

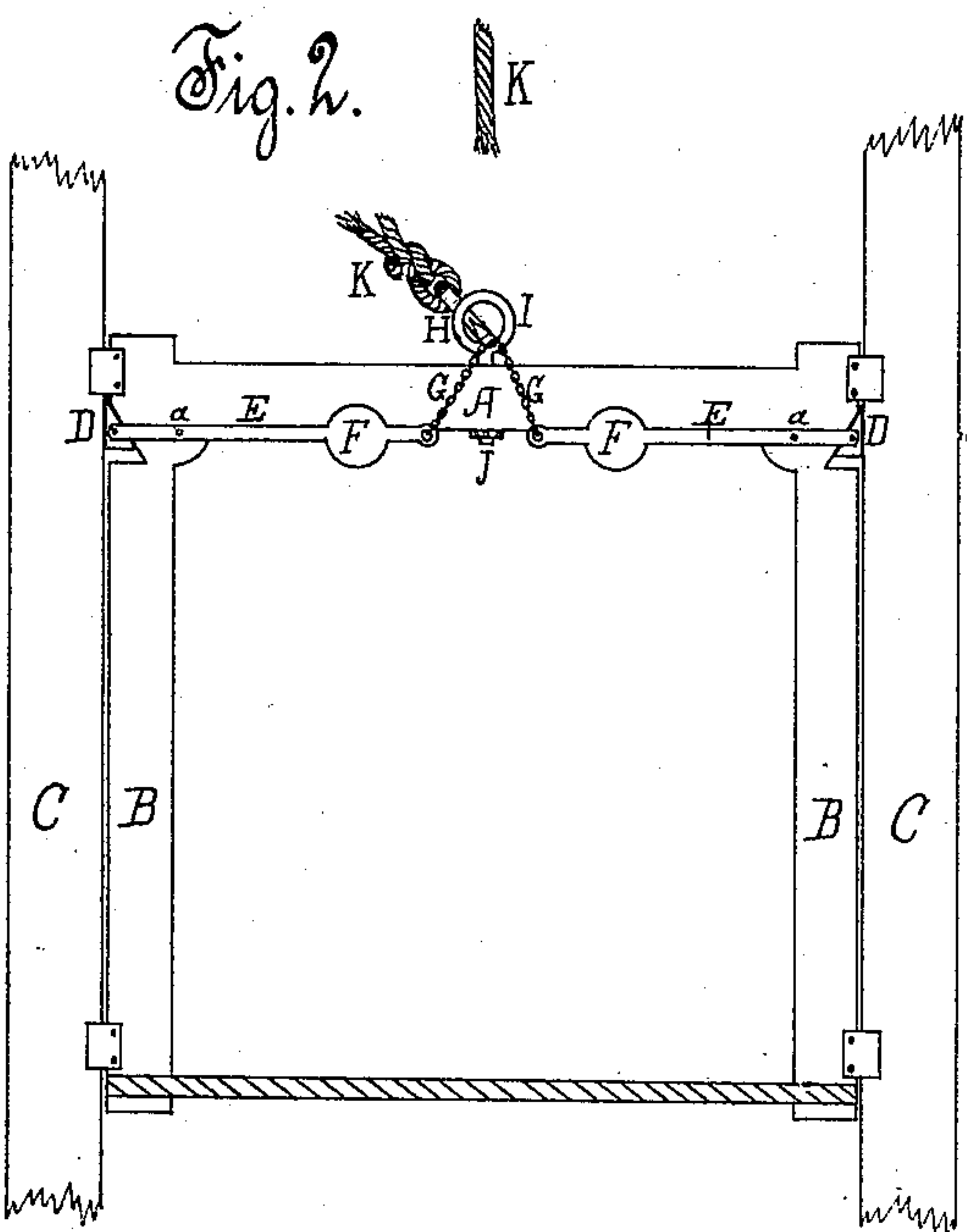
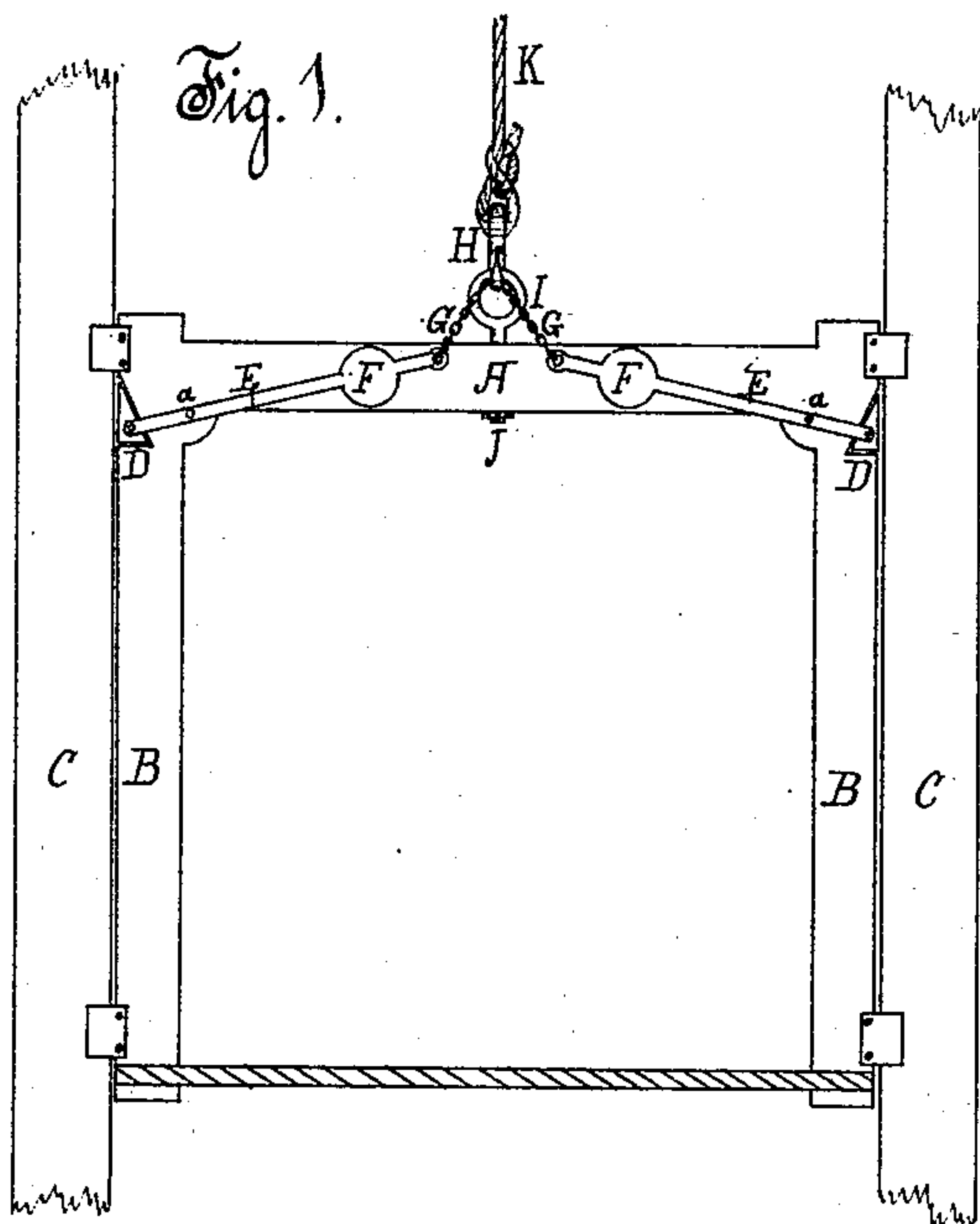
(No Model.)

C. S. LONGSTREET.

AUTOMATIC SAFETY BRAKE FOR ELEVATORS.

No. 256,013.

Patented Apr. 4, 1882.



Witnesses:

Wm. S. Bainton

Jacob Pettig

Inventor:

Christopher S. Longstreet

UNITED STATES PATENT OFFICE.

CHRISTOPHER S. LONGSTREET, OF NEW YORK, N. Y.

AUTOMATIC SAFETY-BRAKE FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 256,013, dated April 4, 1882.

Application filed February 11, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPHER S. LONGSTREET, of the city of New York, in the county and State of New York, have invented a certain new and useful Automatic Safety-Brake for Elevators, of which the following is a specification, reference being had to the accompanying drawings, constituting part thereof.

The objects of my invention are to provide any freight or passenger elevator with a simple and sure brake automatically operated by the breaking of the hoisting-cable or its attachment, so constructed as to be always ready and certain in its operation, so powerful as to positively stop the falling elevator, and so inexpensive in cost of manufacture and application as to be popular. These objects are attained by the devices shown in Figures 1 and 2 of the accompanying drawings, the former figure showing the device applied to a freight-elevator and ready for operation, and the latter figure showing the operation of the device upon the breaking of the hoisting-rope and falling of the elevator.

A is the cross-head connecting the uprights D D from the platform of the elevator. This elevator runs between the guides C C in the ordinary manner. To this cross-head is attached the hoisting-rope K, as by the hook H and eye I of the bolt J.

E E are levers, pivoted at *a* to the cross-head or uprights of the elevator, and having suitable weights, F F, toward their upper ends, and at their lower ends hinged or jointed to the wedges D D. The light chain or band G, passing through the link or hook H, connects the upper ends of the weighted levers together and suspends their action so long as the hoisting-cable sustains the elevator and its load. Upon the breaking of the hoisting-rope above the eyebolt of the elevator this chain or band G is no longer supported, and so no longer in its turn sustains the weights F F, which consequently fall, and by this acquired motion the levers E E bring into action the wedges D D between the sides of the elevator and the guides C C, whereupon the elevator is securely wedged

between the guides and held fast. Upon the pulling out of the eyebolt from the cross-head of the elevator the entire weight of the suspended elevator comes upon the slight chain or band G, which is immediately broken, whereupon the weights F F are no longer sustained, and act as previously described.

The relations of the wedge, guides, and sides of the elevator to each other are clearly shown in the figures.

The materials out of which the various parts of this device are constructed depends somewhat upon the circumstances of use, and may be of metal or wood, or both combined, in the judgment of the mechanic.

To avoid cutting into the uprights to accommodate the wedges, if this should be desirable, cleats may be provided on the outside of the uprights, so arranged that the operation of the wedges shall be the same. The outside face of the wedge may be serrated or roughened to take a firmer hold upon the guides, which may be correspondingly serrated or roughened, if desired. Where only light loads are carried one of these wedges, with its operating weighted lever suspended directly from the ring H, might be used.

The chief advantage resulting from my invention is that no strain comes upon the levers E E, and the ability of the wedges D D, whenever brought into action to stop the falling elevator, in nowise depends upon the strength of the levers or their connections.

The application of this device to passenger-elevators will be obvious to any mechanic.

What I claim as novel and useful in my invention is—

A safety-brake for elevators, consisting of a movable wedge automatically, upon detachment of the hoisting-cable, brought by a weighted lever into action between the adjacent sides of the elevator and its guide to stop the falling elevator.

CHRISTOPHER S. LONGSTREET.

Witnesses:

WM. S. BAINTON,
JACOB RETTIG.