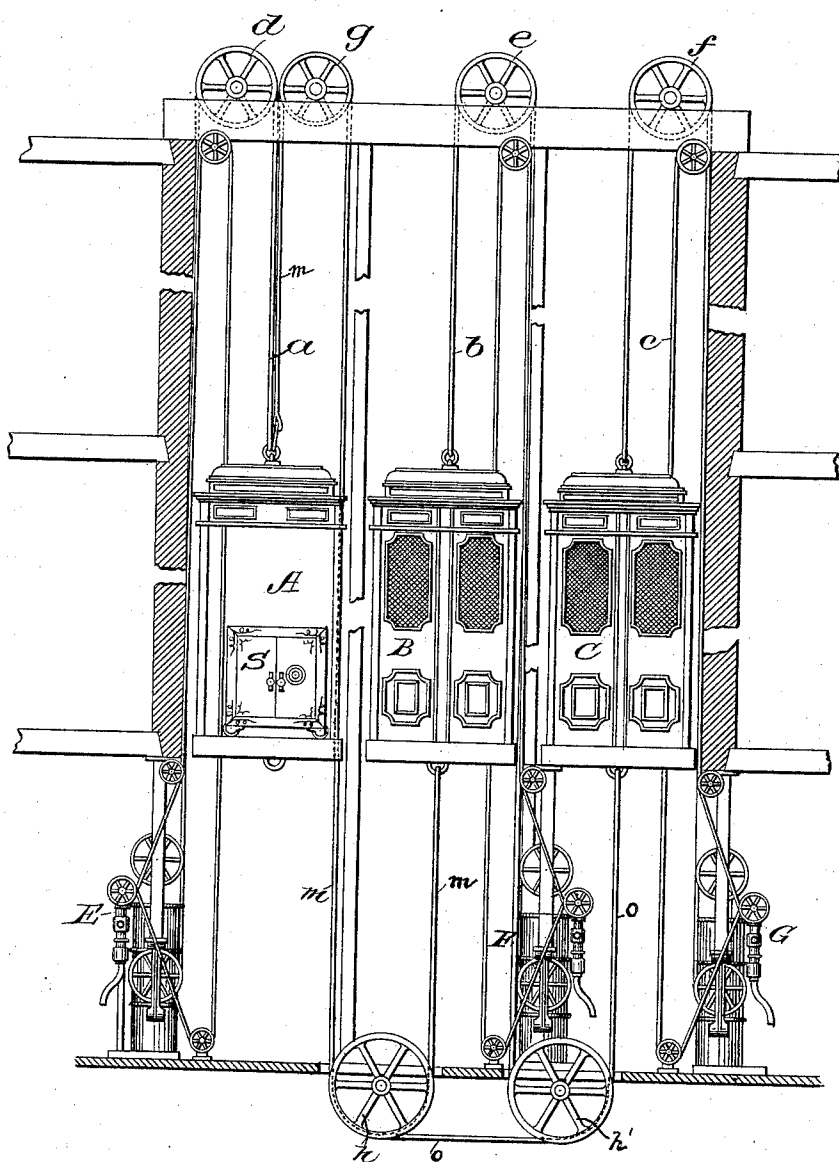


(No Model.)

C. WHITTIER.  
ELEVATOR.

No. 474,431.

Patented May 10, 1892.



Witnesses.  
Fred S. Grunleaf.  
Edward F. Allen.

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# UNITED STATES PATENT OFFICE.

CHARLES WHITTIER, OF BOSTON, MASSACHUSETTS.

## ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 474,431, dated May 10, 1892.

Application filed May 18, 1891. Serial No. 393,137. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES WHITTIER, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Elevators, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

Elevators as at present constructed are invariably operated each by its own separate and distinct mechanism, the lifting-power of each elevator being accordingly limited to the capacity of its own operating mechanism.

In the large buildings constructed at the present time it is frequently necessary to raise heavy articles—such, for instance, as safes—to the upper stories, and if the article to be lifted is of greater weight than the lifting capacity of either of the elevators alone such article must be raised from the outside of the building by means of a tackle especially arranged for that purpose.

It is the usual custom to provide buildings of any considerable size with two or more elevators, each being operated by its own independent mechanism; and the object of this invention is to provide an auxiliary intermediate connection between two elevator mechanisms, whereby the aggregate power of two or more of these independent elevator mechanisms may be connected or applied to one elevator, in order that articles of greater weight than the lifting capacity of the elevator may be conveniently raised.

One part of this invention therefore consists of two or more elevator mechanisms, each normally operating an elevator, and an intermediate auxiliary connection, whereby the lifting power of two or more of the elevators may be applied to lift a single elevator, substantially as will be described.

Other features of this invention will be hereinafter described.

The drawing represents three elevators with connecting means whereby, in accordance with this invention, the lifting power of one or more of the elevator mechanisms may be applied to another.

The elevators A, B, and C are and may be constructed and operated in usual or desired manner, they being herein represented as suspended by cables *a b c*, passed over sheaves *d*

*e f* at the tops of the elevator-wells and thence down to the operating mechanism E F G.

One form of intermediate auxiliary connection embodying this invention is shown in the drawing, wherein a sheave or pulley *g* is placed at the top of the elevator-well and a second sheave *h* at the bottom, a cable or intermediate auxiliary connection *m* being passed about the said sheaves, as shown, and, while said cable when not in use is normally unattached at either end, lying idly over the said sheaves, it is shown herein as attached and ready to operate. When, however, it is desired to lift an article—as, for instance, a safe *s*—the weight of which exceeds the lifting power or capacity of either one of the elevators, the cable or connection *m* is drawn down and hooked or otherwise attached to one of the elevators, as A, it carrying the load, and the other end of the cable, after passing around the sheave *h*, as shown in dotted lines, is hooked or otherwise attached to the bottom of another of the elevators B, as shown, thus forming a connection between the two elevator mechanisms, so that by starting both elevator mechanisms the lifting power of the elevator B is transmitted through the cable or connection *m* to the elevator A, doubling its capacity or increasing it to such an extent that the safe may be easily lifted to the desired floor. If, however, the aggregate lifting-power of two elevators is insufficient, a third may also be attached in like manner by a cable or auxiliary connection *o*, as represented in the drawing, thus further increasing the lifting power of the elevator A. This auxiliary cable *o* is shown as attached to the bottom of the car C and passing around the sheaves *h'*, *h*, and *g* to the top of car A. As herein shown the cable *o* is alongside of the cable *m*, and behind it, looking at the drawing, and consequently cannot be seen between the sheave *h* and car A.

In usual practice it would be necessary to provide only one of a number of elevators with this additional means for lifting it, as represented; but it is evident any other one or all may be so equipped, if necessary.

This invention is not limited to the particular means shown for connecting the elevator mechanisms, so as to increase the capacity or lifting power of one elevator by

transmitting to it power from other elevators, for I consider any suitable means whereby the power employed to actuate one elevator may be transmitted to another elevator as  
5 within the scope of this invention. It is obvious that the auxiliary connection may be varied to adapt it to the varying kinds and positions of elevators to be connected.

I claim—

10 1. The combination, with two or more independent elevator mechanisms, each normally operating a separate elevator-car, of an auxiliary connection between the elevator mechanisms, whereby the power of one mech-  
15 anism may be combined with the power of another mechanism, substantially as described.

2. The combination, with two elevator-cars and elevator mechanisms to operate the same independently, of a detachable cable connect-

ing the said cars, whereby the lifting power of one mechanism may be transmitted to the other when said cable is attached to each car, substantially as described.

3. The combination, with a series of elevator mechanisms, each normally operating its own elevator-car, of an intermediate connection or connections between said mechanisms, whereby the aggregate lifting power of all the elevator mechanisms may be concentrated or transmitted to lift a single elevator-car, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES WHITTIER.

Witnesses:

GEO. W. GREGORY,  
FREDERICK L. EMERY.