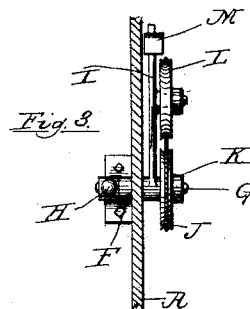
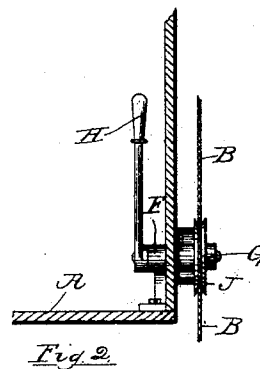
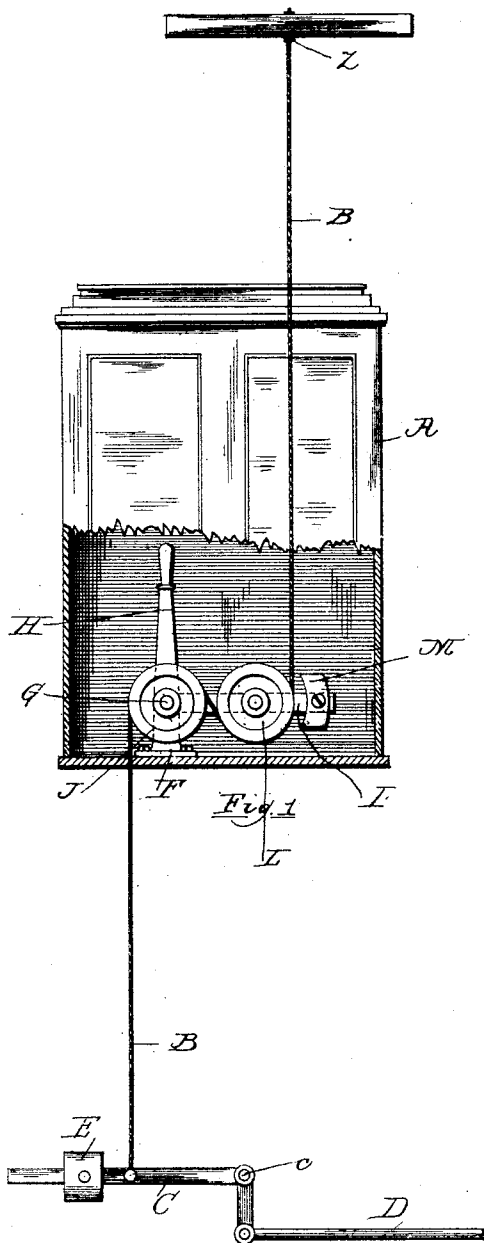


(No Model.)

E. S. MATTHEWS.
ELEVATOR CONTROLLER.

No. 469,655.

Patented Feb. 23, 1892.



Witnesses.
Walter S. Brown
James J. Rafferty

Inventor
Edwin S. Matthews
By his Attorney.
Louis W. Southgate

UNITED STATES PATENT OFFICE.

EDWIN S. MATTHEWS, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO
JAMES L. HAVEN, OF SAME PLACE.

ELEVATOR-CONTROLLER.

SPECIFICATION forming part of Letters Patent No. 469,655, dated February 23, 1892.

Application filed June 4, 1891. Serial No. 395,076. (No model.)

To all whom it may concern:

Be it known that I, EDWIN S. MATTHEWS, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Elevator-Controllers, of which the following is a specification.

The aim of this invention is to produce a very simple and efficient controlling apparatus for elevators, whereby the motor-controlling element may be positively actuated from the cage or car.

To this end the invention consists of the device described and claimed in this specification, and illustrated in the accompanying drawings, in which—

Figure 1 is an elevation showing the device applied to an elevator-car, the car being partly in section. Fig. 2 is a view at right angles to Fig. 1, and Fig. 3 is a plan of Fig. 2.

In detail, A represents an elevator-car.

B represents a standing cable. This cable is fastened at the top of the elevator-well, as at Z, and at the bottom of the well or at any convenient point is fastened to the bell-crank lever C. This lever C is fulcrumed at c, and connects by rod D to the motor-controlling element. This lever C has the weight E adjustably arranged on its horizontal arm.

Mounted or fastened on the car is the bearing F, and in this bearing is journaled the shaft G. This shaft has fastened on its inside end the handle or lever H and on the outside end the arm or frame I.

On the end of the shaft G runs the sheave J. This sheave J may be held in place by the collar K, and the said sheave is free to turn on the shaft G between the collar K and the arm I. Running on a stud held on arm I is another sheave L, and on the end of the arm is the adjustable weight M. The cable passes down the side of the cage, under sheave L, and then over the top of sheave J.

The operation of the device is apparent. If the lever H is rocked one way or the other by the conductor, the arm I and consequently the sheave L are moved to let out or take up the cable B. If the same is moved to let out the cable B, the weight E will move the mo-

tor-controlling element in one direction, if to take up cable B, the weight and lever C will be moved in the opposite direction.

The advantages of the device are that the device is very simple and of few parts, and that a single cable is used, and the same may be turned around corners and carried to points where it would be almost impossible to carry two cables. Further, the two weights M and E are set to counterbalance each other and thus the weight E can be made large enough to overcome any possible resistance that the motor-controlling element may offer, and still the operator does not have to raise and lower a dead-weight. By making one sheave stationary and moving the other sheave about its center, besides other advantages, it will be noted that the sheave L and arm I act with the weight M, and that there is absolutely no dead-weight to be lifted.

All that the operator has to do in any case is to exert a force sufficient to overcome the friction of the moving parts. Further, it will be seen that no tension device is needed, as the weight M holds the sheave L in the loop of the cable and forms a tension device that will compensate for any slight variations in the length of the cable, due to changes of temperature, stretching of the cable, &c.

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

1. An elevator-controlling apparatus consisting of the arm or lever having a weight attached thereto, said arm or lever being connected to control the motor, a cable fixed at one end and attached to the said arm or lever at the other, in combination with a car provided with a stationary sheave, a movable sheave and a weight connected to move with the movable sheave and so arranged as to substantially counterbalance the weight on the said arm or lever, said cable being passed over one sheave and under the other, and means to actuate said movable sheave, substantially as described.

2. An elevator-controlling apparatus consisting of the arm or lever having a weight attached thereto, said arm or lever being con-

nected so as to control the motor, a cable fixed
at one end and attached to the said arm or
lever at the other, in combination with a car
provided with a bearing or box carried by the
5 car, a shaft journaled in the said bearing, a
sheave free to turn on said shaft, a frame fixed to
the shaft, said frame carrying a sheave and an
adjustable weight, said cable passing under
one of said sheaves and over the other, and a
10 lever or handle fixed to said shaft by means

of which the movable sheave may be operated,
substantially as described.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing
witnesses.

EDWIN S. MATTHEWS.

Witnesses:

M. H. FOLGER,
WM. A. HAVEN.