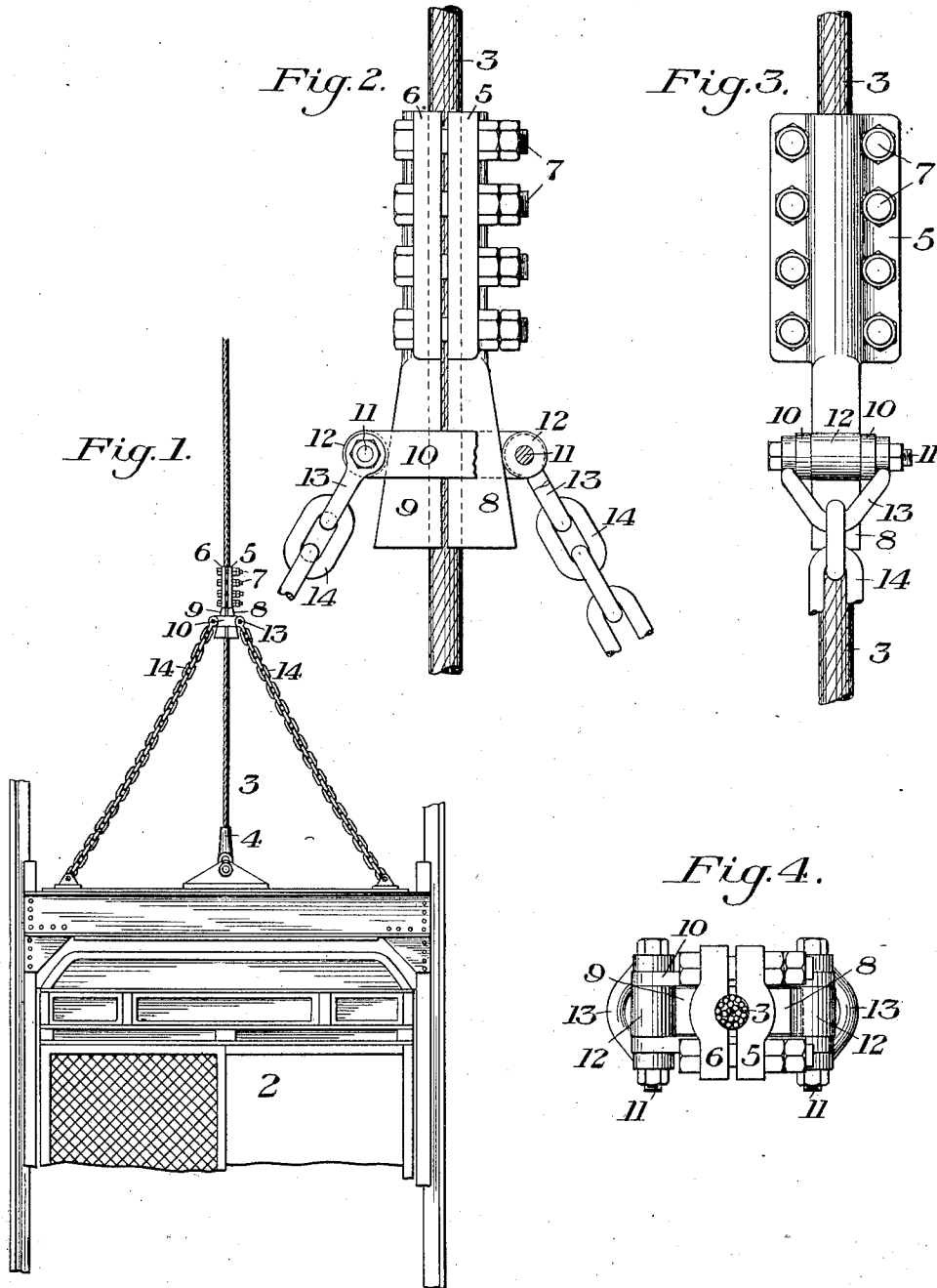


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AUTOMATIC SAFETY CATCH FOR ELEVATORS.
APPLICATION FILED SEPT. 17, 1910.

1,002,947.

Patented Sept. 12, 1911.



WITNESSES
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AUTOMATIC SAFETY-CATCH FOR ELEVATORS.

1,002,947.

Specification of Letters Patent. Patented Sept. 12, 1911.

Application filed September 17, 1910. Serial No. 582,559.

To all whom it may concern:

Be it known that I, ALEXANDER WALLACE, of Herminie, in the county of Westmoreland and State of Pennsylvania, have invented a new and useful Improvement in Automatic Safety-Catches for Elevators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a portion of an elevator showing one form of my improved device in connection therewith. Fig. 2 is a front view on a larger scale of the catch. Fig. 3 is an end view thereof, and Fig. 4 is a plan view.

This invention relates to a safety catch and is designed to provide a cheap, simple and efficient device of this character.

It is well known to those familiar with the art, that the elevator cable usually parts at a point slightly above the connection to the cage.

The object of my invention is to provide a safety catch which may be attached to the lifting cable of an elevator above the cable connection to the cage, and connected to the elevator in such a manner that if the said cable should part between the catch and its connection to the elevator, the load will be supported from the cable through the medium of the catch and its connection to the cage.

I am aware that it is old to provide a connection from the cable to the cage from a point above the main connection between the cable and the cage and which is arranged to support the cage if the cable should part between said connection and the connection between the cable and the car. In all previous devices, however, this member was rigidly clamped to the cable and would in time become loose, so that when the device was brought into use by the parting of the cable, instead of supporting the cage, it would slide over the cable and drop off from the end thereof.

The particular object of my invention therefore, is to provide a device which will be clamped to the cable by means of the load thrown on said device when the cable parts, and only at such time.

The precise nature of my invention will be best understood by reference to the accompanying drawings, which will now be

described, it being premised, however, that various changes may be made without departing from the spirit and scope of my invention as defined in the appended claims.

Referring to the accompanying drawings, the numeral 2 designates an elevator cage, 3 the hoisting cable having at its end a socket 4 which is connected to the cage 2. Connected to the cable 3 at a suitable distance above the socket 4 are the members 5 and 6, which I have shown as being connected by means of bolts 7. These bolts are merely drawn tight enough to retain the members 5 and 6 in connection with the cable so that they will support the safety chains hereinafter described. Connected to the lower end of these members 5 and 6 are wedge and clamp members 8 and 9, respectively, which are surrounded by a yoke comprising the straps 10, bolts 11, and the rollers 12 which are supported on the bolts 11 and lie between the straps 10.

13 are clevises which are connected to the bolts 11, and to which are connected the safety chains 14, the other ends thereof being connected to the cage 2. As shown in Fig. 1 of the drawings, the chains 14 are slack and the cage is supported from the cable through the medium of the socket 4.

If the cable 3 should part between the wedge members 8 and 9 and the socket 4, the chains 14 will immediately be drawn taut by the load of the cage, which will draw the yoke over the clamp members 8 and 9, and rigidly clamp them against the cable to prevent the cable from slipping through the catch. The whole load of the cage will then be supported from the cable through the medium of the wedges 8 and 9 and the connecting chains 14.

The advantages of my invention result from the provision of a safety catch which will be clamped against the cable by means of the safety chains and thereby prevent the slipping of the cable through the catch. Further in the provision of anti-friction rollers which will permit the yoke to pass along the clamps to the greatest extent before the load is supported by the clamps, thereby jamming the clamps around the cable.

It will readily be understood by those familiar with the art, that this catch is not only adaptable to elevator supporting cables, but can readily be used in connection with

any cable which is arranged to lift or support a load from its end.

I claim:—

1. In a safety device for lifting cables, 5
having means to connect the cable to the load, a catch connected to the cable, a vertically sliding member supported on the catch, and connections between said member and the load, said movable member being 10
arranged to be moved by said connections to clamp the catch to the cable to support the load thereby if the cable should part between the catch and the load; substantially as described.

2. In a safety device for lifting cables, 15
having means to connect the cable to the load, a clamp having two members connected to the cable, a wedge member integral with one of the clamping members, a movable member supported by the wedging 20
member and arranged to coact therewith to clamp the cable between the two clamp members, and means connecting the movable member to the load; substantially as 25
described.

3. In a safety device for lifting cables, having means to connect the cable to the load, a pair of stationary wedges clamped to the cable, a yoke supported on said wedges, and 30
a connection between the yoke and the load; substantially as described.

4. A safety catch for elevators, comprising a lifting cable, a socket connected to the end of the cable and the elevator car, a 35
clamp connected to the cable above the said socket, said clamp having a wedge member on each side of the cable, a yoke supported by said wedge members and arranged to

move thereon, and a plurality of chains connecting the yoke and the elevator car 40
and arranged to draw the yoke along the wedges to clamp the cable between the wedges if the cable should part below said wedges; substantially as described.

5. A safety catch for elevators, comprising a lifting cable, a socket connected to the end of the cable and the elevator car, a clamp secured to the cable above said socket, said clamp having a wedge member on each 45
side of the cable, a yoke supported by said wedge members and arranged to move thereon, anti-friction rollers on said yoke arranged to engage the inclined surfaces of the wedges, and a plurality of chains connecting the yoke and the elevator car and 55
arranged to draw the yoke along the wedges to clamp the cable between the wedges if the cable should part below said wedges, so that the elevator car is supported by the cable through the medium of the wedges and 60
chain; substantially as described.

6. A safety catch for elevators, comprising a lifting cable, means for connecting the cable to the car, a clamp comprising a plurality of stationary wedge members 65
clamped to the cable, a yoke surrounding said wedges and supported thereby, and a connection between the yoke and the car, substantially as described.

In testimony whereof, I have hereunto set 70
my hand.

ALEXANDER WALLACE.

Witnesses:

MICHAEL E. DODDS,
GEORGE COLES.