No. 687,818. Patented Dec. 3, 1901.

J. CRAIG.

CAR FENDER.

(Application filed Aug. 8, 1901.)

(No Model.)

Fig. 1.

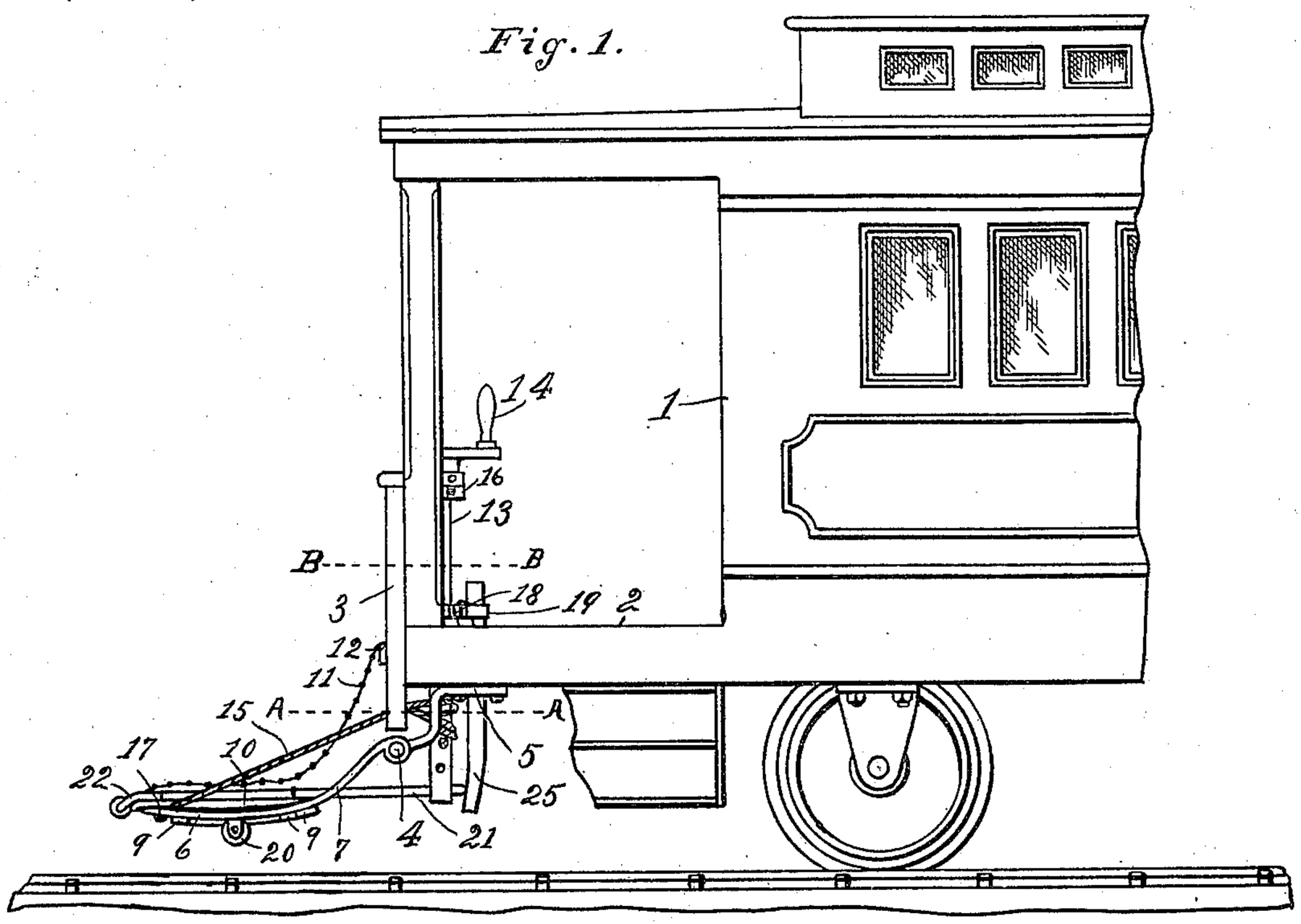


Fig. 3.

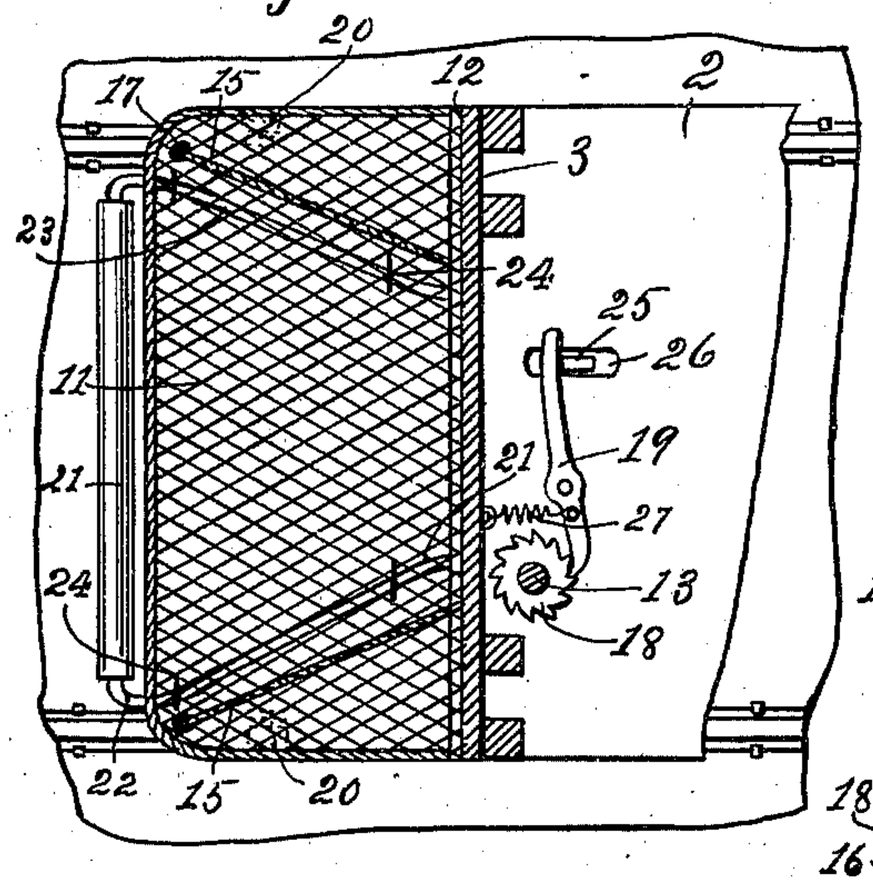


Fig. 2.

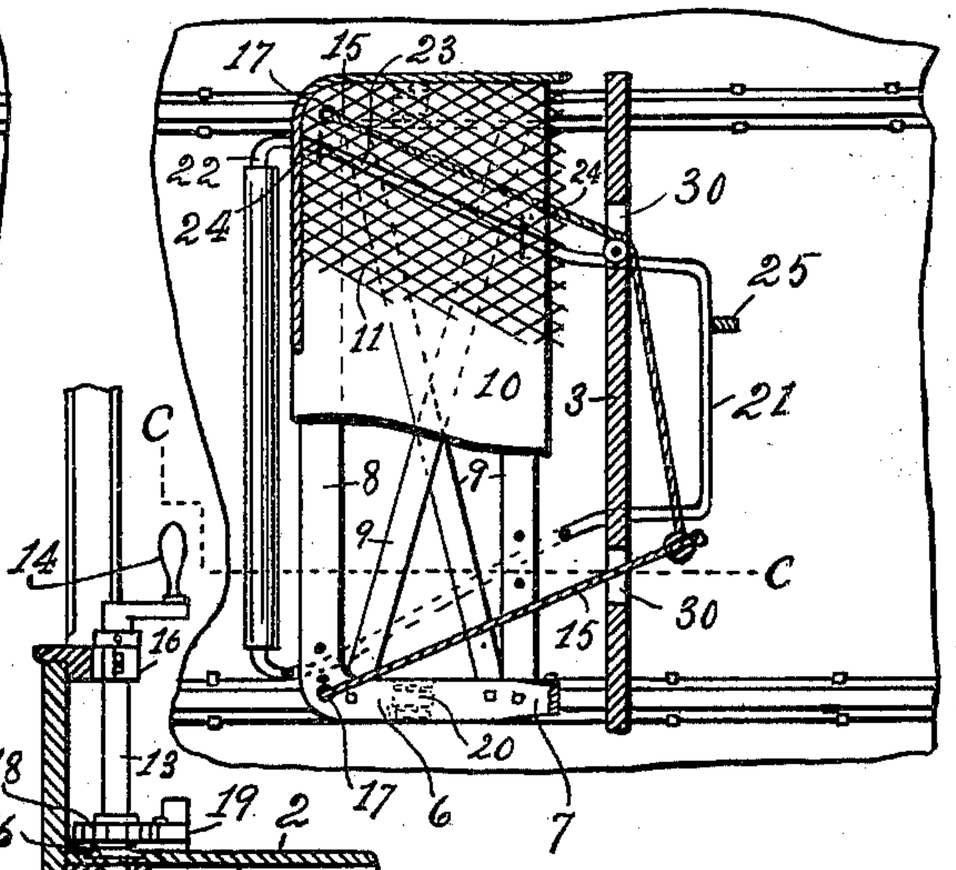
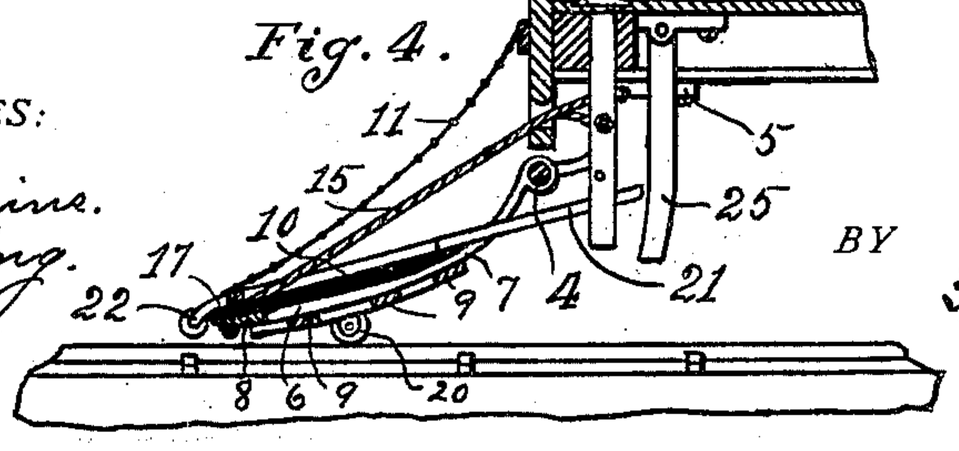


Fig. 4.



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CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 687,818, dated December 3, 1901.

Application filed August 8, 1901. Serial No. 71,401. (No model.)

To all whom it may concern:

Be it known that I, JOHN CRAIG, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification.

My invention relates to improvements in car-fenders, the object of my invention being to provide a car-fender which shall be cheap and simple in construction and operation, which may be operated by the motorman to drop the fender, and which also will automatically operate to drop the fender upon striking a person on the track as the car advances.

My invention therefore resides in the novel construction, combination, and arrangement of parts for the above ends hereinafter fully specified, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation of the front portion of a car equipped with my device. Fig. 2 is a horizontal section on the line A A of Fig. 1, parts being broken away. Fig. 3 is a similar section on the line B B of Fig. 1; and Fig. 4 is a vertical section on the line C C of Fig. 2, the fender being dropped.

Referring to the drawings, 1 indicates the body of the car, 2 being the platform thereof for the motorman. Beneath the lower edge of the dashboard 3 are provided bearings 4, supported by brackets 5 from the under side of the platform, and in said bearings is pivotally mounted the frame 6 of the fender, said frame being yoke-shaped in form and comprising downwardly-curved sides 7 and a front piece 8, connecting said sides. Said sides are suitably braced by cross-pieces 9, as shown, and upon said frame is secured an apron 10, of flexible material, as rubber, adapted to receive without injury the body of a person caught by said fender. Over the frame 6 and apron 10 extends a shield 11, of network, the upper edge thereof being secured, as shown at 12, to the front of the dashboard at a considerable height above the bearings of the fender-frame.

It is necessary in a fender of this character that means should be provided for dropping the fender on approaching a person on the track liable to be run over, which means should be under the control of the motorman, and it is also necessary that additional means should be provided whereby the fender may be automatically dropped upon striking a person on the track. I have endeavored to supply the above mechanisms in as cheap and simple a form as possible, since cheapness is an important element in the successful introduction of car-fenders by street-railroad companies. Such mechanism is as follows: 13 represents a vertical shaft mounted in upper and lower bearings 16 and having at its upper end a handle 14, whereby said shaft may be rotated by the motorman. Upon the lower end of said shaft are wound two cords or ropes 15, which pass through holes 30 near the lower edge of the dashboard and are then extended forwardly and attached to the fender near its front edge, as shown at 17. By this means said fender can be raised upon its bearings by rotating the vertical shaft, thus winding the ropes thereon. Said vertical shaft carries thereon a ratchet-wheel 18, engaged by the spring-actuated pivoted dog 19, so that when the shaft has been rotated to a sufficient extent to raise the fender to the desired elevation the dog 19, engaging one of the ratchet-teeth, will resist the unwinding of said ropes. When an accident appears to the motorman to be imminent, he will push forward with his foot the outer end of said dog and will release it from said ratchet-wheel, whereupon the fender will immediately drop so that its front edge is close to the ground. In this position said front edge will be protected from actual contact with the ground by means of two rollers 20, mounted on the sides of the fender in suitable position to run upon the car-tracks.

In order to provide for the automatic dropping of the fender upon coming into contact with a person upon the track, there is provided a trigger 21, comprising a rubber-covered cross-bar 22, extending somewhat in advance of the front edge of the fender and having sides 23, which slide through suitable bearings 24 upon the fender-frame, the rear edge of the trigger contacting with the lower arm of a vertical lever 25, said lever extending through a hole 26 in the platform of the

car and its upper arm abutting against the rear side of the outer end of the dog 19. Contact of a person with the cross-bar of the trigger will move the trigger rearwardly, thereby pushing the lower arm of the vertical shaft rearwardly and releasing the dog from the ratchet-wheel and allowing the fender to drop. A spring 27 returns the dog to its normal position in engagement with the ratchet-wheel.

An important feature of my invention resides in the position of the rollers 20. These rollers being placed on the fender at a considerable distance from the front edge thereof instead of at the front edge, as heretofore, permit the front edge to drop close to the ground, thus insuring that no part of the person is caught between the fender and track.

I claim—

In a car-fender, the combination, with the fender proper, pivotally supported at its rear end, of the vertical shaft, the ropes wound around said shaft and attached to the front end of the fender to raise the same, means for rotating said shaft to wind the ropes thereon, a ratchet-wheel on said shaft, a pivoted dog engaging said ratchet-wheel, a vertical lever the upper portion of which engages said dog, and a trigger extending in front of the fender and slidable thereon, the rear end of said trigger engaging the lower portion of the lever, whereby a rearward movement of the trigger actuates the lever to disengage the dog from the ratchet-wheel, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN CRAIG.

Witnesses:

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