W. K. MARVIN.

ELEVATOR.

No. 109,331. Patented Nov. 15, 1870.

Fig. 1.

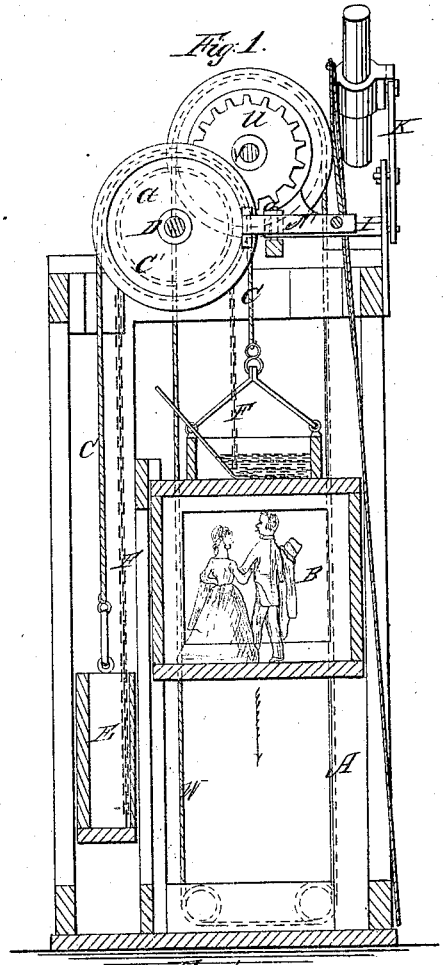


Fig. 2.

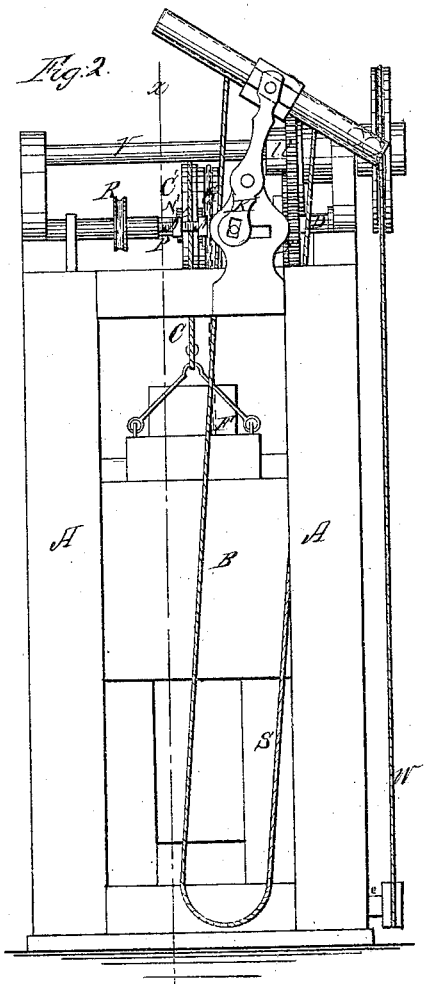


Fig. 4.

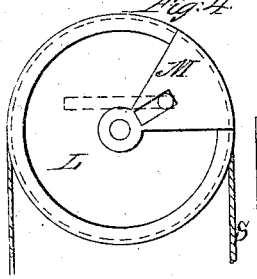
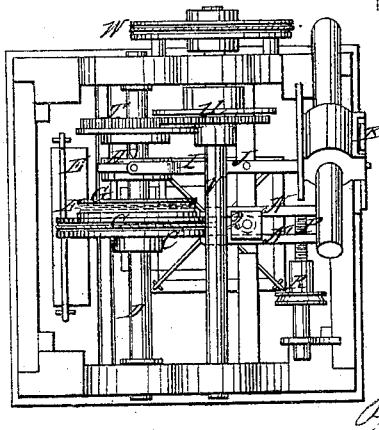


Fig. 3.



Witnesses:

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WALTER K. MARVIN, OF NEW YORK, N. Y.

Letters Patent No. 109,331, dated November 15, 1870.

IMPROVEMENT IN ELEVATORS.

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, WALTER K. MARVIN, of the city, county, and State of New York, have invented a new and improved Elevator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

My invention consists in a mode of producing the up-and-down movements of an elevator-carriage or platform by means of a chain or other weight, which may be transferred from the carriage or platform to the balance-box, or equivalent receptacle for said weight, or *vice versa*, so as to make the one heavier than the other, thus causing the carriage to rise or descend, according as the greater portion of the weight is carried by the box or by the carriage.

The manner in which my invention is or may be carried into effect will be readily understood by reference to the accompanying drawing, which represents one mode of applying the invention.

Figure 1 represents a sectional side elevation of my device through the line *x x*, showing the car in the act of descending.

Figure 2 is a front elevation of the same.

Figure 3 is a plan of the same.

Figure 4 is a modification of the device for holding the clutch-lever.

Similar letters of reference indicate corresponding parts.

In this case the letter A represents the frame in which the car B travels, the said car being suspended by the cord C which passes over a fixed pulley on the shaft D, and is secured to the weight-box E, as shown in the drawing.

F represents a chain of suitable weight. The said chain hangs over the loose-pulley G on the shaft D. The said chain is provided with sufficient slack, so as to allow the weight of the same to be transmitted from the balance-box to the car, or from the car to the balance-box, as the circumstances of the case may require, in order to raise or lower the car.

H is a clutch set loose on the shaft D. The said clutch is operated by a lever, I, which is pivoted at J, the end of the said lever I passing through the end of the weighted lever K, which will serve to hold the clutch steady in or out of gear.

Fig. 4 represents a modification of the device for holding the clutch-lever steady in or out of gear, the said modification consisting of a pulley, L, provided with a solid segment, M, in which a slot is made for the purpose of receiving the end of the clutch-lever I.

The brake consists of a male-screw, P, working in a female-screw in the arm N', and bearing against the arm N. The said arms are pivoted at Q, and are clamped against the sides of the pulley C' by means of a hand-rope passing over the fixed pulley R.

In order to operate this elevator, I first clamp the brake against the pulley C', and then pull the hand-rope S, which will throw the clutch in gear with the wheel T, which meshes in the wheel U on the shaft V. I then pull the hand-rope W until I have caused a sufficient amount of the chain F to be transposed from the balance-box to the car, or from the car to the balance-box, so as to overcome the weight to be raised or lowered. I then release the brake, and, by the balancing medium of the chain, the elevator will be moved, and the speed governed by the amount of friction allowed by the brake on the aforesaid pulley.

Having thus described my invention,

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

1. An elevator, in which the carriage and the balance-box connected therewith are combined with a chain or other weight and means for transferring a greater or lesser portion of said chain or weight from the carriage to the balance-box, or *vice versa*, substantially as described, whereby, by the shifting of the chain or weight, the carriage, together with its load, may be caused to rise or descend, as required.

2. The combination, with the elevator-carriage, the balance-box, the chain or weight, and means for transferring the same, of a brake arranged to be operated from the carriage, so as to regulate or entirely check the movement of the carriage as desired, substantially as shown and set forth.

3. The weighted lever, or its equivalent, as described, in combination with the clutch, the chain-pulley, and the shaft upon which the same are mounted, arranged substantially as and for the purposes set forth.

4. The brake, constructed, arranged, and operating in the manner and for the purposes substantially as herein shown and described.

The above specification of my invention signed by me this 13th day of April, 1869.

WALTER K. MARVIN.

Witnesses:

FRANK BLOCKLEY,

E. GREENE COLLINS.