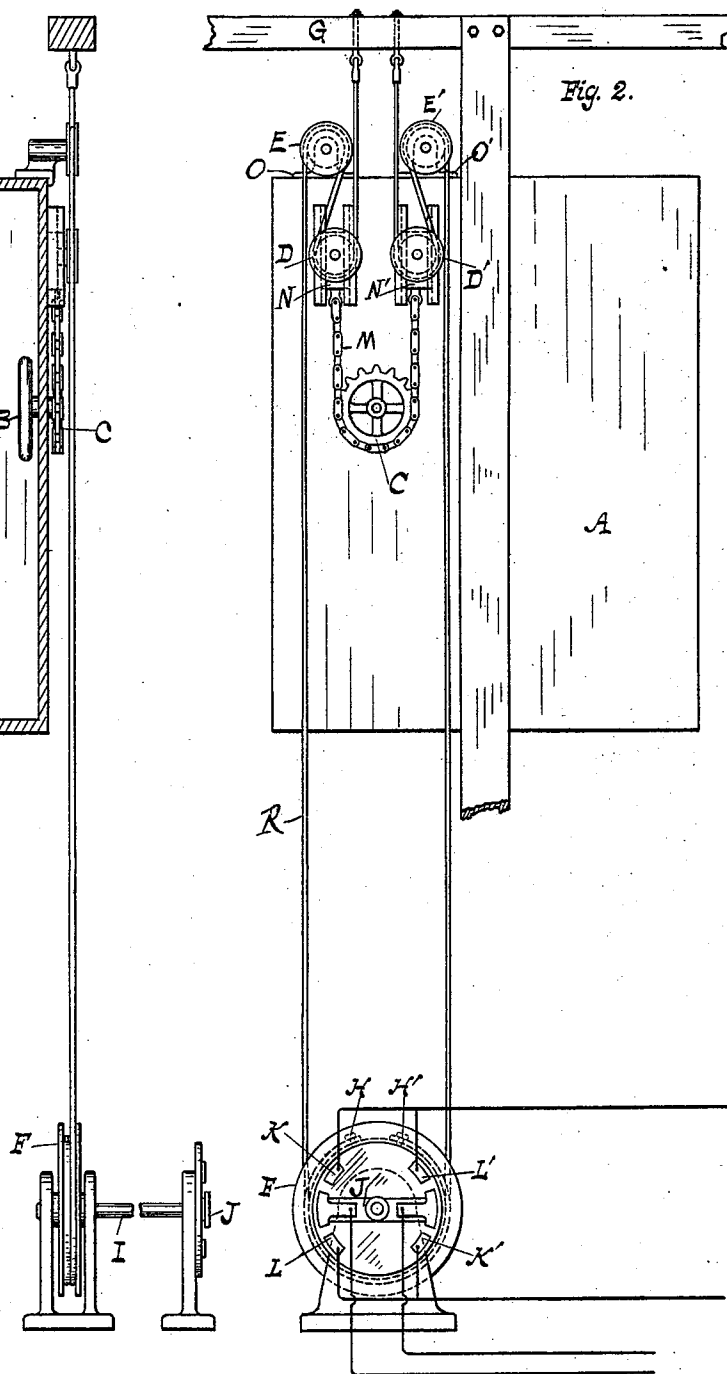
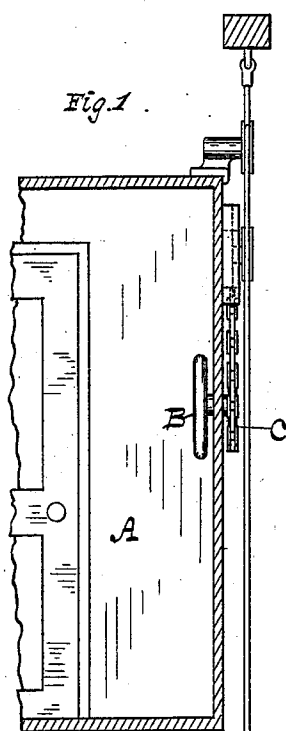


(No Model.)

A. B. SEE.
ELEVATOR.

No. 538,355.

Patented Apr. 30, 1895.



Witnesses:

J. Landis
C. C. Briggs

Inventor :

Alonzo B. See

By his Attorneys:

Popple & Rogers

UNITED STATES PATENT OFFICE.

ALONZO B. SEE, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO
WALTER L. TYLER, OF SAME PLACE.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 538,355, dated April 30, 1895.

Application filed January 31, 1895. Serial No. 536,766. (No model.)

To all whom it may concern:

Be it known that I, ALONZO B. SEE, a citizen of the United States, residing in Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Elevators, of which the following is a specification.

The object of this invention is to provide means for controlling an elevator car without having the check-rope pass through the same and to enable the operator to more easily and accurately actuate the controlling devices which regulate its movement and its speed and direction of travel.

In carrying out my invention I pass a cable connected with the power controller over a pulley or pulleys on the outside of the car and provide a hand-operating device within the car by which the pulleys may be shifted relatively, thereby shifting the cable and actuating the power-controlling apparatus. I prefer to use a double check-rope or cable passing through the elevator shaft and two pairs of pulleys, one of which produces slack on one side of the check-rope, and the other of which takes up such slack, the rope passing over a sheave at the bottom of the shaft on the axle of which is mounted the power-controller. The invention is not, however, limited to a double rope, but may, with advantage, be used with a single rope, a spring or weight being used in such cases to take up the slack.

The invention will be more particularly hereinafter described and the several features of novelty will be particularly pointed out in the appended claims.

In the accompanying drawings, which illustrate the invention, Figure 1 is a side elevation, partly in section, of an elevator car and controlling apparatus embodying the features of the invention. Fig. 2 is an elevation on a plane at right angles to that shown in Fig. 1.

A represents an elevator car, the supporting cable and source of power being omitted. Within the car is mounted a wheel B or other operating device by which the car may be controlled. The axis of this wheel is rigid therewith and extends through the car, as shown in Fig. 2, being provided on the outside with a sprocket-wheel C over which passes a sprocket-chain M or its equivalent, the ends

of which are connected with movable standards N, N', in which are mounted so as to turn freely pulleys D, D'. The standards or bearings of these pulleys are mounted to slide in vertical guide ways, as shown, by which they are prevented from swaying about. A pair of fixed pulleys E, E' are journaled on standards O, O' fixed to the frame of the car. The check-rope R may be secured to a cross bar at the top of the elevator shaft and is led at each side around pulleys D, E, D', E', as shown, and over a sheave F at the bottom of the shaft. To avoid slipping the two runs of the check-rope may have independent terminals, the upper ends being secured to the cross-bar G and the lower ends carried around the sheave F in reverse directions and fastened to its periphery, as shown at H, H'. The axle or shaft of the sheave operates the starting or stopping devices for the source of power. As these may be of any suitable construction they have not been illustrated.

I have shown the device as applied to an electrically-driven elevator, and the shaft I carries a circuit-closer and reverser J which may be rocked into engagement with contacts K, K' or L, L' connected with the motor circuits in any suitable manner—for example, as shown and described in Patent No. 531,070, of December 18, 1894. It will of course be evident that any other source of power might be employed, the shaft I being connected with suitable actuating devices.

It will be seen that if the hand-wheel B be turned the axes of the pulleys D, D' will be relatively shifted, one creating slack on one side of the check-rope and the other taking up such slack and turning sheave F through an angle depending on the degree of movement of the hand-wheel. During motion of the car the check-rope is always taut and passes freely over the loose pulleys D, E, D', E'. If but a single run of the check-rope be used, the sheave F might be spring-actuated and one pair of pulleys dispensed with, a chain or cord being connected with the wheel C at one end and the standard for the movable pulley at the other end, as will be evident from Fig. 1, if but one side or run of the double check-rope be considered.

Having thus described my invention, what

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

1. An elevator comprising a car having a hand-operating device within the same, a gear-wheel operated thereby on the outside of the car, a sprocket chain engaging the gear-wheel, two fixed and two movable pulleys, slide bearings for the latter, said bearings being connected with the ends of the chain, a double check rope having its runs engaging each a pair of fixed and movable pulleys, and power controlling devices actuated by the check rope.

2. An elevator comprising a car, a hand-operating device within the car, a shaft extending through the car connected to said device,

a fixed and a movable pulley on the outside of the car, a check rope engaging the pulleys, power-controlling devices actuated by the check rope, a slide bearing for the movable pulley fixed to the car; and connections between the shaft and movable pulley for shifting the latter and operating the power-controlling devices when the shaft is rotated.

In testimony whereof I have hereunto subscribed my name this 24th day of January, A. D. 1895.

ALONZO B. SEE.

Witnesses:

ROBT. H. READ,
GEORGE A. ADAMS.