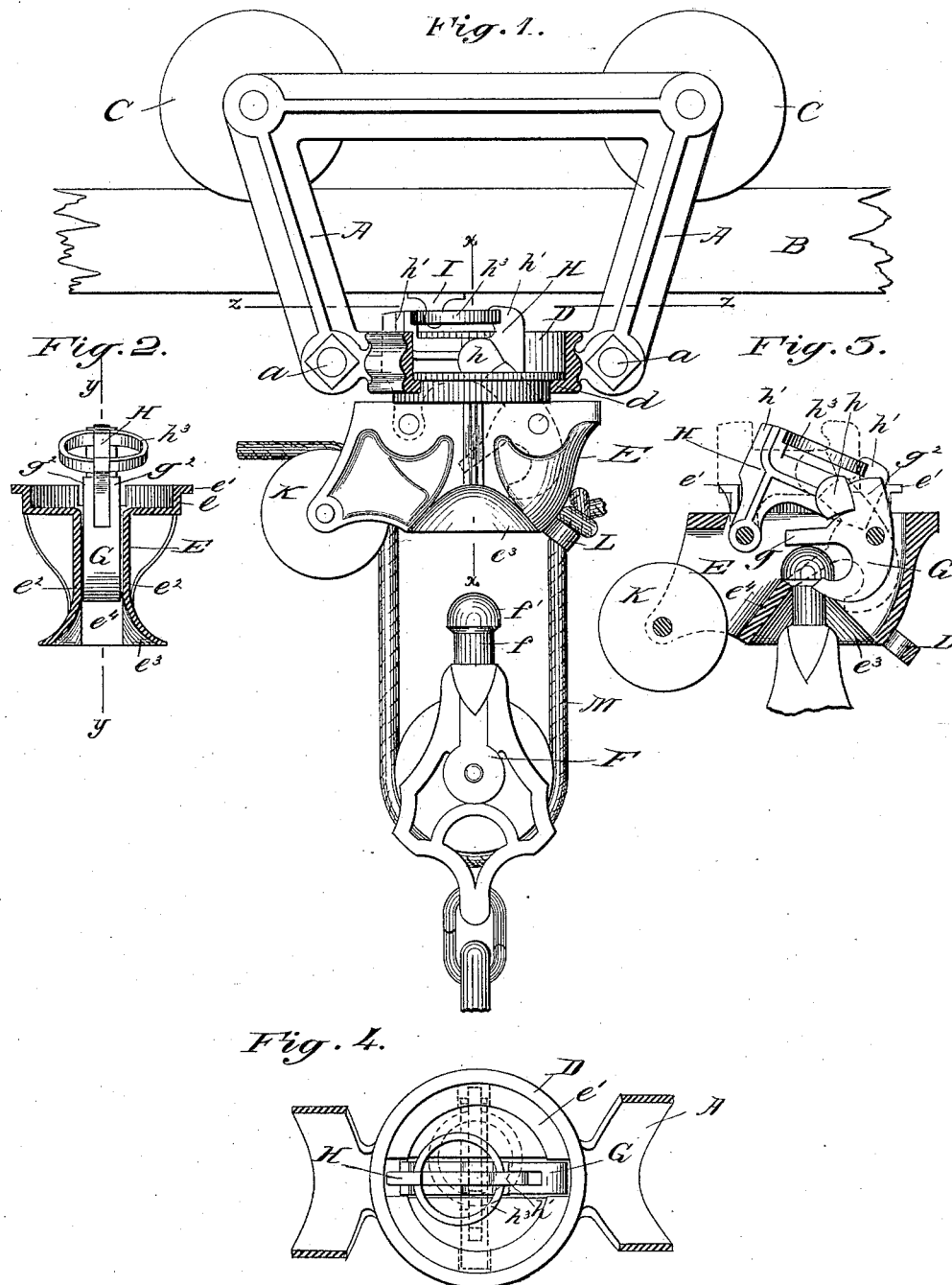


(No Model.)

M. W. CHAMBERLAIN  
ELEVATOR AND CARRIER.

No. 344,941.

Patented July 6, 1886.



Attest:  
*John A. Ellis*

Inventor:  
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Atty:

# UNITED STATES PATENT OFFICE.

MARCUS W. CHAMBERLAIN, OF BRANCHVILLE, NEW JERSEY, ASSIGNOR OF  
THREE-FOURTHS TO E. A. ELY AND F. S. ELY, BOTH OF SAME PLACE,  
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## ELEVATOR AND CARRIER.

SPECIFICATION forming part of Letters Patent No. 344,941, dated July 6, 1886.

Application filed June 19, 1885. Serial No. 169,188. (No model.)

*To all whom it may concern:*

Be it known that I, MARCUS W. CHAMBERLAIN, a citizen of the United States, and a resident of Branchville, in the county of Sussex and State of New Jersey, have invented certain new and useful Improvements in Elevators and Carriers, of which the following is a specification.

My invention relates to an improved elevator and carrier, and belongs to that class wherein a single draft-rope is made to perform the double function of elevating the load and moving it from one point to another along a suitably-prepared track.

It is designed chiefly for use with devices for loading and unloading hay, grain, or similar material.

It consists of a carriage traveling upon a suspended tramway and provided with a pulley to permit the hoisting of the load and an automatically-working catch or lock, whereby the load is securely locked to the carriage after it has been raised, and which will be automatically unlocked or opened when the carrier has returned to its loading-point by a fixed block or stop upon the tramway.

In the accompanying drawings, Figure 1 is a side elevation of my improved device, partly broken away. Fig. 2 is a sectional view of a part of my device on line *x x* of Fig. 1. Fig. 3 is a central vertical section on line *y y* of Fig. 2; and Fig. 4 is a horizontal section, looking down on line *z z* of Fig. 1.

The construction of my device is as follows:

A U-shaped frame, A, is joined together at its lower part by bolts *a a*, and made to project upward so as to embrace a track, B, and this frame has pivoted to its upper part flanged wheels C C, two on each side, and adapted to bear and roll upon the upper surface of the track. A central annular ring, D, is formed in the lower part of the frame A, in position to be immediately beneath the position occupied by the track, and an inwardly-projecting flange, *d*, is formed at the lower side of this ring. A frame, E, is suspended to this ring D by means of an upwardly-projecting annular ring, *e*, with an outwardly-projecting flange,

*e'*, which will bear and rotate upon the flange *d* of the ring D. The frame E is formed of two parallel walls, *e<sup>2</sup> e<sup>2</sup>*, curved outwardly at their lower side to form a conical or bell-shaped socket, *e<sup>3</sup>*, to receive the handle or bail of an elevating-pulley, F, and a cross-partition, *e<sup>4</sup>*, is formed between the two walls *e<sup>2</sup> e<sup>2</sup>*, to form a bearing for one side of the bail or handle of the pulley F when the latter is locked in position. A hook or locking-block, G, is pivoted between the walls *e<sup>2</sup> e<sup>2</sup>*, so as to swing under and against the handle of the pulley F on the side opposite the partition *e<sup>4</sup>*, and this hook is provided with a projecting arm, *g*, in position to be pressed upon by the bail of the pulley when the latter is forced into the socket *e<sup>3</sup>*, and to force the hook G into locking position. A locking-block, H, is also pivoted between the walls *e<sup>2</sup> e<sup>2</sup>*, and this block is provided with laterally-projecting lugs *h h*, adapted to engage upwardly-projecting arms *g<sup>2</sup> g<sup>2</sup>* upon the locking-hook G, the body of the lock H being made to lie between said arms when the hook is locked. Two upwardly-projecting lugs, *h' h'*, are formed upon the upper side of the block H, in position to be operated upon by a fixed stop-block, I, upon the under side of the tramway, and an annular ring, *h<sup>2</sup>*, is secured to and made to include the lugs *h' h'*. At one end of the frame E a pulley-wheel, K, is pivoted between the walls *e<sup>2</sup> e<sup>2</sup>*, and at the opposite end a ring or eye, L, is formed. The hoisting-pulley F is made with an upwardly-projecting bail or handle having a round body, *f*, provided with an enlarged spherical head, *f'*, to permit a firm hold thereon by the locking devices.

In use the hoisting and draft rope M is secured by one end to the ring L, preferably by passing it through the same and tying it in a knot. The rope is then led down around the pulley F, and then up over the hoisting-pulley K, and off to a convenient position for applying the power. Suppose, now, the lock in the frame E to be opened—that is, as shown in Fig. 1—and the load placed upon the pulley F. Then a pull upon the draft-rope M will cause the load to rise. The stop-block I upon

the under side of the tramway will, by engaging the lock-block H, prevent the carriage from moving till the bail or handle of the pulley F has entered the socket  $e^2$ , raised the hook G to its locking position, and allowed the lugs  $h$  on the block H to drop behind the arms  $g^2$ , Fig. 3, on the hook G, thereby securing the load to the carriage. A further pull upon the draft-rope will cause the carriage to travel along upon the tramway.

The end sought in connecting the frame E to the carriage by means of the annular flanged rings  $d$  and  $e$  is to permit the working of the carrier from either end of the tramway without reversing the position of the carriage upon the track.

To make the necessary change in the direction of the draft along the tramway, it is only necessary to bring the carriage over the stop-block, so that the hoist-pulley will be unlocked or loosened therefrom, as shown in Fig. 1, and to give the frame E a half-turn in its annular bearing by means of the draft-rope, and the carrier is ready for use on the opposite direction.

In making the locking-hook G it is not necessary to have two upwardly-projecting lugs,  $g^2$ , as one will serve the purpose, by cutting away the locking-block H to accommodate it to the change.

It will be readily seen that while the carriage itself will work equally well from either end of the track to the stop-block, it will be impossible to force the locking-block H past the said stop-block without bringing it into

position to unlock the hoisting-pulley and causing the annular ring  $h^3$  to surround the stop-block, and then rotating the swiveled frame in its bearings and again locking the bail of the pulley, so as to allow the ring  $h^3$  to drop away from around the stop-block, as shown in Fig. 3.

What I claim is—

1. In an elevator and carrier, the combination, with a traveling carriage and with a frame swiveled thereto having a bell-shaped socket to receive the bail of a pulley, and provided with a locking-hook, of a pivoted locking-block having upwardly-projecting arms to engage a fixed stop-block upon the track and withdraw said lock-block from its locking position to free the bail of the pulley, and when so withdrawn to embrace the stop-block and prevent a movement of the carriage upon the track, substantially as and for the purpose set forth.

2. In an elevator and carrier, the combination, with a swiveled hoisting-frame and with a pivoted locking hook therein, of a pivoted locking-block provided with upwardly-projecting arms terminating in an annular ring, substantially as and for the purpose set forth.

Signed at Branchville, in the county of Sussex and State of New Jersey, this 22d day of May, A. D. 1885.

MARCUS W. CHAMBERLAIN.

Witnesses:

JOHN S. DECKER,  
ROBERT A. PRICE.