No. 694,818. Patented Mar. 4, 1902.

J. M. APPLEGATE.

ELEVATOR AND CARRIER.

(Application filed Apr. 6, 1901.)

(No Model.)

Fig. 1.

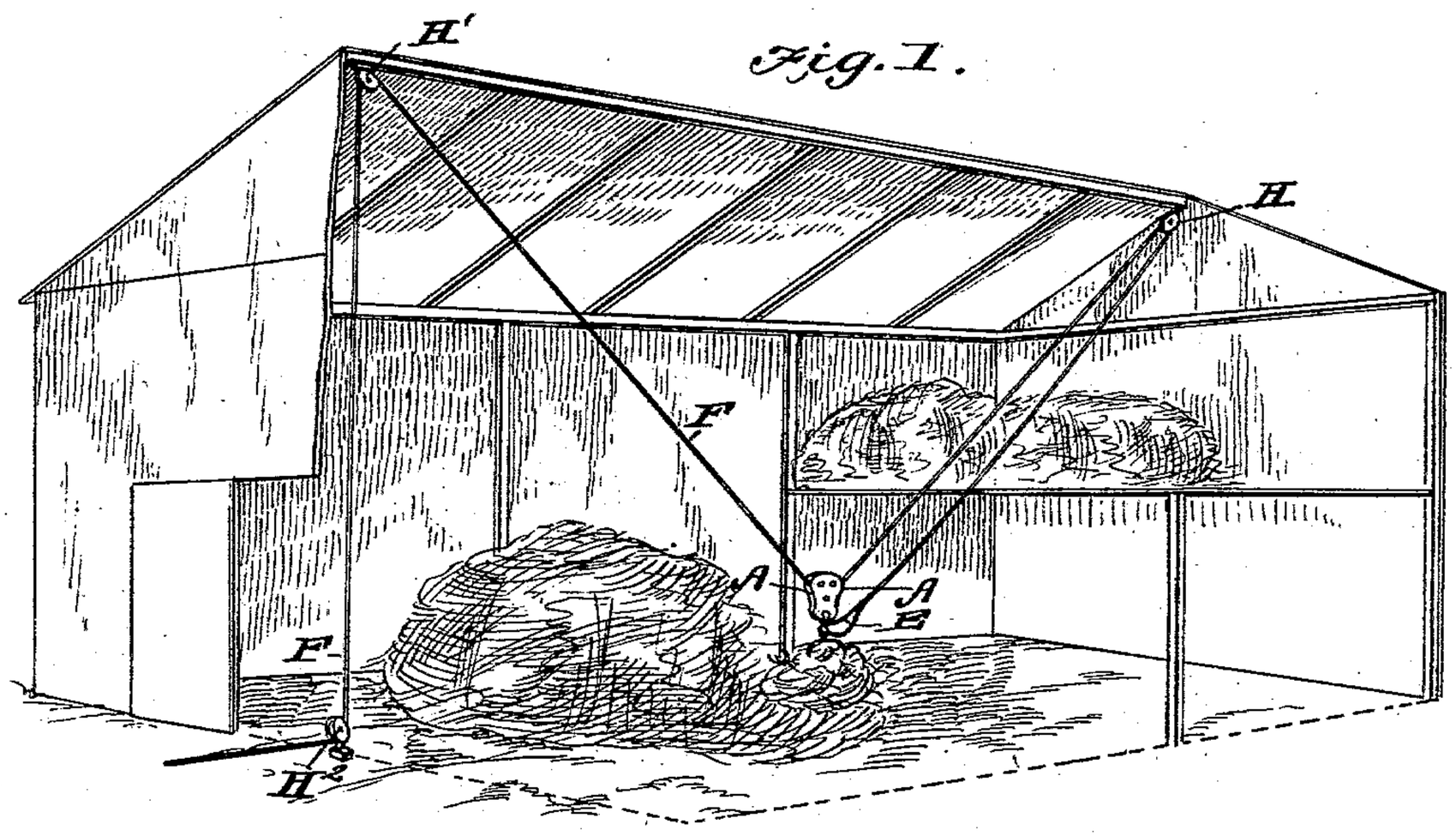


Fig. 2

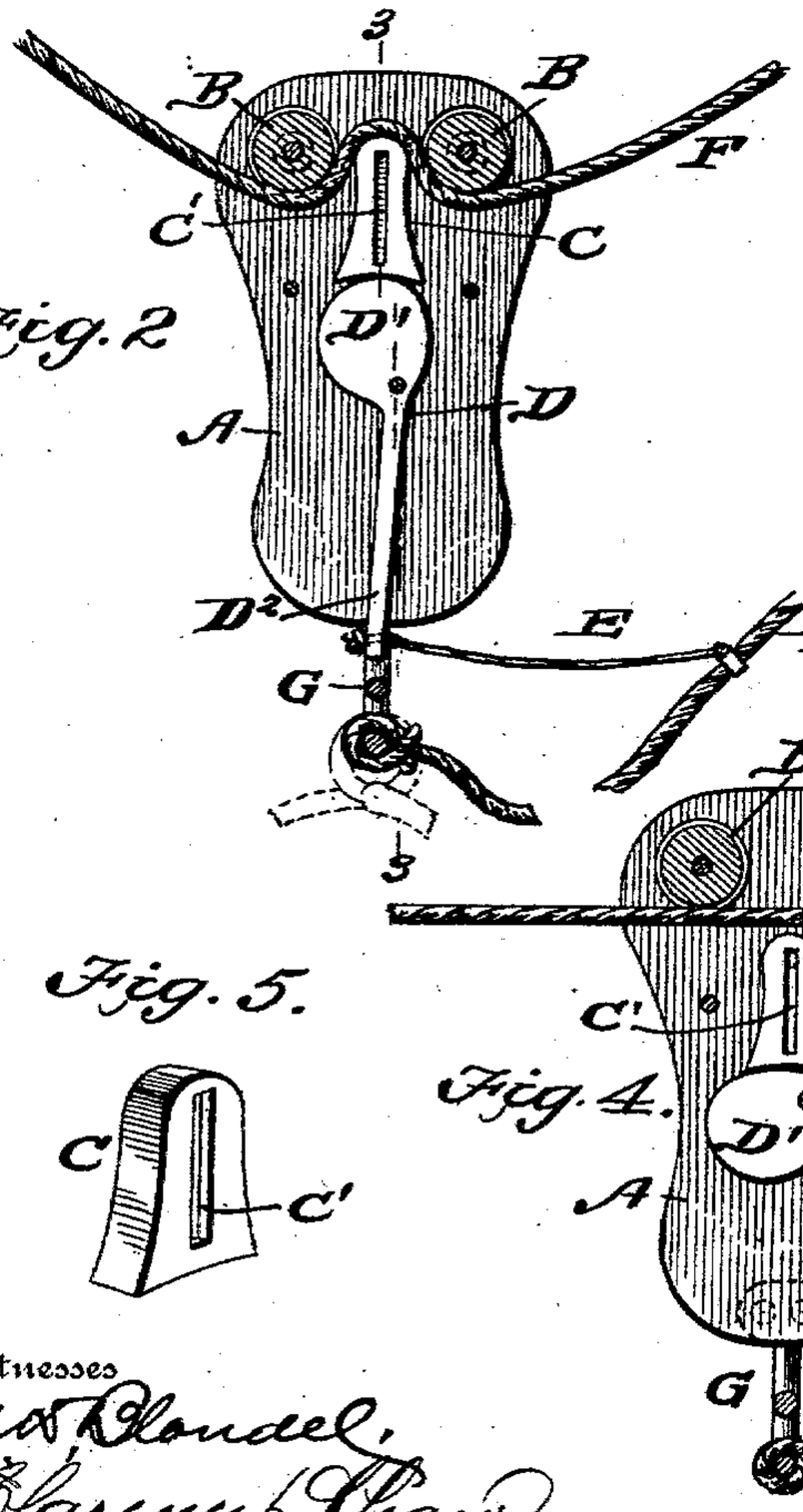


Fig. 3.

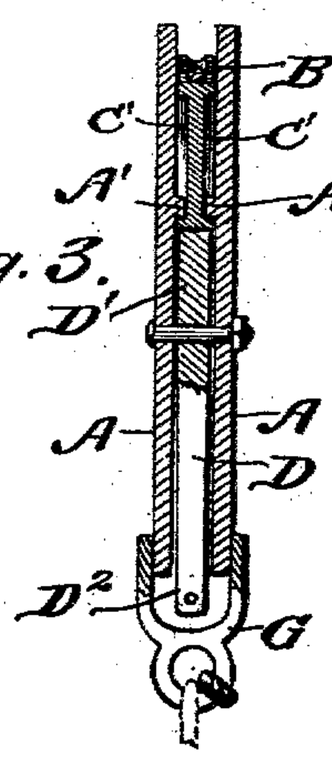
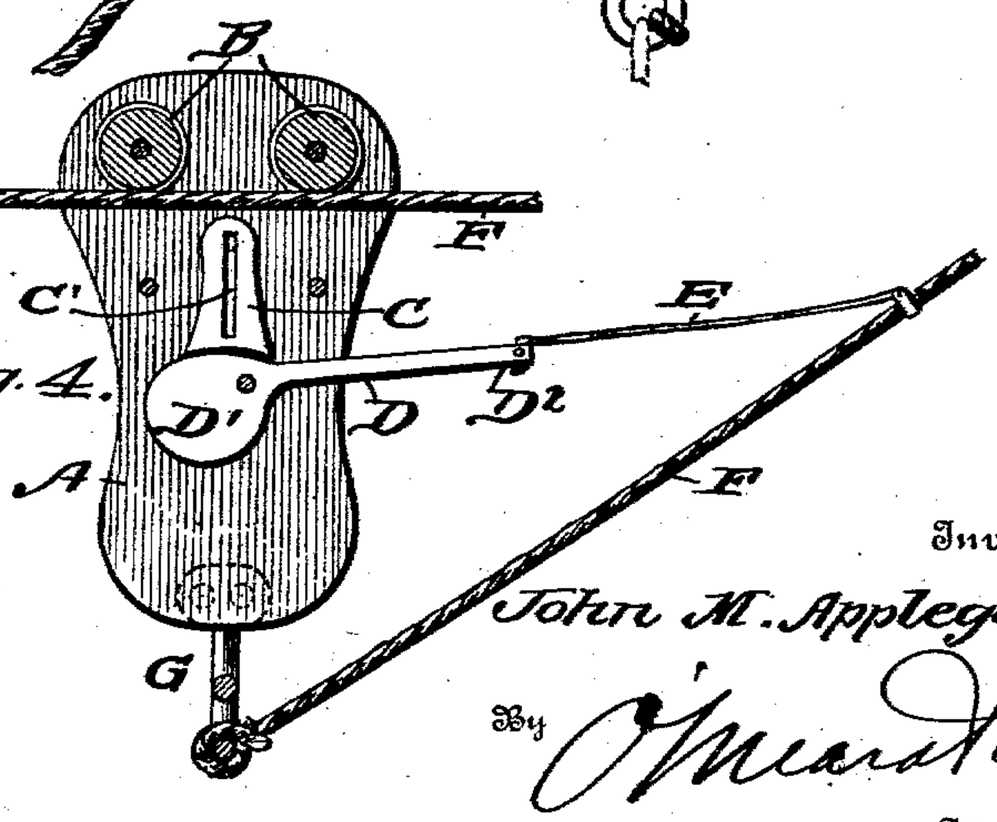


Fig. 5.

Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN M. APPLEGATE, OF INDIANAPOLIS, INDIANA.

ELEVATOR AND CARRIER.

SPECIFICATION forming part of Letters Patent No. 694,818, dated March 4, 1902.

Application filed April 6, 1901. Serial No. 54,676. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. APPLEGATE, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Elevator and Carrier, of which the following is a specification.

This invention is an improved construction of hay elevator and carrier, the object being to provide a cheap, simple, and efficient device which will avoid the elevated tracks and complicated mechanism now in use.

Another object is to provide a hay elevator and carrier which can be rigged in any barn or any other place desired for the purpose of depositing the hay in any particular spot or corner.

With these objects in view the invention consists in journaling a pair of pulleys in a block of suitable construction, arranging a sliding wedge between the said pulleys for the purpose of locking the carrier upon the rope, and in providing a cam-lever for operating the locked wedge, all of which parts operate automatically, as hereinafter described and claimed.

The invention consists also in certain details of construction and novelties of combination, all of which will be hereinafter referred to in the description and specified in the claims.

In the drawings forming part of this specification, Figure 1 is a view showing the practical application of my invention. Fig. 2 is a detail view of the carrier, one plate of the block being removed. Fig. 3 is a transverse section on the line 3 3 of Fig. 2. Fig. 4 is a sectional plan view showing the position of the parts when the carrier is traveling upon the rope. Fig. 5 is a detail view of the locking-wedge.

In carrying out my invention I employ a block, preferably composed of the side plates A, securely fastened together, grooved pulleys B being journaled between the plates of the block adjacent to their upper ends, as most clearly shown. These grooved pulleys are provided with suitable reduced bearings in order to avoid friction as far as possible. A wedge-block C, having vertical grooves C′ produced in each side, is arranged between the plates A and central of the pulleys B, the plates being provided with inwardly-projecting guide-lugs A′, which engage the vertical grooves C′. This arrangement permits the wedge-block C to have a vertical movement between the pulleys B. A lever D is pivoted between the plates of the block beneath the wedge-block C, the cam-shaped head D′ contacting with the lower end of the wedge-block, while the lower end D^2 may project below the plates of the block, and the lower end of the lever has a rope or cord E connected thereto, the opposite end of the said rope or cord E being connected to the cable F. One end of the cable is secured to the block by means of a depending eye G and is then passed around the pulley H, arranged at one end of the barn. After passing around the said pulley H the cable is passed through the block, under the pulleys B, above the wedge-block C, and then around the pulley H′, arranged near the opposite end of the barn, and then carried down under another pulley H^2 and connected to any suitable power. The grappling-fork is also suspended from the eye G.

In operation the carrier is lowered for the purpose of grappling a quantity of hay, and the fork is inserted in the usual manner. The lever D is turned down preferably until its end passes the pivotal point at the head, which will force the wedge upward and bind the cable F against movement over the pulleys B. Power is then applied to the end of the cable which passes over the pulley H′, which is preferably located as nearly as possible above the material to be moved, so as to secure a vertically pull upon the portion of the cable between the block and said pulley. When power is applied to the cable F, the block and grapple are raised in a straight line; but the wedge-plate holds the carrier against longitudinal movement upon the cable until the upper flight of the cable becomes horizontal, as shown in Fig. 4. The lower flight, becoming taut, then exerts a pull upon the cord E, which in turn operates upon the lever D so as to withdraw the cam-head to a lowered position, thereby permitting the wedge or block to drop down, and the continued pull upon the cable causes the carrier to travel to the rear end of the barn, where the load can be discharged. After the load has been dis-

charged the carrier and grappling-hooks can be returned for another load, and these operations continue until the entire load of hay is transported from one place to the spot desired.

It will thus be seen that I provide a very simple and effective hay elevator and carrier which can be applied to any barn and will avoid the use of tracks now in use.

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

1. In a device of the kind described, a block having pulleys journaled therein, a wedge-block sliding vertically in the pulley-block, a cam-lever for projecting said wedge-block upwardly, substantially as shown and described.

2. In a device of the kind described, a pulley-block composed of two plates secured together and having an eye depending from its lower end, to which the grappling-hook and the cable are attached, the pulleys journaled between the plates adjacent to their upper end, a wedge-block slidably arranged between the plates below the wedge-block and connected at its lower end with the cable, substantially as and for the purpose described.

3. In a device of the kind described, the combination with a pulley-block composed of two side plates having inwardly-projecting lugs, of the pulleys journaled between the said plates near their upper end, the wedge-block having vertically-grooved sides adapted to receive the guide-lugs of the plates, a lever pivoted between the plates, and having a cam-head, the lower end of said lever projecting below the bottom of the block, a depending eye arranged upon the lower end of the block, the cable attached to the said eye and also passing beneath the pulleys and above the wedge-block, and the rope or cord connecting the lower end of the lever with the said cable adjacent to the end secured to the eye, all arranged and adapted to operate substantially as herein shown and described.

4. In an elevator and carrier, a cable, one end of which is doubled upon itself, a block upon the cable connected with the free end of the doubled portion, a lock for holding the block against movement on the cable, and means connected with the free end of the cable for automatically releasing the lock.

5. In an elevator and carrier, a cable, one end of which is doubled upon itself, a block mounted upon said cable in position to be moved longitudinally thereof, the free end of the doubled portion being connected with the block, a lock in the block for engaging with the cable and holding the block against longitudinal movement on the cable, a trip for controlling the lock, and means for connecting the trip with the free end of the doubled portion of the cable between the block and the end of the doubled portion in such position that the trip will be automatically released when the block is elevated.

6. In an elevator and carrier, a cable, one end of which is doubled upon itself, a block mounted on said cable and provided with pulleys for moving longitudinally thereon, the free end of the doubled portion of the cable being connected with the block, a lock in the block for holding the cable against the pulleys, a lever pivotally secured in the block in position to hold the lock in engagement with the cable, and means for connecting the opposite end of the lever with the cable between the block and the end of the doubled portion.

7. In a pulley for an elevator and carrier, two plates, means at the lower end for connecting the fork thereto, two pulleys journaled between the plates near each other at the upper end, a sliding lock below the pulleys in position to be forced between them, and a cam-lever pivotally secured between the plates below the lock in position for engaging therewith, the free end of said lever adapted to be connected with the elevating-cable in such relation thereto as to render the device automatic.

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Witnesses:
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