

(No Model.)

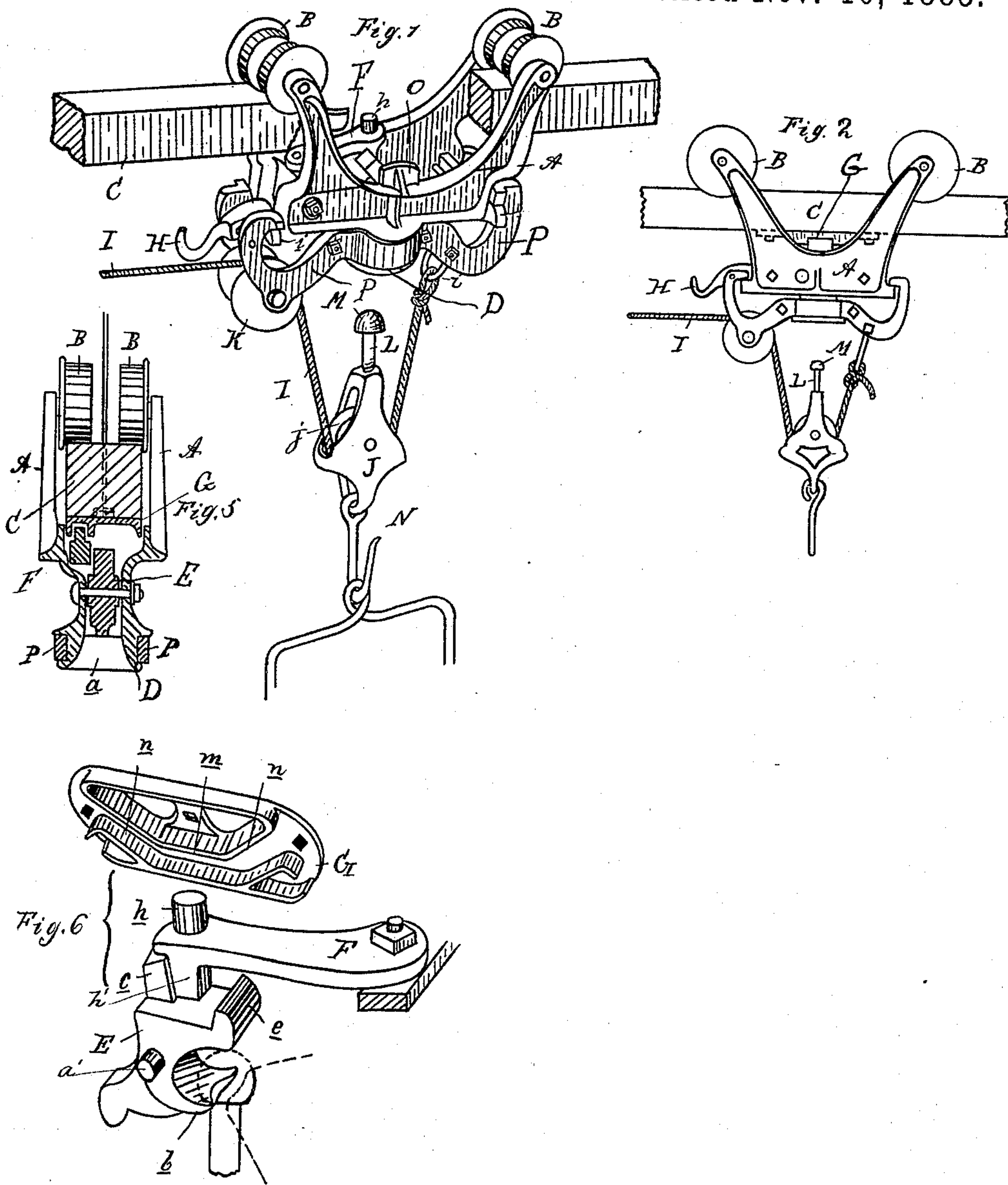
2 Sheets—Sheet 1.

W. W. BOWER.

HAY CARRIER.

No. 330,290.

Patented Nov. 10, 1885.



Attest:  
John Schuman.  
N. Sprague

Inventor:  
William W. Bower.  
by his Atty  
Thos. L. Sprague

(No Model.)

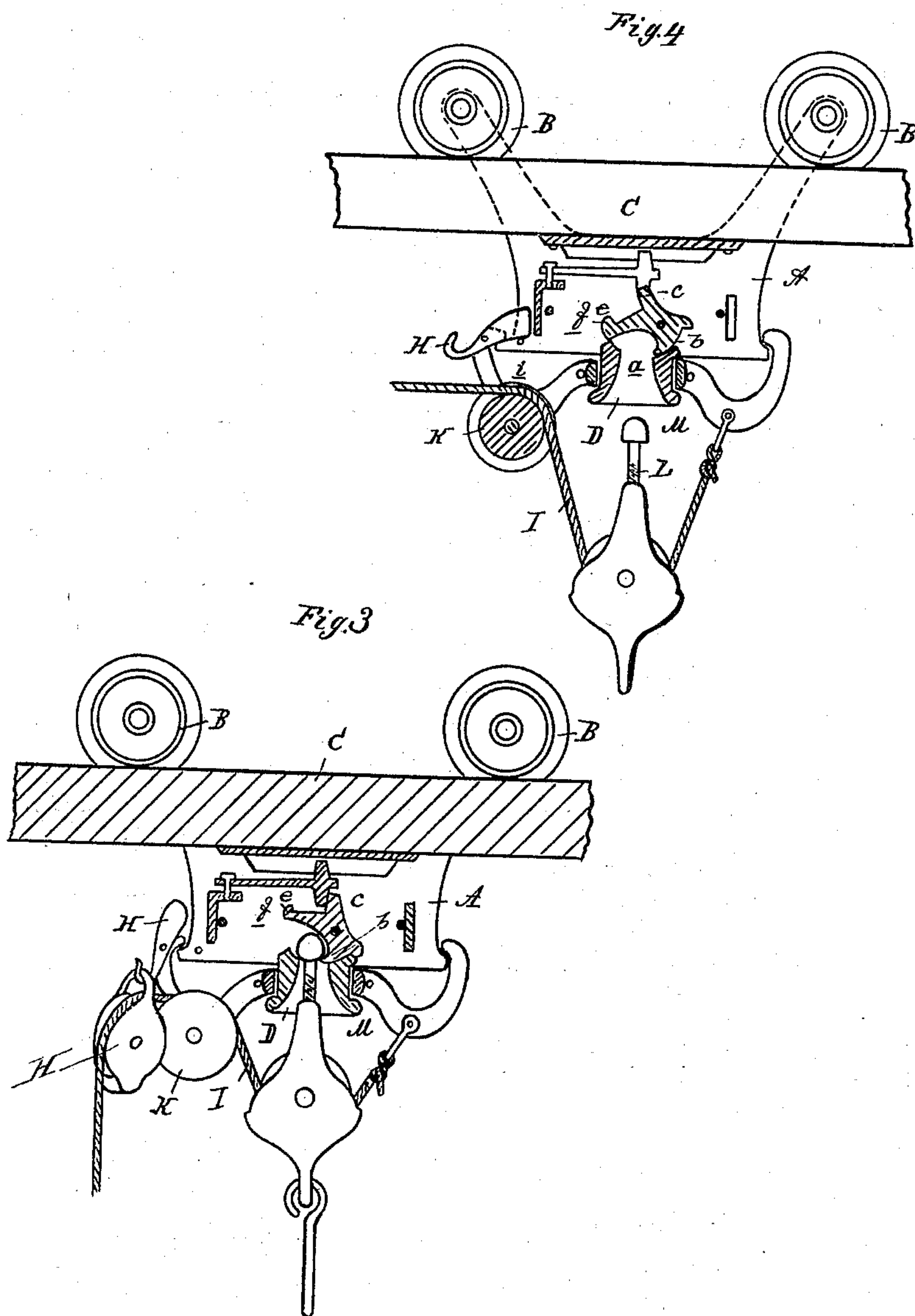
W. W. BOWER.

2 Sheets—Sheet 2.

HAY CARRIER.

No. 330,290.

Patented Nov. 10, 1885.



Attest:  
John Schuman.  
E. J. Scully.

Inventor:  
William W. Bower.  
by his Atty  
Thos. S. Sprague.



# UNITED STATES PATENT OFFICE.

WILLIAM W. BOWER, OF ROMULUS, ASSIGNOR TO JAMES H. ROGERS, OF WAYNE, MICHIGAN.

## HAY-CARRIER.

SPECIFICATION forming part of Letters Patent No. 330,290, dated November 10, 1885.

Application filed March 5, 1885. Serial No. 157,731. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM W. BOWER, of Romulus, in the county of Wayne and State of Michigan, have invented new and useful  
5 Improvements in Hay-Carriers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

10 This invention relates to certain new and novel improvements in hay-carriers; and the invention consists in the peculiar construction and means employed for locking and tripping the fork-pulley, in the peculiar construction  
15 and arrangement of a turn-table, and in the peculiar construction, arrangement, and combination of the various parts, all as more fully hereinafter set forth.

Figure 1 is a perspective of my improved  
20 carrier, with a portion of the track broken away to show the trip-lever. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical longitudinal section showing fork-pulley locked in the carrier. Fig. 4 is a longitudinal section of the same with the fork-pulley detached.  
25 Fig. 5 is a vertical central cross-section through the carrier. Fig. 6 is a detached perspective in detail of trip mechanism.

I provide a turn-table which allows the device to be operated from either side of the tripping-cam. I provide a tripping-cam  
30 which provides a parallel space for the trip-lever to allow ample time for the uncoupling of the fork. I provide peculiar means for locking the turn-table to the carriage and for  
35 adjustability in the fork-head.

Referring to the drawings, A designates the frame of the carriage suspended from a track, C, by rollers B. The carriage is formed of two  
40 plates bolted together, the lower portion of both halves forming a cylindrical bearing above collar D for the turn-table P. (See Figs. 1 and 5.) Inside the collar D is formed the flaring throat *a*, and between the parts of the  
45 carriage at *a'* is pivoted the locking-pawl E.

J designates the fork-carrier, having hooked head M upon a threaded shank, L, adjustably secured in the carrier, and having also a pulley, *j*, under which passes the rope I. The  
50 rope I is secured to one arm of the turn-table

P, as seen at *i*, and after passing under the pulley *j* passes over another pulley, K, journaled in the opposite arm of the turn-table, and thence over a pulley, H', which is secured to a convenient position in the barn, as is usual  
55 in this class of devices. Above the pulleys K is pivoted in the turn-table a hooked latch, H, which has a weighted end adapted to fall into a space in the carriage and prevent the turn-table from turning on its bearings. When the  
60 device is not in use, the pulley-block H' is hung on the hook end of the latch H, bringing all the parts conveniently together. The latch H serves to lock the turn-table to the carriage in either of its operative positions.

65 The tripping-cam plate G is secured cam-surface down to the under side of the rail C, and its cam consists of a straight portion, *m*, and two oblique portions, *n*, as shown in Fig. 6. The trip-lever F is pivoted to the carriage  
70 at *f*, and has an upwardly-extending lug, *h*, which is adapted to engage the cam-groove *m* of the plate G.

The hook-lever E is pivoted within the carriage A, and has a hook portion, *b*, adapted to  
75 pass under the head M and lock the fork-carrier to the carriage. When thus locked, a lug, *c*, projecting from the lever E, is engaged by a lug, *h'*, depending from the trip-lever F, as shown in Fig. 6, and when in this position the  
80 lug *h* of said trip-lever is entirely out of contact with the cam-plate G. The hook-lever E has a weighted end, *e*, and the normal position of this lever is with the weighted portion resting upon a bearing formed by the upper portion  
85 of the throat *a*, as seen in Fig. 4. When in this position, the lug *h* of the trip-lever lies in the straight portion *m* of the cam-slot, and the lug *h'* of that lever is disengaged from the projection *c* of the hook-lever.

90 In the operation of the device, the parts being in position as seen in Fig. 4, proper tension upon the rope I will lift the carrier J and its carried load until the head M comes in contact with the weighted arm *e* of the hook-lever E, and oscillates that lever upon its pivot  
95 until the hook *b* passes under said head. (See Fig. 3.) A continuation of the tension moves the carriage A, and the lug *h* of the trip-lever, passing into the inclined portion *n* of the cam, 100



throws the lug *h'* into engagement with the lug *c* of the lever *E* and locks the parts in such position. (See Fig. 6.) Upon the return of the carriage (operated by any known means to compel such return) the lug *h* rides into the cam portion *n* until the trip-lever is disengaged from the hook-lever *E*, and the said hook-lever falls to its normal position, as shown in Fig. 4.

I attach importance to the cam-groove having the straight portion *m*, for the reason that it assures sufficient time for the hook-lever to resume its normal position and allows a range of freedom to the movements of the carriage.

I also attach importance to the adjustability of the hooked head and its shank *L*, for the reason that wear upon the head may be readily compensated for and the relation of the pulley-block *j* and tripping-lever may be readily adjusted to suit.

The device may be operated in the other direction by simply lifting the weighted end of the latch *H* and turning the turn-table one-half around. The hook on this latch furnishes

a very convenient bearing for the pulley-block when the device is out of use, as seen in Fig. 3. When the carriage passes the cam-plate *G*, guide-plates *O* on said carriage hold the said carriage firmly in position.

What I claim as new is—

1. The combination, with the hook-lever *E* and trip-lever *F*, of the cam-plate *G*, having groove with inclined portions *nn* and straight portion *m*, as and for the purposes set forth.

2. In a carrier, substantially as described, the weighted lever *H*, having hook, as shown, combined and adapted to serve with the pulley-block *H'*, as and for the purposes set forth.

3. The combination, with the weighted hook-lever *E*, having projection *c* and hook *b*, of the cam-plate *G*, having groove *m n*, the trip lever *F*, having lugs *h* and *h'*, and the fork-carriers, having head *M*, as and for the purposes set forth.

WILLIAM W. BOWER.

Witnesses:

WM. A. MARKER,  
THOMAS MORRISON.