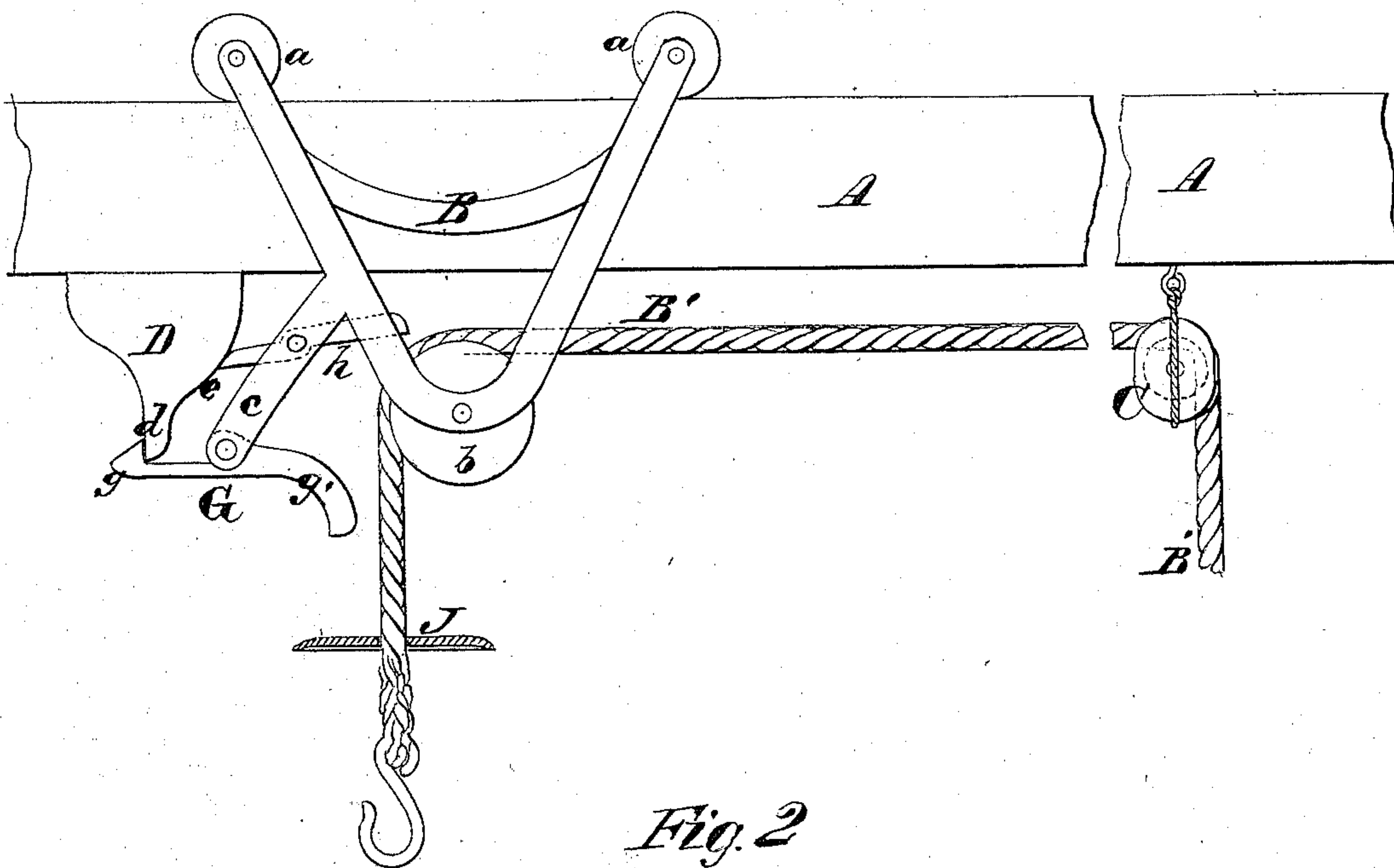
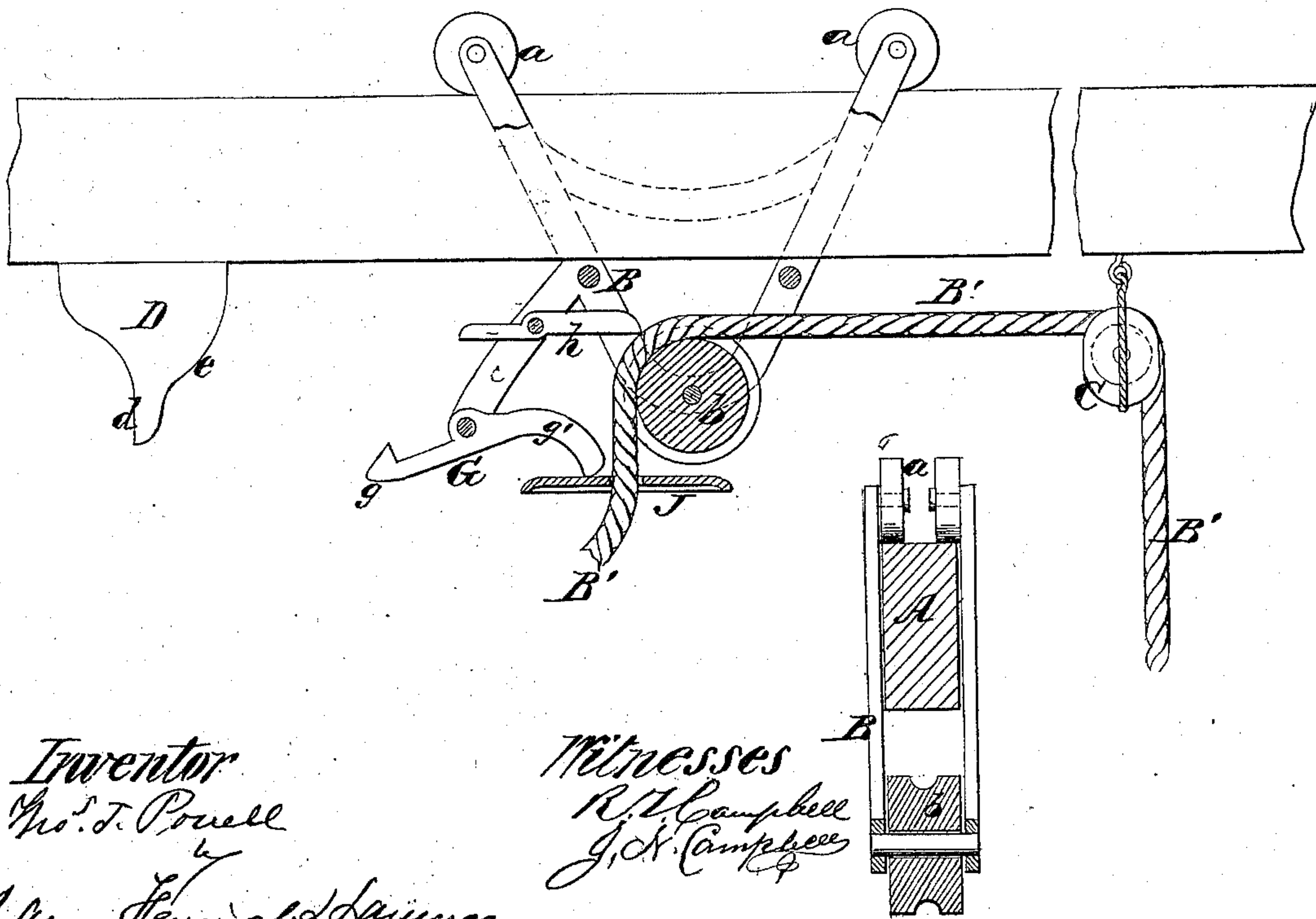


Fig. 2



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THOMAS J. POWELL, OF NAPLES, NEW YORK, ASSIGNOR TO GEORGE SMITH, OF PROVIDENCE, RHODE ISLAND, AND JOHN C. DE LANY, OF DETROIT, MICHIGAN.

Letters Patent No. 105,723, dated July 26, 1870.

IMPROVEMENT IN HAY-CARRIERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, THOMAS J. POWELL, of Naples, in the county of Ontario and State of New York, have invented a new and improved Hay-Carrier; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a view of one side of the improved elevating device suspended from a beam.

Figure 2 is a sectional view of the same device when in a condition for being moved upon the suspension beam.

Figure 3 is a section taken vertically and transversely through the center of the device.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to improvements which are designed to facilitate the use of hay-elevating forks or slings in the operation of transferring hay from wagons into barns.

The nature of my invention consists—

First, in a truck-frame, which is sustained by and adapted to travel on a beam or a stretched rope, and which is provided with a gravitating catch, adapted to engage the truck with a shoulder on the suspending-beam or rope, and which is also supplied with a tripping device, which is applied on the elevating-rope, and which will disengage the said catch from the said shoulder when the load has been elevated to a proper height, and allow the load to be moved to the required position for discharging it, as will be hereinafter described.

Second, in so combining a gravitating catch, a rope-brake, a pulley, and a tripping-plate with a truck-frame that, simultaneously with the movement of the catch to release the truck from a shoulder on its suspension-beam or rope, the elevating-rope will be tightly clamped and held against the pulley on said truck-frame, thereby preventing the elevated load from descending as the truck-frame is moved along, as will be hereinafter explained.

Third, in the application of a tripping-plate loosely on the elevating-rope, in combination with a truck-frame, and a device which will engage such frame at a given point with the suspension-beam or rope, as will be hereinafter explained.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawing—

A represents a strong beam, which should be sustained near the peak of a barn into which hay is to be stacked.

B represents a truck-frame, which is sustained upon said beam by means of the wheels *aa*, so as to travel freely in a direction with the length of the beam.

At the lower end of the truck-frame, and centrally

arranged, is a grooved sheave, *b*, over which passes the elevating-rope *B'*, which rope also passes through a tackle-block, *C*, arranged at any desired point, and attached to the beam *A*, or any other object.

Two arms, *cc*, are applied rigidly to the truck-frame *B*, and to the lower ends thereof a gravitating catch, *G*, is pivoted, the rear curved end *g'* of which is loaded, so as to preponderate over the hooked end *g*.

Above the catch *G* a gravitating brake, *h*, is pivoted to the arms *cc* in such relation to and above the sheave *b* that the loaded or longest end of this brake will lie upon the rope *B'* on said sheave, when the truck-frame is disengaged from the block *D*, and thereby prevent the load from descending, as shown in fig. 2.

D is a block, which is secured to the lower edge of the beam *A*, and which is so shaped as to leave a shoulder at *d* for receiving the hooked end *g* of the gravitating catch, as shown in fig. 1.

Block *D* is also made with a curved or inclined surface, *c*, against which the shortest arm of the brake *h* abuts, when the truck-frame is engaged by its catch *G* with the block *D*, as shown in fig. 1.

The block *D* is arranged over the point from which the hay is elevated, and it serves, in conjunction with the catch *G*, to hold the truck-frame *B* in one place on the beam *A* during the act of elevating the loads.

J is a circular plate, the upper surface of which is preferably convex, and through the center of which a hole is made for receiving loosely through it the elevating-rope *B'*.

This plate *J* is slipped on the rope *B'* between the sling or fork, as the case may be, and the sheave *b*, so that, when a load is elevated to the highest point desired, said plate *J* will press up the end *g'* of the catch *G*, release the hooked end of this catch from block *D*, and thus allow the truck-frame to be moved along with the suspended load toward the tackle-block *C*.

At the same time that the truck-frame is moved away from the block *D*, the longest end of the brake *h* will drop upon the rope *B'* on sheave *b*, and thus prevent the load from descending.

When a load has been discharged from a suspended sling or fork, and the truck-frame or carrier drawn back over the wagon again by means of the pull-cord attached to the sling or fork, the catch *G* will engage with the block *D*, and at the same time the brake *h* will be disengaged from the rope, thus allowing the latter to run down for a repetition of the operation.

It will be seen from the above description that the loads of hay can be elevated perpendicularly from a wagon to the peak of the roof of the barn, and then moved horizontally to a position for discharging the loads; also that these results are obtained by a very simple combination of devices which are substantial and not liable to derangement.

It is obvious that a stretched rope may be employed

instead of the suspension beam A, for sustaining the truck-frame or carrier, in which case two grooved wheels would be substituted for those marked *a a*; but I prefer to use a beam as described, on account of its stiffness.

I do not claim broadly, under this petition, the combination of hay-carrier with an elevating apparatus. Neither do I claim broadly the employment of a locking device with a carrier and elevator, as such devices are shown and described in Letters Patent granted to me on the 26th day of January, 1869.

What I do claim as new, and desire to secure by Letters Patent, is—

1. The bracket or arm *c*, with the gravitating or self-locking catch *G g g'*, applied on or formed upon the pulley, truck, or carriage B, in combination with the block *D d*, substantially in the manner described.

2. The gravitating or self-acting brake *h*, applied and arranged on the arm *c*, of the pulley, carriage, or truck, in combination with the block *D d*, substantially in the manner described.

3. The gravitating or self-fastening catch *G g g'* and the gravitating or self-locking brake *h*, arranged upon the arm *c* of the pulley, truck, or carriage, in combination with the movable stop *J* and the double-acting stationary device *D d*, substantially in the manner described.

4. The arrangement of the parts A B C D *h G b B' J*, for elevating hay, in the manner and for the purpose described.

THOMAS J. POWELL.

Witnesses:

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