J. T. WORLEY.

Safety-Cars.

No. 147,215. Patented Feb. 3, 1874.

Fig. 1.

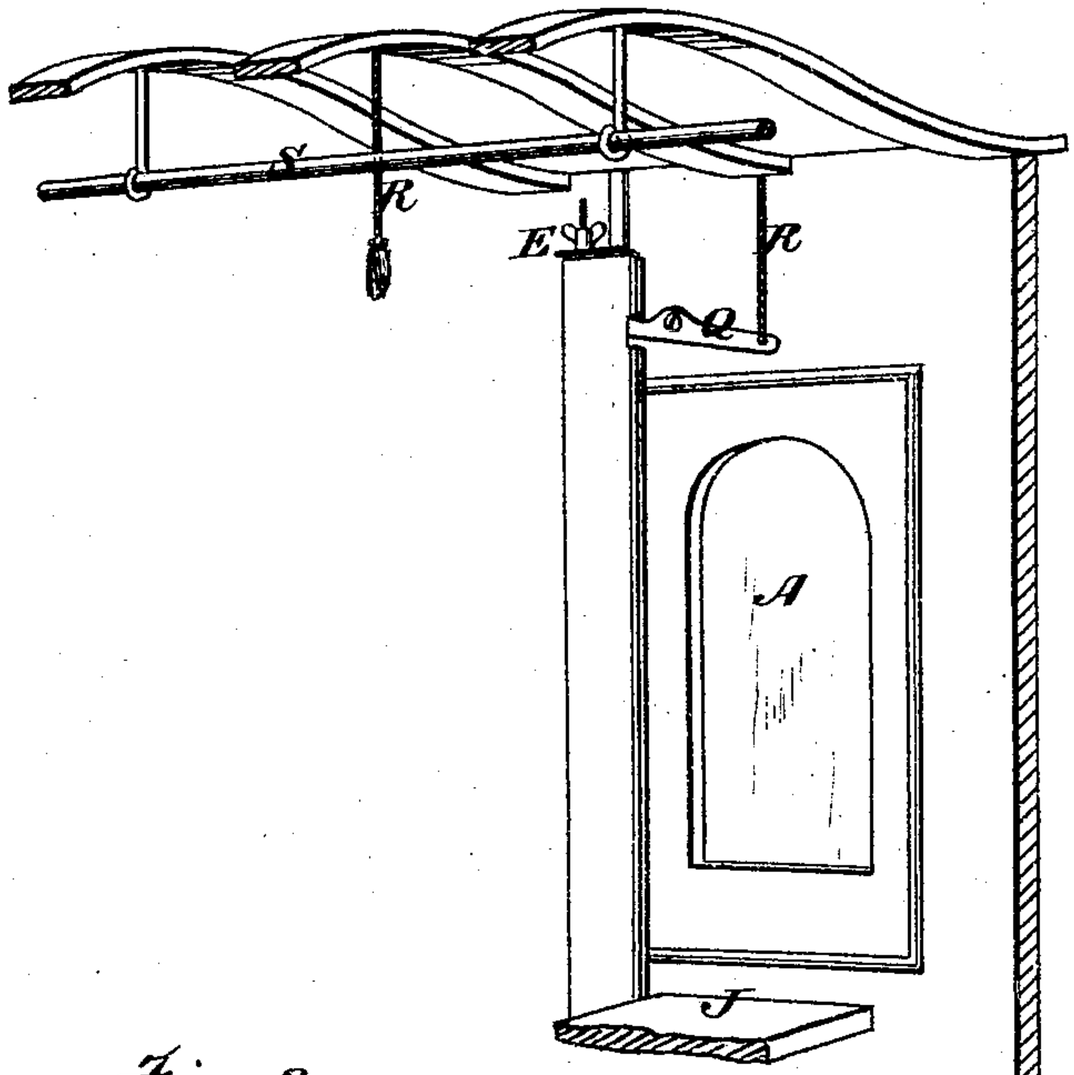
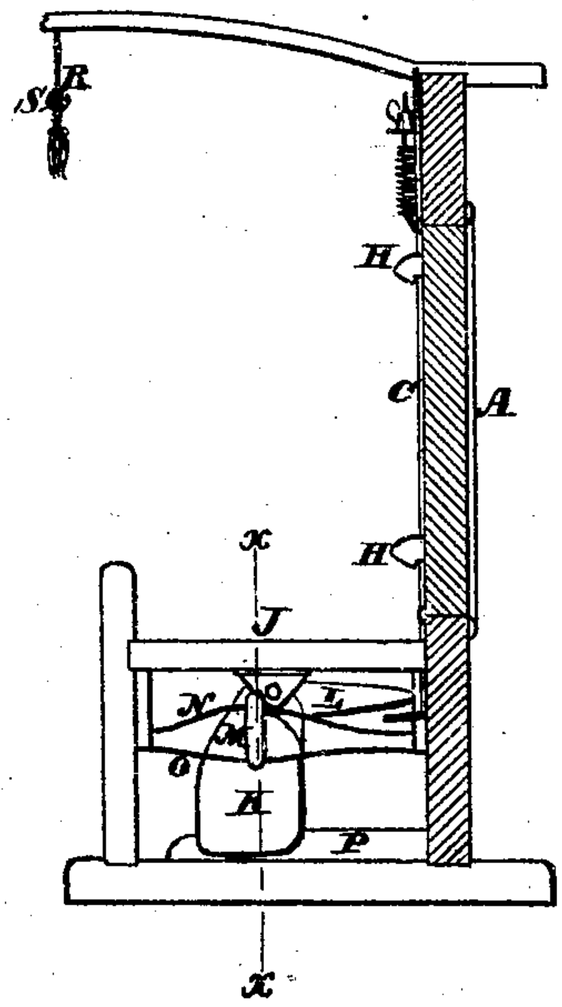
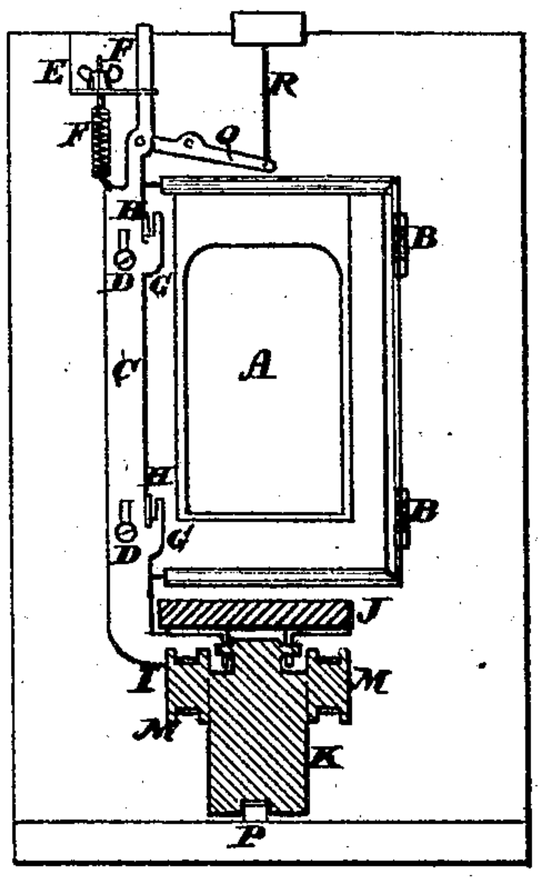


Fig. 2.

Fig. 3.





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UNITED STATES PATENT OFFICE.

JAMES T. WORLEY, OF CLEVELAND, OHIO.

IMPROVEMENT IN SAFETY-CARS.

Specification forming part of Letters Patent No. **147,215**, dated February 3, 1874; application filed October 10, 1873.

To all whom it may concern:

Be it known that I, JAMES T. WORLEY, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Safety Passenger-Cars for Railways; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a portion of a railway-car in perspective, showing the arrangement of the safety devices upon the interior. Fig. 2 is a transverse vertical section of one side of the car, showing a seat and part of the safety devices in elevation; and Fig. 3 is a transverse section taken in the line *x x*, Fig. 2.

Similar letters of reference in the accompanying drawings indicate the same parts.

My invention has for its object to provide railway-passenger cars with a quick and easy means of exit in case of accident; and it consists in certain improvements upon the safety passenger-car, for which Letters Patent of the United States were granted to me December 26, 1871, numbered 122,208. In said patent, the car is described as provided with spring doors or windows, adapted to open outward automatically when the car is suddenly stopped or accidentally displaced. The means employed for this purpose are a weighted latch-bar upon the inside of the car, for holding the door closed until an accident swings the weight and releases the door, so that it shall swing open for the passengers to pass through.

My present improvements consists, first, in the method of arranging the weight and holding it in place until swung by the displacement or sudden stoppage of the car; secondly, in the provision of means for opening the doors or windows by hand from the interior of the car; thirdly, in adapting the rod or rods under the roof of the car to be moved longitudinally for opening the doors or windows in case of the accident known as "telescoping." It consists, lastly, in the construction of various parts, as I will presently describe.

In the accompanying drawings, A is a door or window, hinged to the side of the car by means of the spring-hinges B, so as to swing outward. C is the sliding bolt or bar, attached to the inside of the car by the screws and slots D, so that the notches in its edge shall engage the catches H in the swinging edge of the window or door. The upper end of the bar is guided in a bracket, E, also secured to the car, and an adjustable spring, F, connected to the bracket, serves to hold the bar upward to engage the catches.

These several features are embraced in my former patent, and do not, therefore, form the subject of my present invention.

Q is a lever, connected to the bar C and pivoted to the side of the car above the door. A cord, R, attached to the long arm of the lever, passes through suitable guides up the side of the car, and thence along the roof to the center thereof, from which point it depends downward within reach of the passengers, after passing through the longitudinal rod S at the top of the car. By pulling upon this cord, the lever is operated to depress the latch-bar and release the catches, so that the door may be swung open by its springs. The rod S extends throughout the length of the car and over its platforms, and, in case of telescoping, is moved longitudinally in its hangers or guides to pull upon the cord and release the doors, as above described. K is a weight, pivoted to suitable brackets under the seat J, so as to swing transversely of the car. This weight is provided with a lateral arm at or near its top, which extends toward the side of the car, and over a ledge or arm, I, formed upon the lower end of the latch-rod, so as to reach under the seat. M M are ears, cast or otherwise formed upon opposite sides of the weight, and grooved upon their upper and lower sides to receive the flat friction-springs N O, secured to the seat or to posts depending therefrom. The object of these friction-springs is to control the weight and prevent it from swinging by the ordinary motion of the car. A groove is formed in the bottom of the weight to receive a cleat, P, which is firmly secured to the floor of the car longitudinally of the seat. This cleat and groove also steady the weight and prevent its lateral movement in case of concussion. Whenever the car is tipped over at an angle sufficient for the weight to swing away from its side, the arm L strikes the ledge or arm I of the latch-bar and draws

the latter downward to release the catches H and allow the door or window to open upon that side of the car which is uppermost.

If desired, parallel rods S may be arranged under the roof of the car to receive the operating-cords, and to render their operation more certain in case of accident. In place of the rod S, a rope may be arranged under the roof of the car and connected to the cord R, so that a pull upon it shall operate the cord to release the door or window.

Having thus described my invention, what I claim is—.

1. The friction-springs N O, combined with the weight K to prevent it from swinging by the ordinary motion of the car, substantially as described.

2. The swinging weight K L, provided with a groove on its under surface, in combination with the cleat P and latch-bar C, as and for the purpose set forth.

3. The combination of the pivoted lever Q and its operating-cord R with the latch-bar C, as and for the purpose set forth.

4. The sliding rod S, having the operating-cord R, in combination with the pivoted lever Q and latch-bar C, substantially as and for the purpose described.

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Witnesses:
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