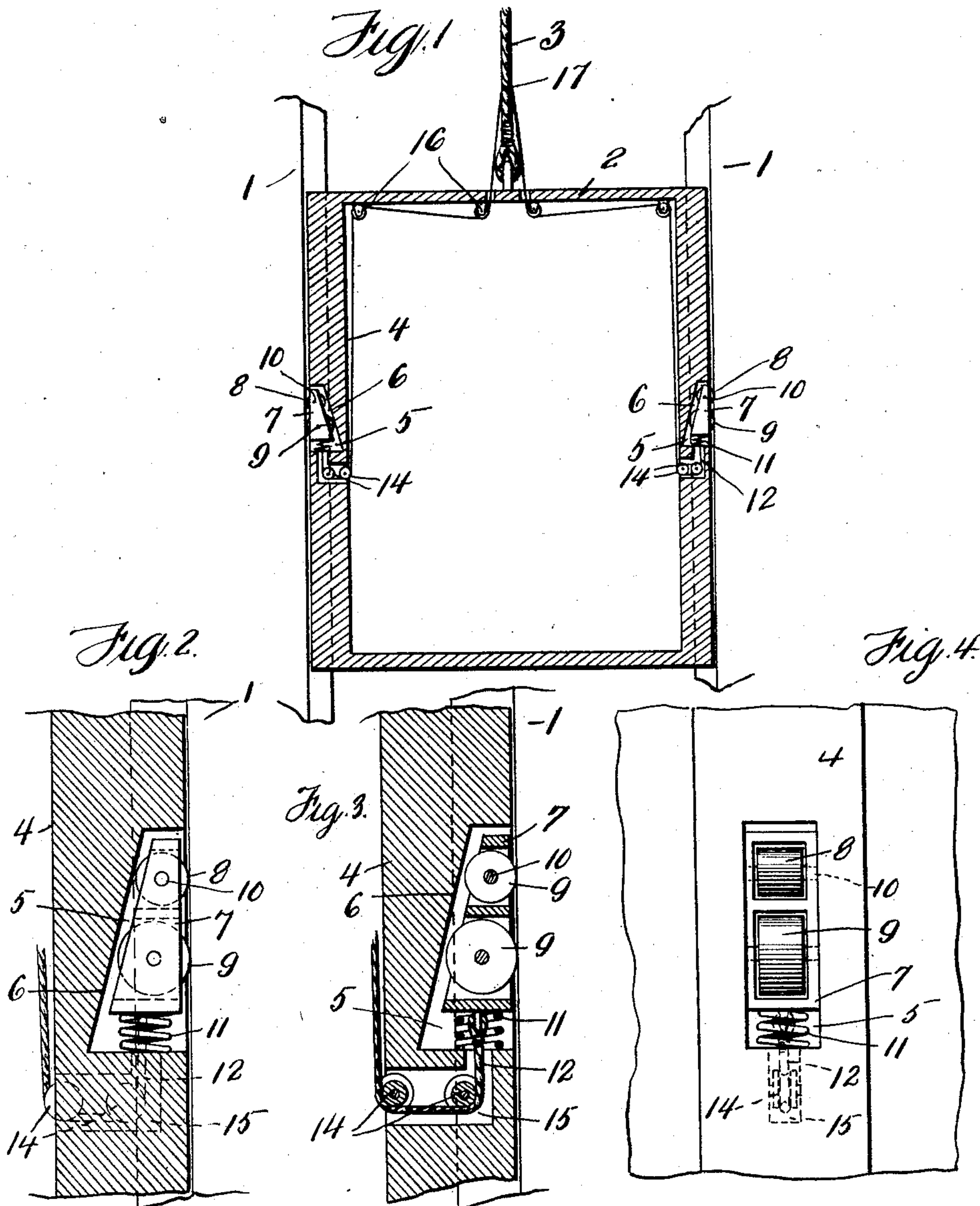


No. 859,718.

PATENTED JULY 9, 1907.

T. J. ABBOTT.
SAFETY DEVICE FOR ELEVATORS.
APPLICATION FILED MAR. 12, 1907.



WITNESSES:

Samuel Payne

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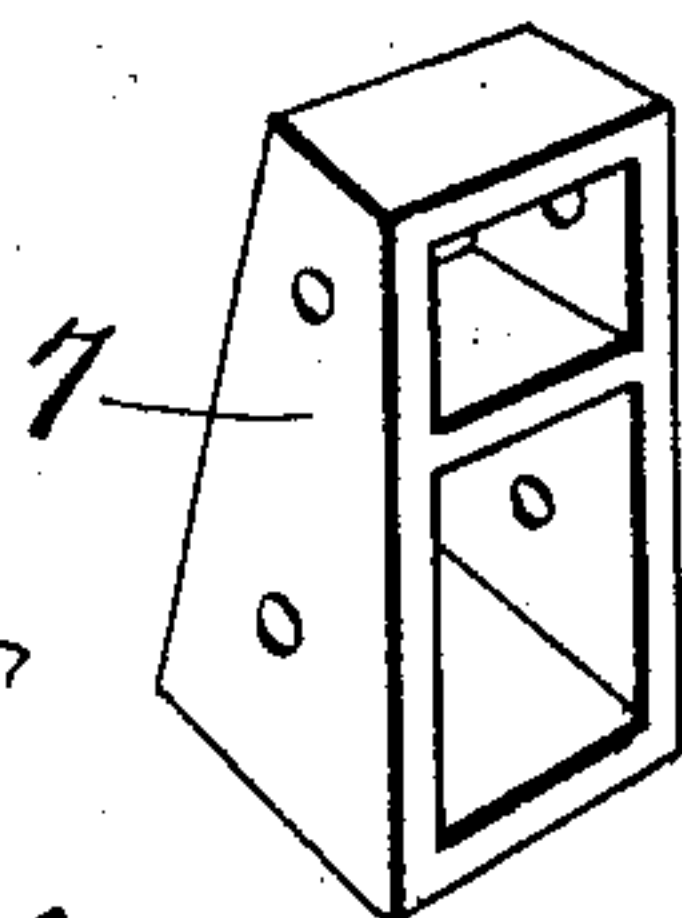


Fig. 5.

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UNITED STATES PATENT OFFICE.

THOMAS J. ABBOTT, OF PITTSBURG, PENNSYLVANIA.

SAFETY DEVICE FOR ELEVATORS.

No. 859,718.

Specification of Letters Patent.

Patented July 9, 1907.

Application filed March 12, 1907. Serial No. 361,994.

To all whom it may concern:

Be it known that I, THOMAS J. ABBOTT, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Safety Devices for Elevators, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to elevator safety devices, and the invention has for its object to provide novel means for gripping the side frames of an elevator shaft and preventing an elevator cage from dropping to the bottom of a shaft should the supporting cable thereof break.

Another object of this invention is to provide a simple and inexpensive device which can be readily used in connection with various types of elevators for insuring the perfect safety of passengers carried thereby.

With these and other objects in view, which will more readily appear as the invention is better understood the same consists in the novel construction, combination and arrangement of parts to be hereinafter more fully described and then specifically pointed out in the appended claims.

Referring to the drawing forming part of this specification, like numerals of reference designate corresponding parts throughout the several views, in which

Figure 1 is a vertical sectional view of the frame of an elevator cage equipped with my improved safety device, Fig. 2 is a fragmentary sectional view of the same, illustrating the roller housing in elevation, Fig. 3 is a similar view illustrating the roller housing in section, Fig. 4 is a side elevation of my improved safety device, Fig. 5 is a detached perspective view of one of the roller housings.

In the accompanying drawings, I have illustrated the guide frames 1 of an elevator shaft and between said frames is slidably mounted the skeleton framework 2 of an elevator cage, the cage being supported by a cable 3.

My invention resides in providing the side rails 4 of the elevator cage with recesses 5 having inclined rear faces 6. In the recesses 5 are mounted partitioned roller housings 7 in which are journaled rollers 8 and 9 by detachable pins 10. The rollers 9 are of a greater diameter than the rollers 8 and said rollers are adapted to engage the inclined rear faces 6 of the recesses 5.

Housings 7 are supported by coiled springs 11 which are normally held under tension by cables 12 passing over rollers 14 journaled in the cut away parts 15 of the side rails 4. The cables extend upwardly over grooved

pulleys or sheaves 16 carried by the elevator cage and connect with the cable 3, as at 17.

As heretofore stated, the springs 11 are normally held under tension and the rollers 8 and 9 held out of engagement with the rear inclined faces 6 of the recesses 5. Should the supporting cable 3 break, the taut cables 12 will be immediately released sufficiently to allow the springs 11 to elevate the housings 7 and place the rollers 8 and 9 in engagement with the rear inclined faces 6 of the recesses 5 and the guide frames 1 of the elevator shaft. The downward movement of the elevator cage will tend to thoroughly wedge the rollers 8 and 9 between the side frames of the elevator cage and the guide frames thereof, causing the elevator cage to stop and prevent the passengers carried by the cage from being injured or killed by the cage being dashed to the bottom of the elevator.

By the repairing of cable 3 to again support the elevator cage, the cables 12 can again be placed in a taut condition to release the housings 7 and allow the elevator cage to continue its movement in the elevator shaft.

From the foregoing description it will be observed that I have devised a novel locking mechanism adapted to be used in connection with an inclined or curved surface, said locking mechanism having a wedging action to prevent two surfaces from moving with relation to each other.

Such alterations in the details of construction as are permissible by the appended claims, may be resorted to without departing from the spirit and scope of the invention.

What I claim and desire to secure by Letters Patent, is:—

In an elevator safety device, the combination with the guide frames of an elevator shaft, an elevator cage, and a cage-supporting cable, the side rails of said elevator cage having recesses in the outer face thereof having inclined rear faces and communicating with openings through the inner faces of the said rails, of housings mounted in said recesses open on opposite side faces and inclined on their inner faces to conform to the inclined rear faces of the recesses, different sized rollers journaled in said housings, springs seated in the base of said recesses on which said housings are mounted, and cables connected to the base of said housings and extended through said openings in the cage side rails and connected to said cage-supporting cable for normally holding said springs under compression, as and for the purpose described.

In testimony whereof I affix my signature in the presence of two witnesses.

THOMAS J. ABBOTT.

Witnesses:

MAX H. SROLOVITZ,
A. J. TRIGG.