(No Model.) 2 Sheets—Sheet 1.

N. WALKER.

SAFETY DEVICE FOR ELEVATORS.

No. 410,339. Patented Sept. 3, 1889.

Fig. 1.

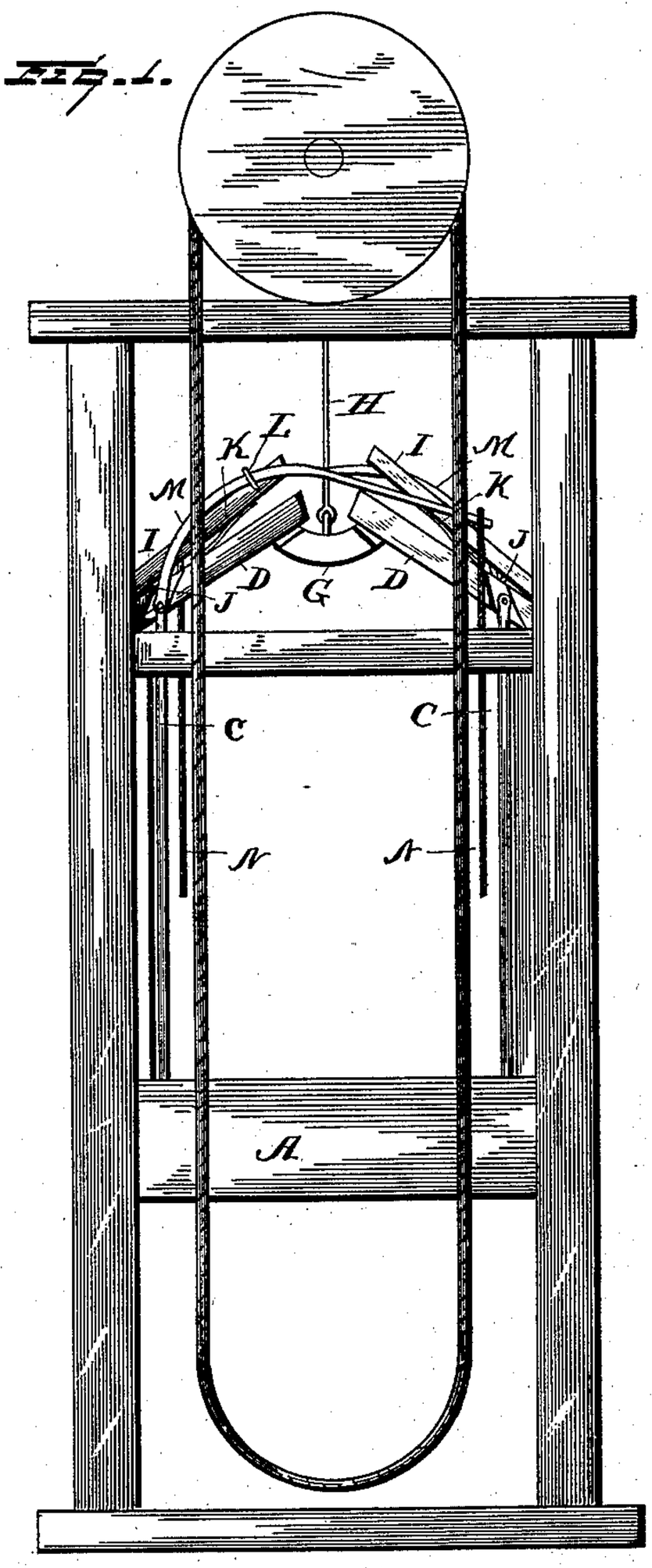
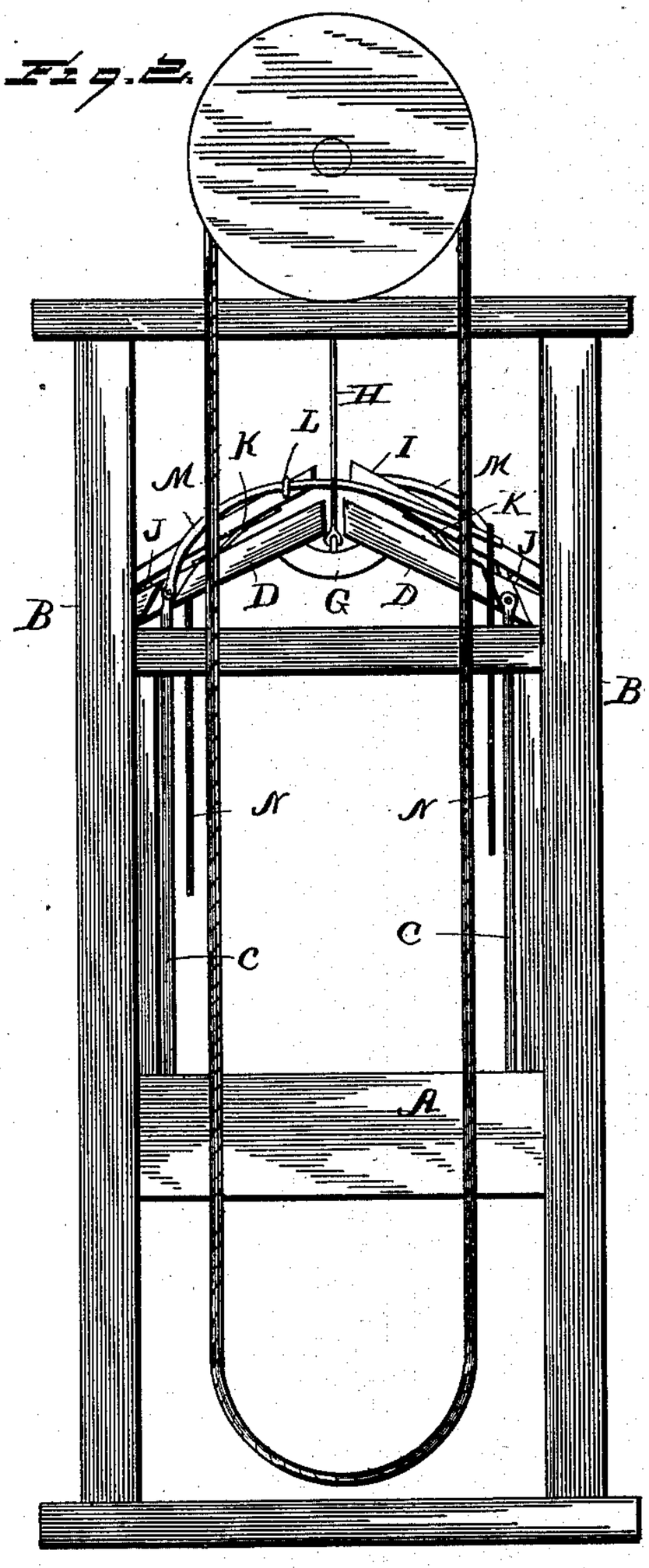


Fig. 2.



Witnesses

E. C. Wurdeman.

R. N. Bishop.

Inventor

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C. A. Snow & Co

(No Model.) 2 Sheets—Sheet 2.

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Fig 3.

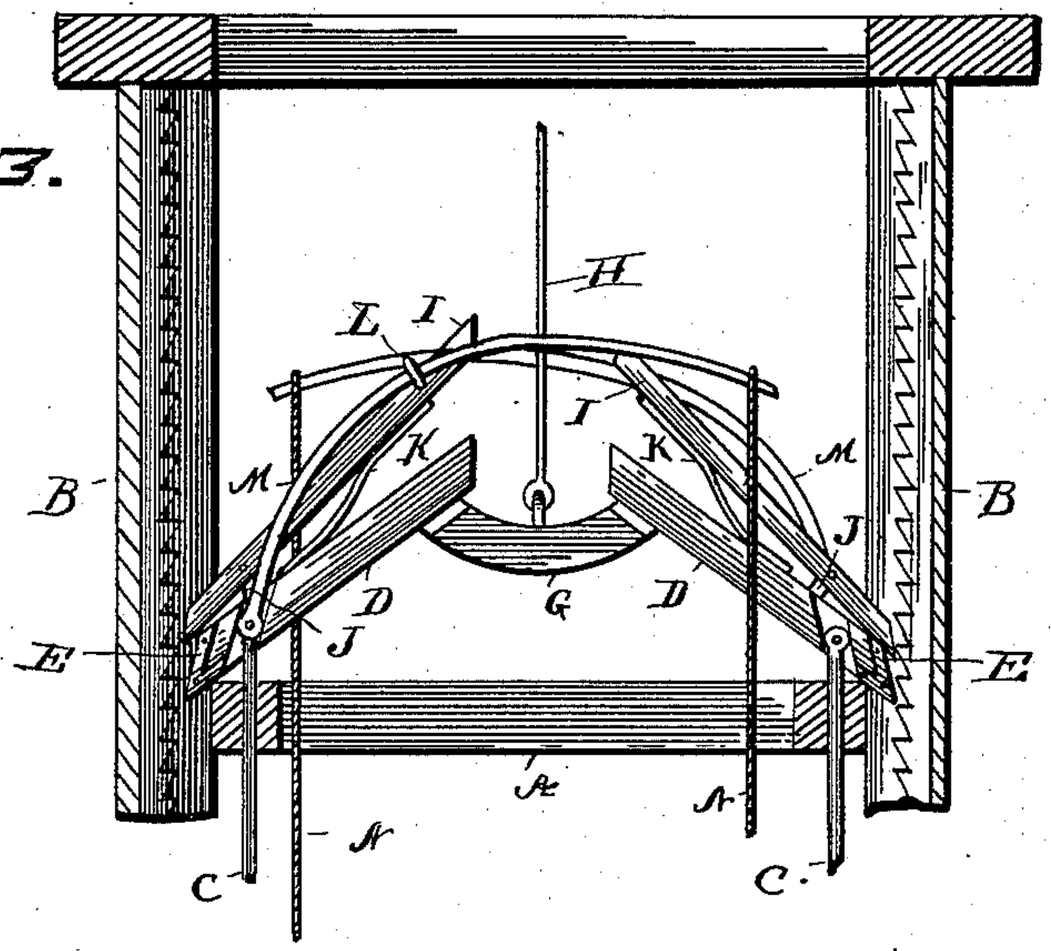
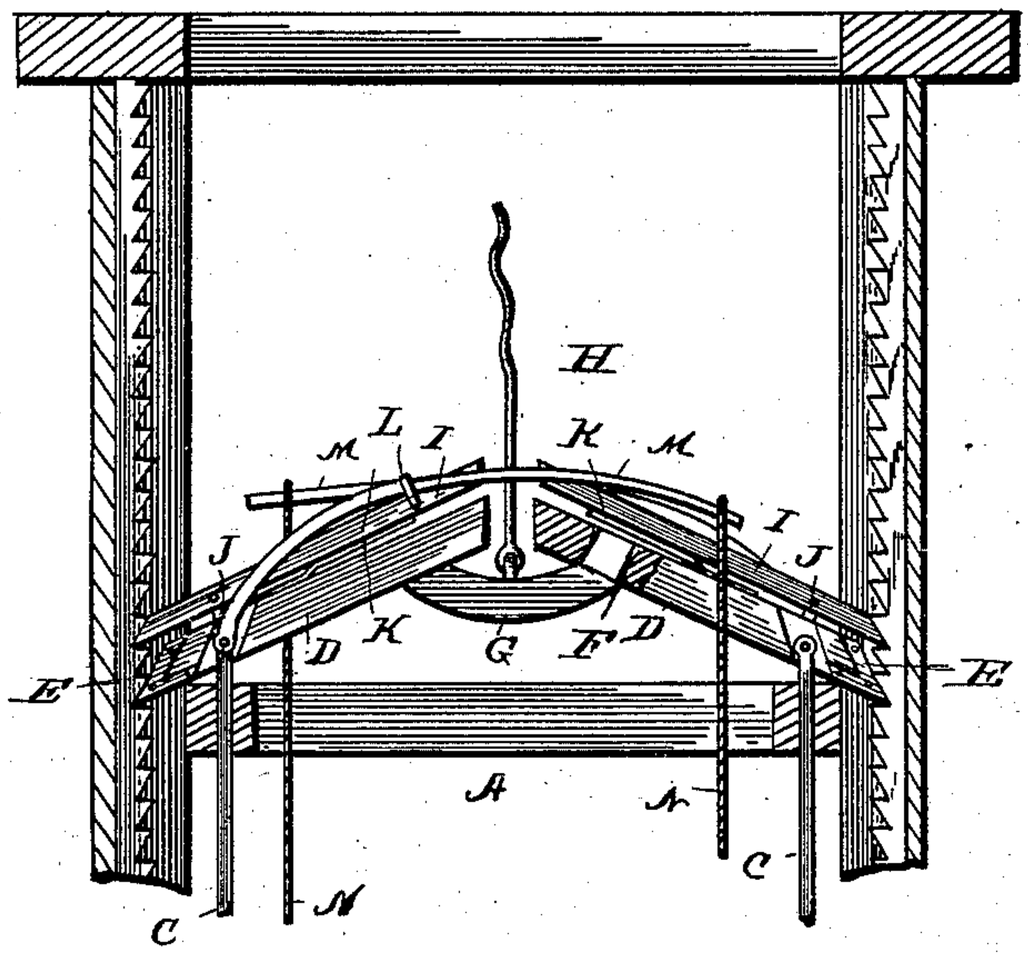


Fig. 4.



Witnesses

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By his Attorneys

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UNITED STATES PATENT OFFICE.

NATHAN WALKER, OF HARWICH, MASSACHUSETTS.

SAFETY DEVICE FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 410,339, dated September 3, 1889.

Application filed May 6, 1889. Serial No. 309,806. (No model.)

To all whom it may concern:

Be it known that I, NATHAN WALKER, a citizen of the United States, residing at Harwich, in the county of Barnstable and State of Massachusetts, have invented a new and useful Elevator, of which the following is a specification.

My invention relates to improvements in elevators; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side view of an elevator provided with my improvements. Fig. 2 is a similar view showing the position of the parts when the hoisting-rope breaks. Figs. 3 and 4 are detail sections of Figs. 1 and 2, respectively.

The elevator-car A and the elevator-shaft may be of any desired construction and arrangement, and within the elevator-shaft I arrange the guides B, running the entire height of the shaft, as will be readily understood. On the upper side of the elevator-car I provide the rods C, to the upper ends of which I pivot the dogs or levers D, having their outer ends tapered or sharpened and provided with metallic re-enforcing plates E, as shown. The inner ends of these dogs or levers D are provided with longitudinal slots F, in which the ends of a link G are inserted, and the hoisting-rope H is secured to the center of this link G and extends upward therefrom to the windlass. When the elevator is in operation, this link G is drawn upward by the hoisting-rope, so as to raise the inner ends of the dogs or levers D, thereby drawing the outer ends of said dogs inward and away from the guides B. When the tension of the hoisting-rope is released, however, the inner ends of the levers fall, thereby throwing their outer ends against the guides, so that the car will be prevented from descending.

Above each of the dogs or levers D, I arrange a pawl I, which is pivotally connected with the dog by a small link J and has its inner end normally pressed upward by a spring K, secured on the upper side of the dog and bearing against the under side of the pawl. The outer ends of these pawls are constructed like the outer ends of the dogs, and are adapted to bind against the guides in the same manner as shown in Fig. 4. These pawls are provided on their sides, near their inner ends, with the bearings L, and levers M, pivoted to the rods C, rest on the said bearings and have cords N secured to their free ends and depending therefrom into the elevator-car.

From the foregoing description it is thought the operation of my improved device will be readily understood. When the parts are in their normal condition, the elevator is raised and lowered in the usual manner, and the pawls and dogs will move easily and readily over the guides as the car ascends and descends, and when it is desired to prevent downward movement of the car the cords N are drawn downward, thereby depressing the inner ends of the pawls and raising the outer ends of the same, so that they will bind against the guides and prevent further downward movement of the car. Should the hoisting-rope break, the weight on the platform pulls down the dogs by means of the rods C, which slide through the upper cross-piece of the car. The car can thus be held against movement until the broken rope has been repaired.

My device is very simple and its advantages are thought to be obvious from the foregoing description without further reference thereto.

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

As an improvement in elevators, the combination of the elevator-car, the rods C, rising therefrom, the dogs pivoted on the upper ends of said rods, the link connecting the inner ends of the said dogs, the pawls pivotally mounted on the upper sides of the dogs and having bearings L on their sides, the springs secured on the upper sides of the dogs and bearing against the under sides of the pawls, and the levers M, pivoted on the rods C and resting on the bearings L, and having cords N depending from their free ends, as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

NATHAN WALKER.

Witnesses:
FRANK D. UNDERWOOD,
WM. H. UNDERWOOD.