

(No Model.)

O. S. NOWELL.

SAFETY ATTACHMENT FOR ELEVATORS.

No. 285,762.

Patented Sept. 25, 1883.

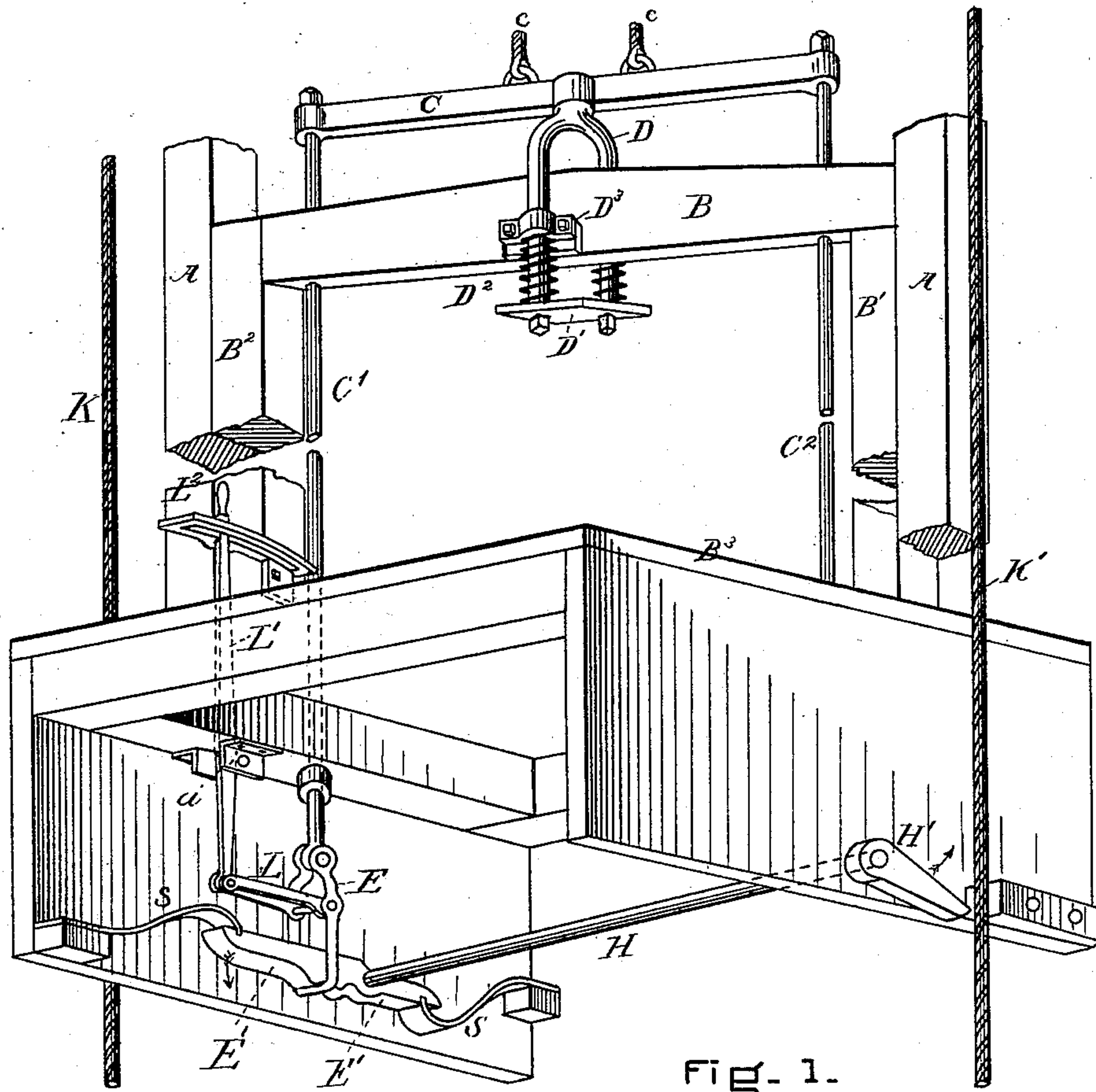


FIG. 1.

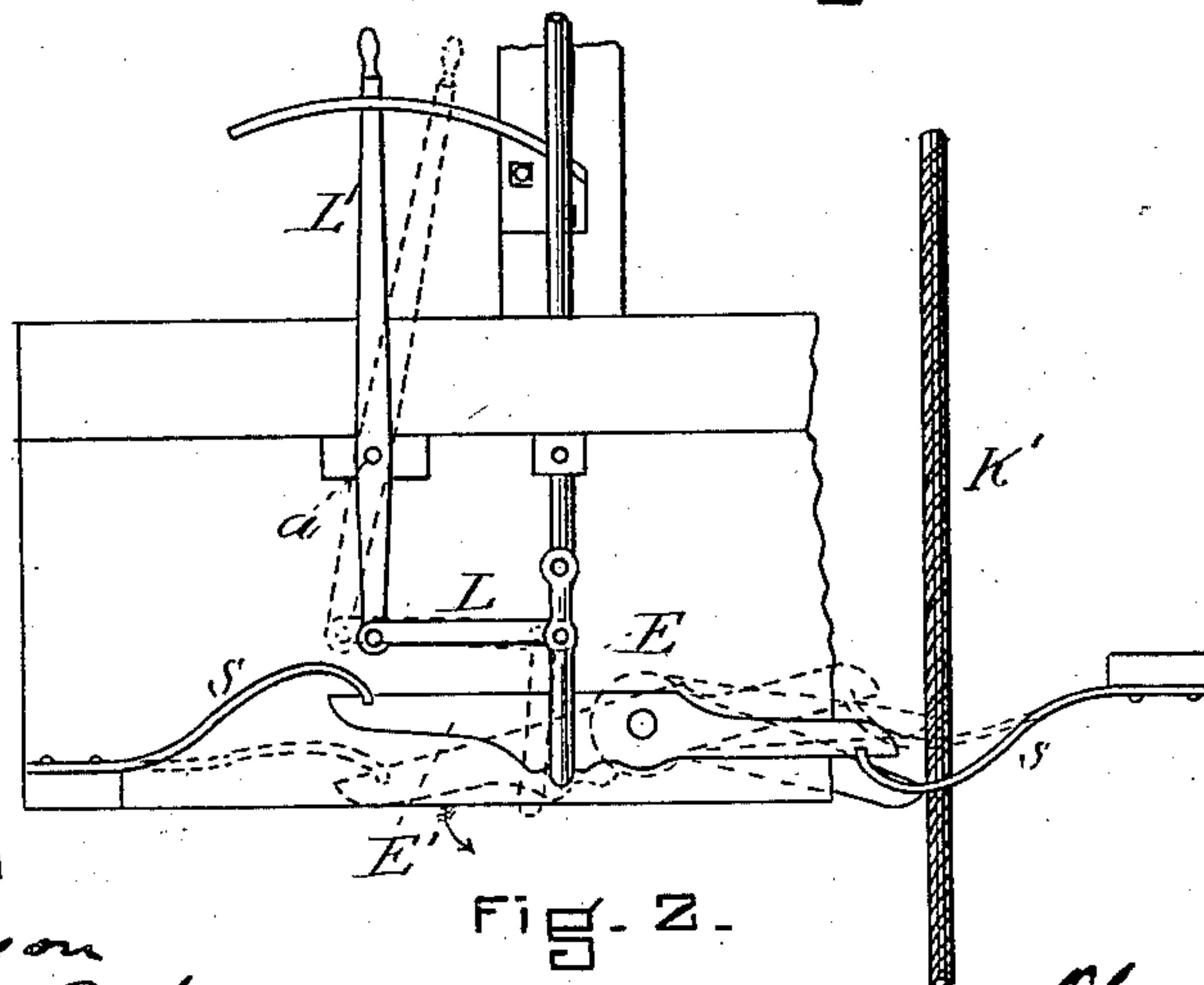


FIG. 2.

WITNESSES

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SAFETY ATTACHMENT FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 285,762, dated September 25, 1883.

Application filed August 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, OLIVER S. NOWELL, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Safety-Attachments for Elevators, of which the following is a specification.

My invention relates to that class of safety attachments for elevators in which the stopping device consists of clamps to seize upon fixed rods, ropes, or chains, said clamps being caused to act by springs or otherwise when the sustaining-rope breaks, and is embodied in an auxiliary mechanism, by the aid of which the occupant of the elevator-carriage may cause the stopping-clamp to act in case the automatic device fails to perform its functions, the object being to guard against the falling of an elevator when its sustaining-ropes have not broken, but have become loosened from the restraining machinery. This object I attain by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view, showing my invention; and Fig. 2 is an elevation showing the same in detail.

In the drawings I have shown my invention in connection with two fixed safety devices; but in practice I prefer to have it applied to four safety devices. I have also shown it as connected with the floor of the elevator-carriage, although it may be attached to the top of the carriage, in which case the hand-lever would project downward from the ceiling instead of upward from the floor.

In the drawings, Fig. 1, let A A represent the side guides for the elevator-carriage, and B B' B² the frame of the elevator-carriage, B³ being the platform or floor of the same.

C is a cross-bar, to which the hoisting-ropes c c are attached. This cross-bar C is connected to the frame B by means of a yoke, D, a coupling-piece, D', housings D³, and springs D², so that the lifting-power of the ropes c c is transmitted to the elevator-carriage.

Attached to the ends of the cross-bar C are two vertical rods, C' C², which pass down through the floor of the elevator-carriage, as shown, and there one, C', connects with the link E, the lower end of which embraces the lever E', and holds it in position against the action of the springs S S.

H is a rocker-shaft, to which the lever E' is attached, so that when the lever E' is thrown

downward, as indicated by dotted lines in Fig. 2, it causes the shaft H to revolve and to throw upward the clamping-jaw H', Fig. 2, and thus force it against the fixed ropes K'. These wire ropes K and K' (see Fig. 1) are rigidly attached to the frame of the elevator-well room, and may be located as represented in the drawings, or in any convenient position, it only being essential that they should be so placed that the clamping-jaws H' shall engage with them when the link E releases the lever E'.

In case the above-described clamping device does not act when the elevator is falling, (as might happen, if from any cause the rods C' C² did not drop, but maintained their relative position with the elevator-carriage,) then my device for throwing out the link E, which I will now explain, will become useful. This link E, when it hangs vertically, as indicated in full lines in Fig. 2, holds the lever E' in position, so that it, through the rocker-shaft H, keeps the clamping-jaw H' away from the fixed rope K; but if the said link E is swung outward, as indicated by dotted lines in Fig. 2, then the lever E' can fall and allow the clamping-jaw H' to engage with the fixed rope K'. To enable the occupant to operate the link E as above described, I connect the said link E by a link, L, to a hand-lever, L', which is pivoted at a, and is provided with a notched guide, L², at its upper end, so that when the occupant of the car wishes to free the lever E' all he has to do is to throw the hand-lever L' out of its notch and move it backward or forward sufficiently to swing the link E, Fig. 2, over to a position similar to one indicated by dotted lines in Fig. 2, in which position it allows the lever E' to fall, as indicated by dotted lines, and to throw the clamping-jaw H' against the fixed rope K', and thus stop the fall of the elevator-carriage.

Having thus described my invention, what I desire to secure by Letters Patent is—

In an elevator, the combination of the hand-lever L', links L and E, with the lever E', rocker-shaft H, clamping-jaw H', and fixed rope K, all operating together, substantially as described, and for the purpose set forth.

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Witnesses:

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