

(No Model.)

C. A. CARSCADIN & F. P. FISH.

SAFETY ATTACHMENT FOR ELEVATORS.

No. 277,226.

Patented May 8, 1883.

Fig. 1.

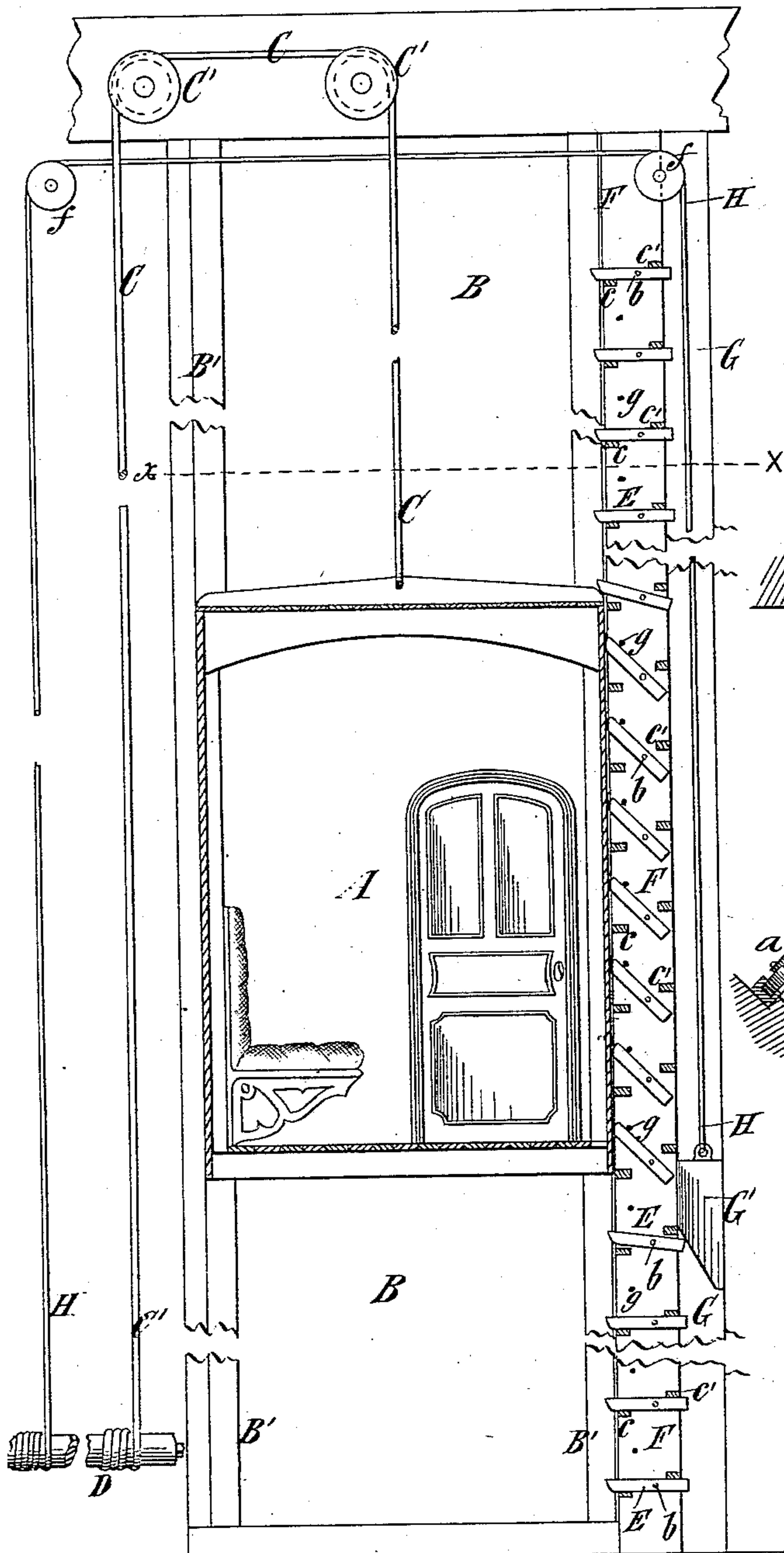


Fig. 2.

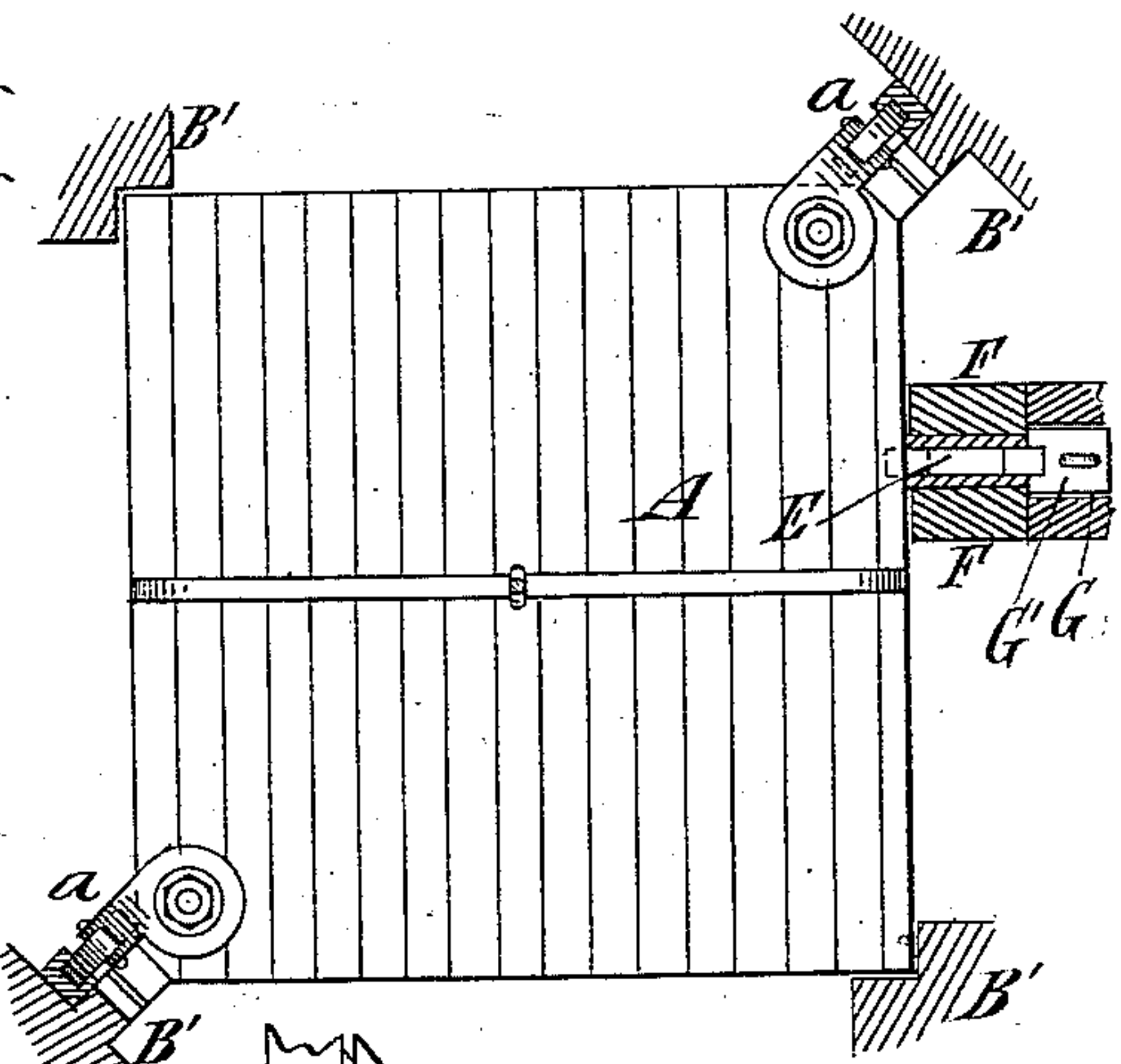
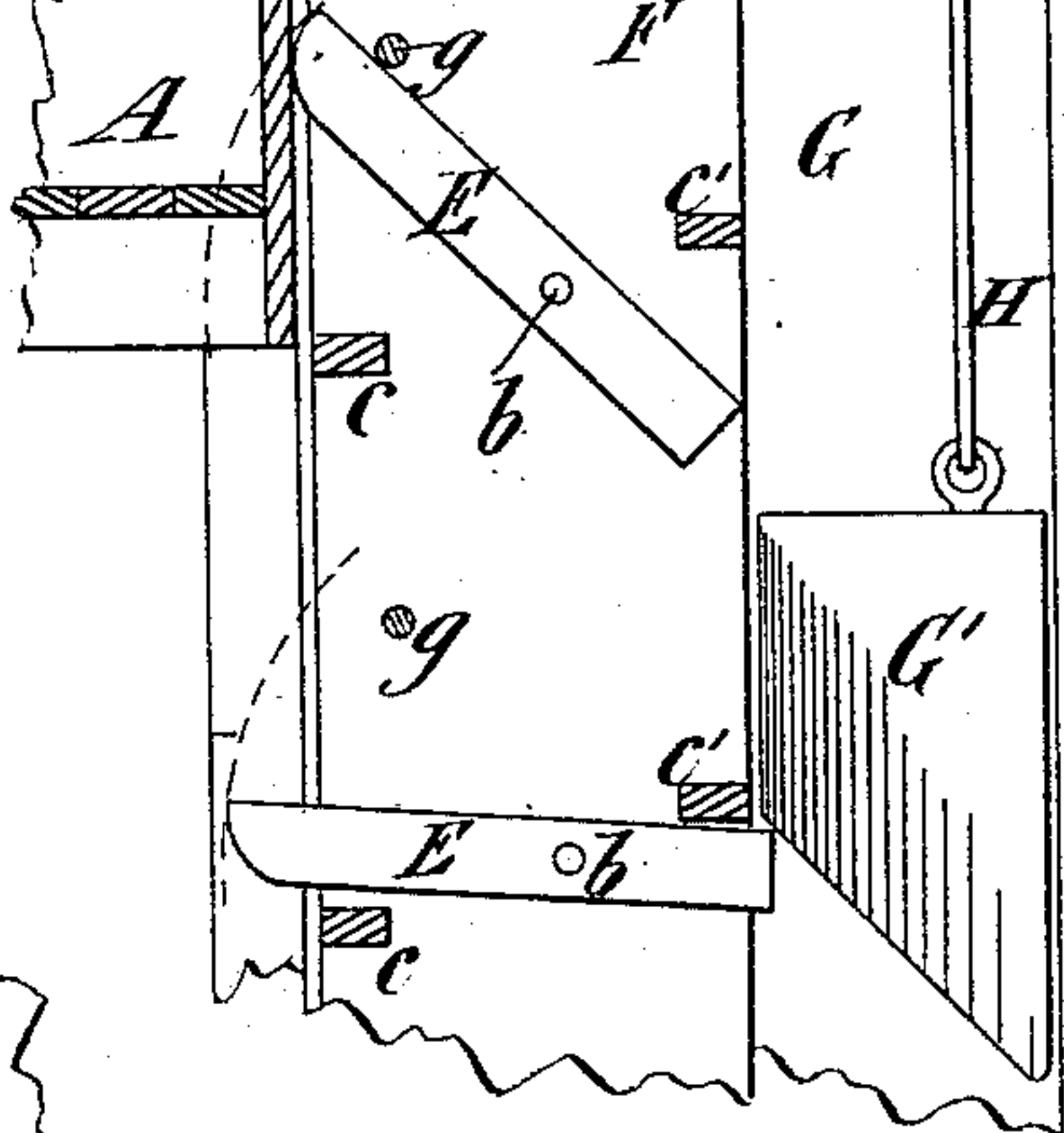


Fig. 3.



Witnesses:
J. H. Haynes
Ed. L. Moran

Charles A. Carscadin
Frank P. Fish
Per their Attorneys
R. M. Brown

UNITED STATES PATENT OFFICE.

CHARLES A. CARSCADIN AND FRANK P. FISH, OF NEW YORK, N. Y.

SAFETY ATTACHMENT FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 277,226, dated May 8, 1883.

Application filed March 10, 1883. (No model.)

To all whom it may concern:

Be it known that we, CHARLES A. CARSCADIN and FRANK P. FISH, both of the city of New York, in the county and State of New York, have invented a new and useful Improvement in Safety Attachments for Elevators, of which the following is a specification.

Our invention relates to devices which are employed to prevent the falling of the elevator car or platform in case of the hoisting-rope breaking.

The invention consists in the combination, with an elevator car or platform and the shaft wherein it is capable of moving upward and downward, of pawls or stops projecting in the path of the car or platform, and hinged or pivoted so that they are capable of being swung upward automatically by the car or platform as it ascends, and abutments for sustaining said pawls or stops with their inner ends in the path of the car or platform, so that they will catch and sustain the latter if the hoisting-rope breaks.

The invention also consists in the combination, with the above-described pawls or stops, of devices, particularly hereinafter described, for tripping or removing said pawls or stops, so as to permit the descent of the elevator car or platform so long as the hoisting-rope remains intact, and in details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a vertical section of an elevator car or platform and appurtenances and an elevator-shaft embodying our invention. Fig. 2 is a horizontal section on the dotted line *x*, Fig. 1; and Fig. 3 is a detail view, illustrating a portion of the car or platform and shaft upon a larger scale.

Similar letters of reference designate corresponding parts in the several figures.

A designates the car or platform, which is movable upward and downward in a shaft, B. Guide-posts B' may be arranged at two or more of the corners of the car or platform, and the said car or platform may have friction-rollers *a* running upon two or more of such guide-posts, as shown in Fig. 2.

C designates the hoisting-rope suspending the car or platform, and which is passed around sheaves or pulleys C', and thence to a windlass or hoisting-drum, D, which is to be operated by any suitable mechanism. (Not here shown.)

E designates pawls or stops arranged in a series one above another, and pivoted at *b*. The said stops or pawls E may be arranged between and pivoted to upright posts F, which extend from top to bottom of the shaft B; and *c c'* designate abutments whereby the pawls or stops are prevented from falling below an approximately horizontal position, or a position in which their inner ends will project in the path of the car or platform A. The rear or tail ends of the pawls or stops are shown as projecting in a slideway or channel, G, and in said slideway is a movable weight, G'. This weight is suspended by a rope, H, passing over pulleys or sheaves *f*, and thence to the same windlass or drum D, around which it is coiled, or to any other windlass or drum which is of the same size, or which is rotated at such a speed that the weight G' will always move with the car or platform and at the same speed. When the car or platform is ascending it acts upon the pawls or stops E and moves or swings them upward and out of the way; but as the car or platform leaves them they drop back upon the abutments *c*. If the hoisting-rope C should at any time break, the car or platform would only fall until it comes in contact with one of the pawls or stops E, and would thereby be retained and supported and its further falling prevented. As the car or platform descends, the weight G' moves slightly in advance of it, and, striking the outer or tail ends of the pawls, raises the latter one after the other at their inner ends, and thus allows the car or platform to pass them in descending.

In Fig. 3 the weight G' is represented as just about to act on the lower pawl or stop, E, and will raise the inner end thereof, as indicated by the dotted lines in Fig. 3.

In order to prevent the pawls or stops E from being thrown over backward by the weight G' striking them, we provide checks *g*, which only permit the pawls or stops to move far enough for the car or platform to pass them.

By our invention we provide a safety attachment for elevators which is very simple in construction, and is not likely to get out of order, and is therefore very reliable and effective.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination, with an elevator car or

platform and its shaft, of pawls or stops projecting in the path of the car or platform, and capable of being swung upward on their pivots automatically by the car or platform as it ascends, and abutments for sustaining said pawls or stops with their inner ends in the path of the car or platform, so that they will catch and sustain the latter if the hoisting-rope breaks, substantially as described.

2. The combination, with the elevator car or platform A and shaft B, of the pawls or stops E, hinged or pivoted so as to be capable of swinging upward and downward, the weight

G', adapted to depress the outer ends of said pawls or stops, so as to raise their inner ends out of the way of the car or platform as it descends, the ropes C' H, and gearing for moving said car or platform and said weight in unison in the same direction, substantially as described.

CHAS. A. CARSCADIN.
FRANK P. FISH.

Witnesses:

FREDK. HAYNES,
T. J. KEANE.