

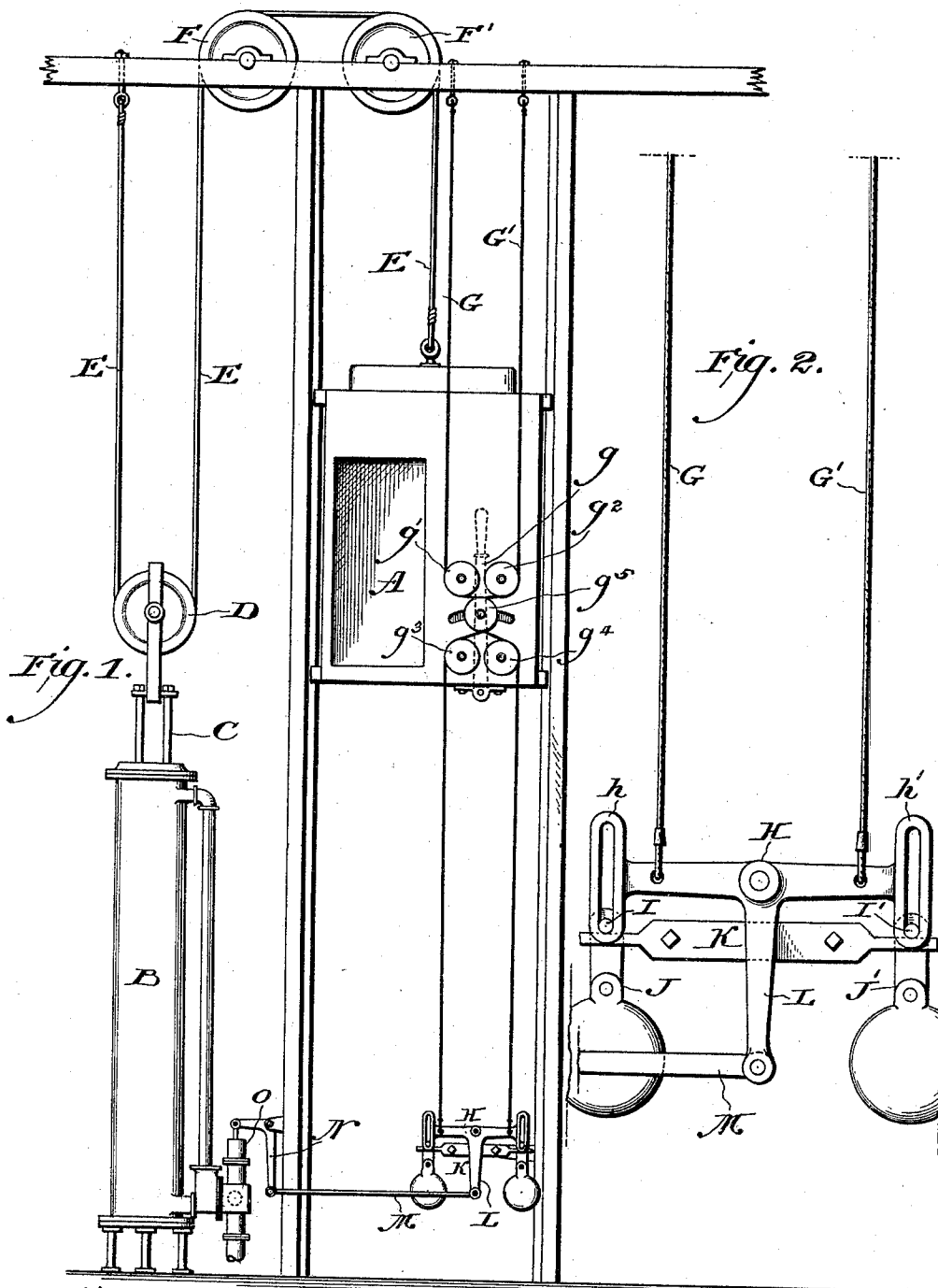
(No Model.)

2 Sheets—Sheet 1.

F. E. HERDMAN.
ELEVATOR.

No. 487,266.

Patented Dec. 6, 1892.



WITNESSES:

Frank S. Bussar
H. C. Wynn

INVENTOR:

Frank E. Herdman
by his atty
G. P. Harding

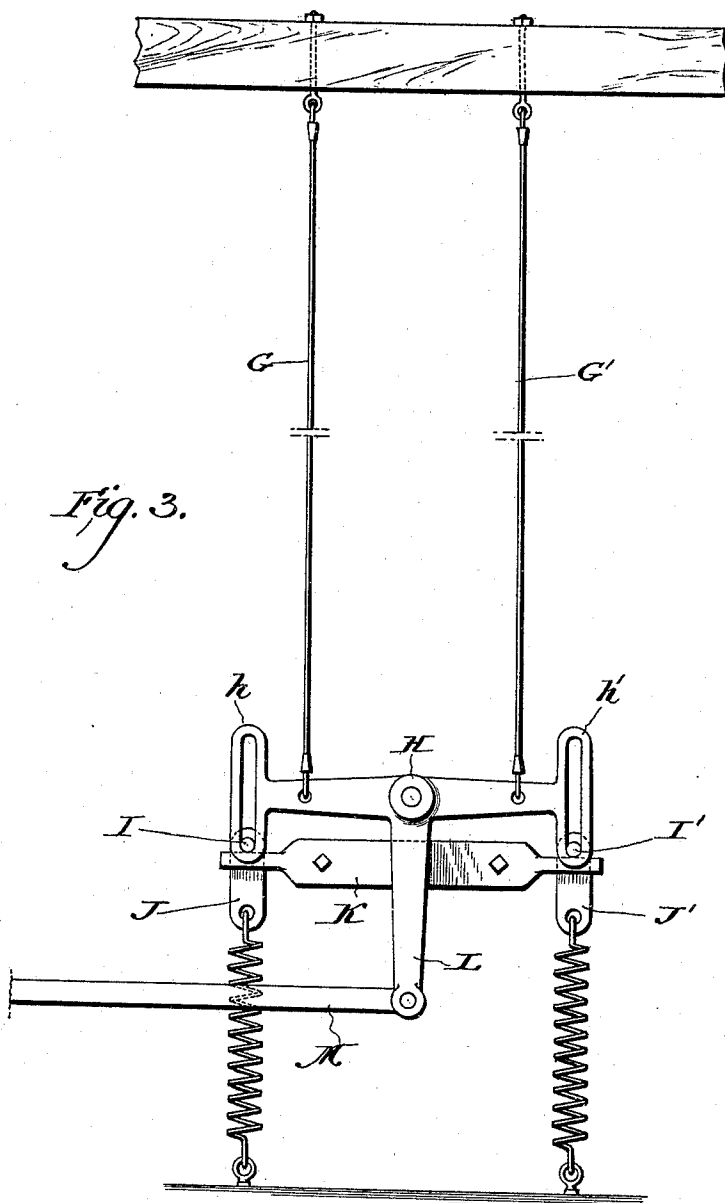
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2 Sheets—Sheet 2.

F. E. HERDMAN.
ELEVATOR.

No. 487,266.

Patented Dec. 6, 1892.



WITNESSES:
David B. Williams
Harry B. Brodhead

INVENTOR:
Frank E. Herdman
by his atty
P. Harding

UNITED STATES PATENT OFFICE.

FRANK E. HERDMAN, OF INDIANAPOLIS, INDIANA.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 487,266, dated December 6, 1892.

Application filed March 8, 1892. Serial No. 424,138. (No model.)

To all whom it may concern:

Be it known that I, FRANK E. HERDMAN, a citizen of the United States, residing at Indianapolis, county of Marion, and State of Indiana, have invented a new and useful Improvement in Elevators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention has for its object an improvement in the mechanism for controlling the operating mechanism from the car by means of operating-cables; and the purpose of the invention is that in case either of the operating-cables break the operating mechanism will stop, the operator, however, being at liberty to operate the elevator in an opposite but not in the same direction in which the broken rope works it. Thus the operator can move the car back to a floor and let out passengers, thereby causing no annoyance.

In the drawings, Figure 1 is a front elevation of an elevator, elevating apparatus, operating mechanism, operating-cables, &c. Fig. 2 is an enlarged elevation of portion of mechanism. Fig. 3 is a side elevation of operating mechanism slightly modified.

A is the elevator; B, the hydraulic cylinder; C, the piston connected to the traveling sheave D; E, the lifting-cable, one end connected to the beam, passing around the traveling sheave and over the guide-pulleys F F', and connected to the car. G G' are the operating-cables; g, the operating-lever in the car, the operating-cables passing around the pulleys g' g² g³ g⁴ g⁵. These operating-cables G G' are connected to the lever H. The ends h h' of this lever are slotted and in these slots rest the pins I I', and means are provided for exerting a downward force upon these pins. Said means may consist of weighted arms J J', Fig. 2, to which said pins are connected, or arms J J' provided with springs, Fig. 3, these pins being in contact with the bottom of the slot when the lever H is in a central position.

K is a bar the ends of which pass around the arms J J'.

L is a link connected to the lever H.

M is a link connecting the link L and the bell-crank N, which is connected to the valve-operating mechanism O.

Whenever the lever g is thrown in either direction by the operator in the car, it lifts one or the other of these uprights controlling the operating mechanism, and in case of the breaking down of the operating-cable so operated upon the weight would pull the cable down, bringing the lever H to the center and stopping the elevator. The pin I, striking the bar K, prevents its dropping too far. The operator can still operate the other cable, which reverses the operating mechanism, enabling the car to be brought back to the last floor. When the operating-cable breaks, by this construction I am enabled to stop the mechanism with certainty and am able to return to the last floor.

Having now fully described my invention, what I claim as new, and desire to protect by Letters Patent, is—

1. In an elevating apparatus, the combination of the operating-cables, a lever to which said cables are connected, said levers being provided with slotted ends, pins in said slot, means for exerting a downward force upon said pins, operating mechanism, and intermediate mechanism between the operating-cables and the operating mechanism.

2. In an elevating apparatus, the combination of the operating-cables, a lever to which said cables are connected, said levers being provided with slotted ends, pins in said slot, means for exerting a downward force upon said pins, a bar the ends of which are in line of said pins, operating mechanism, and intermediate mechanism between the operating-cables and the operating mechanism.

In testimony of which invention I have hereunto set my hand.

FRANK E. HERDMAN.

Witnesses:

W. L. ROBINSON,
G. P. SCHMITLÄU.