No. 751,330. PATENTED FEB. 2, 1904.

J. NAMECHE.

ELEVATOR SAFETY DEVICE.

APPLICATION FILED SEPT. 4, 1903.

NO MODEL.

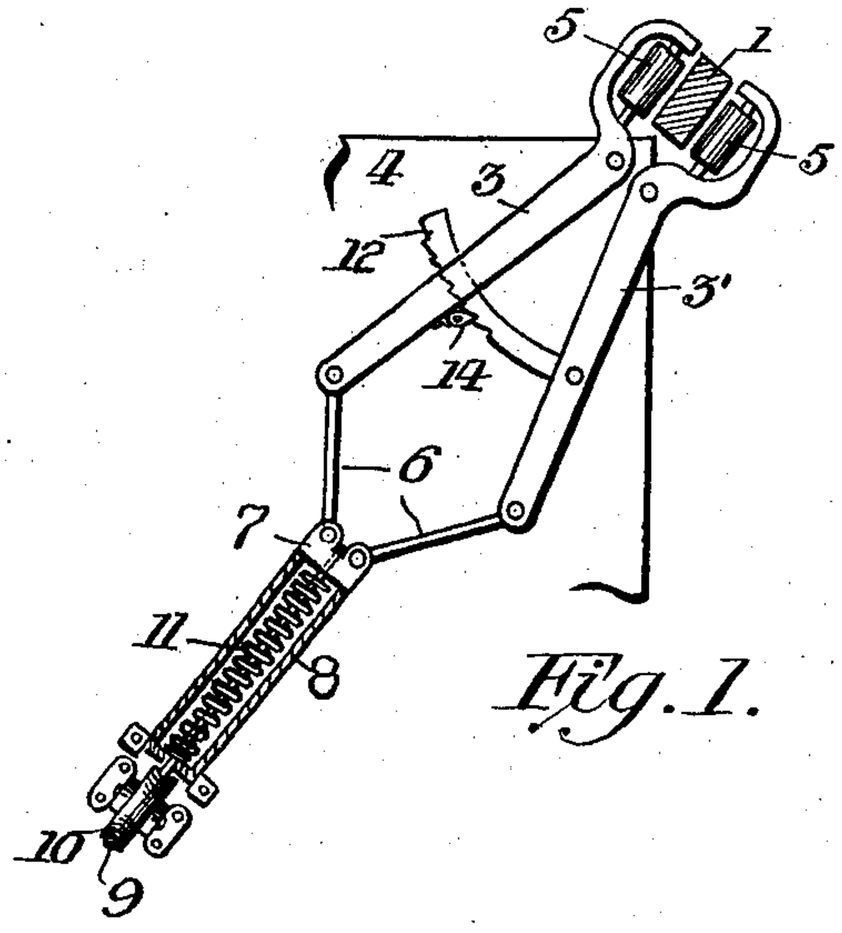

Fig. 1.

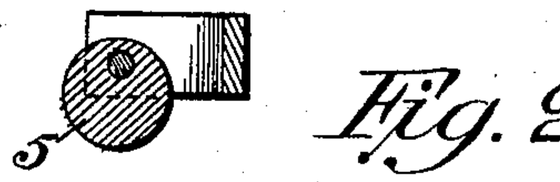

Fig. 2.

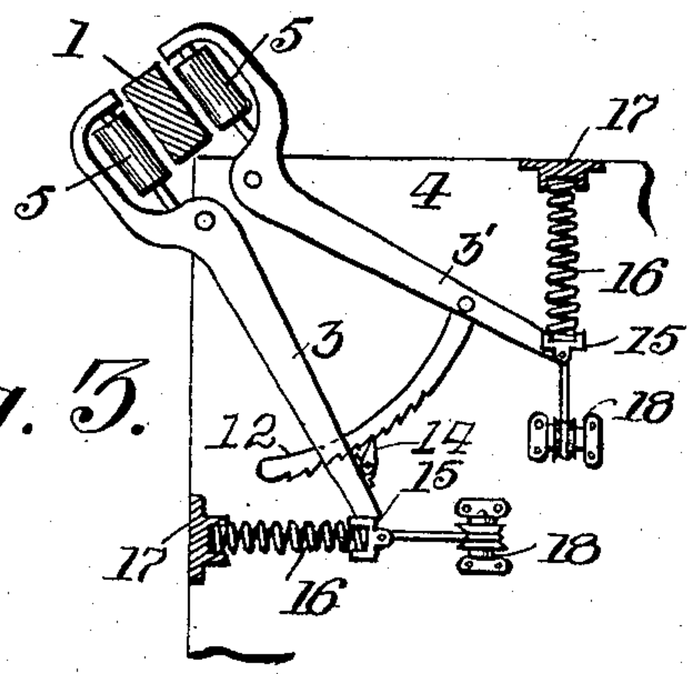

Fig. 3.

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UNITED STATES PATENT OFFICE.

JOSEPH NAMECHE, OF TARENTUM, PENNSYLVANIA.

ELEVATOR SAFETY DEVICE.

SPECIFICATION forming part of Letters Patent No. 751,330, dated February 2, 1904.

Application filed September 4, 1903. Serial No. 171,965. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH NAMECHE, a citizen of the United States of America, residing at Tarentum, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Elevator Safety Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in safety devices for elevators; and the primary object of the invention is to provide means for the holding of the cage to prevent dropping of the latter in event of the suspension rope or ropes being broken.

The invention resides in the novel construction, combination, and arrangement of parts to be hereinafter more specifically described and then particularly pointed out in the accompanying claim, and in describing the invention in detail reference will be had to the accompanying drawings, forming a part of this application, and wherein like numerals of reference will be employed to indicate like parts throughout the different views of the drawings, in which—

Figure 1 is a top plan view of the preferred form of construction, showing the cage broken away. Fig. 2 is a transverse vertical sectional view of one of the gripping-arms and roller carried thereby. Fig. 3 is a view similar to Fig. 1 of a modified form of construction.

My invention embodies a rail-gripping means to which the suspension rope or ropes are attached, and this means is adapted upon the parting of the suspension rope or ropes to engage with a rail provided therefor whereby to hold the cage suspended and prevent dropping thereof. I may employ a rail 1, as shown, in which the side faces of the rail are plain. In the form of construction shown in Fig. 1 I employ a pair of gripping-arms 3 3′, which are pivoted on top of cage 4 at one corner thereof, these arms having somewhat hook-shaped outer ends which project beyond the cage and lie at opposite sides of the rail 1. In these projecting ends of the arms are journaled rollers 5, which are eccentrically mounted, as seen in Fig. 2. The arms 3 3′ from their point of pivot diverge, and pivotally connected to the inner ends thereof are links 6, attached at their other ends to a block 7, which normally abuts against the outer end of a cylindrical casing 8, secured on top of the cage 4. This casing is provided at its inner end with an opening through which is passed the suspension rope or cable 9, that passes down under pulley 10, mounted on top of the elevator-cage. This suspension rope or cable is attached to the block 7, and arranged between this block and the inner end of the casing, within said casing, is a stiff coil-spring 11, which when the rope or cable parts forces the block 7 away from the casing, thus spreading the inner ends of the pivoted arms 3 3′ and throwing rollers 5 5 into engagement with the sides of the rail 1. These rollers being eccentrically hung in the arms, they will tighten against the rail immediately after engaging the same. It is necessary to provide means for holding the arms in their spread position, and to this end I employ a rack 12, pivoted to the arm 3′ and working through the arm 3, and this latter arm carries a pawl 14 to engage with said rack.

In Fig. 3 the same form of gripping-arms is employed, as well as the same means for holding these arms spread; but instead of using the single spring and the block to which the cables or ropes are attached I provide clevises 15 at the ends of the arms 3 3′, connecting to these clevises one end of springs 16, normally expanded, with their other ends attached to sockets 17, carried by the cage. In this case two suspension ropes or cables are employed for the cage, and these ropes or cables are passed under pulleys 18 and attached either to the ends of the arms or to the clevises. On the parting of the ropes or cables the retraction of the springs 16 throws the gripping-rollers 5 5 into engagement with the rail 1 in the same manner as aforedescribed.

In the different constructions it will be observed that the principle of operation is the same—namely, the moving of eccentrically-mounted rollers into engagement with a rail disposed in the elevator-well—and it will be apparent, therefore, that various changes may

be made in the details of construction without departing from the general spirit of my invention.

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

In a device of the type set forth, the combination with the elevator-cage, the vertical rail of the elevator-well and the suspension means, of a pair of gripping members movably mounted in and extending over one corner of said cage, on each side of the rail, means carried within the said members adapted to engage the rail, spring means secured to the cage and to the gripping members and adapted to force the latter into engagement with the rail, means for retaining said members in engagement with the rail, said suspension means having connection with said gripping members whereby on the breaking thereof the gripping members will be forced into engagement with the rail.

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

JOSEPH NAMECHE.

Witnesses:

S. F. McComb,

Frank Morris.