

No. 720,502.

PATENTED FEB. 10, 1903.

J. P. THOM.
CAR FENDER.

APPLICATION FILED JULY 2, 1902.

NO MODEL

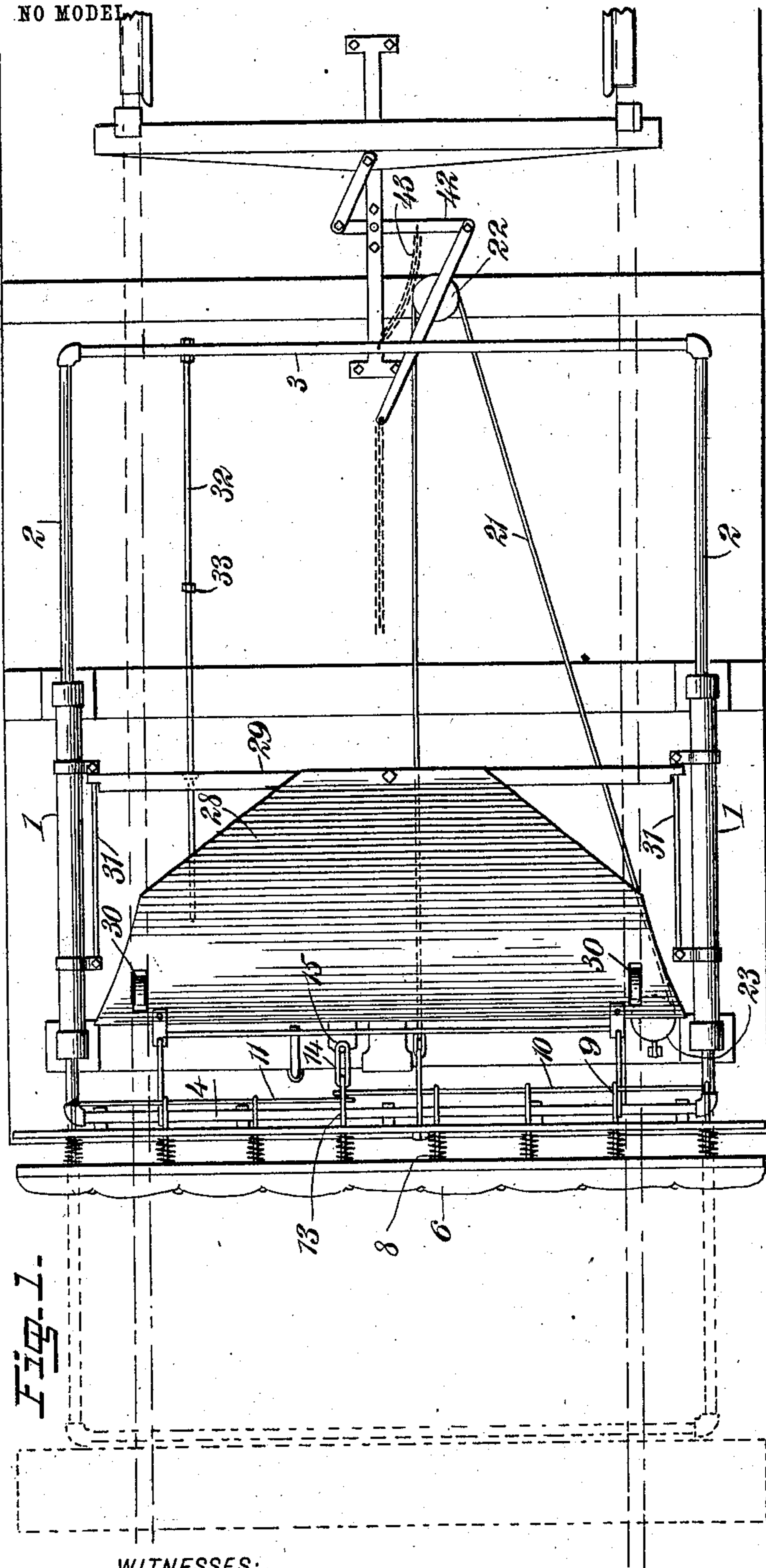


Fig. 1.

WITNESSES:

James F. Duhamel.
C. R. Ferguson

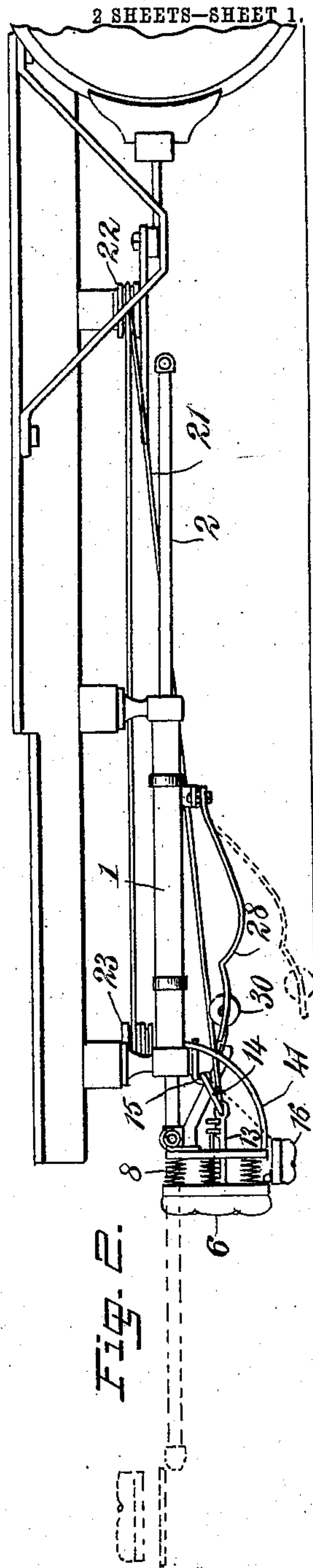


Fig. 2.

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No. 720,502.

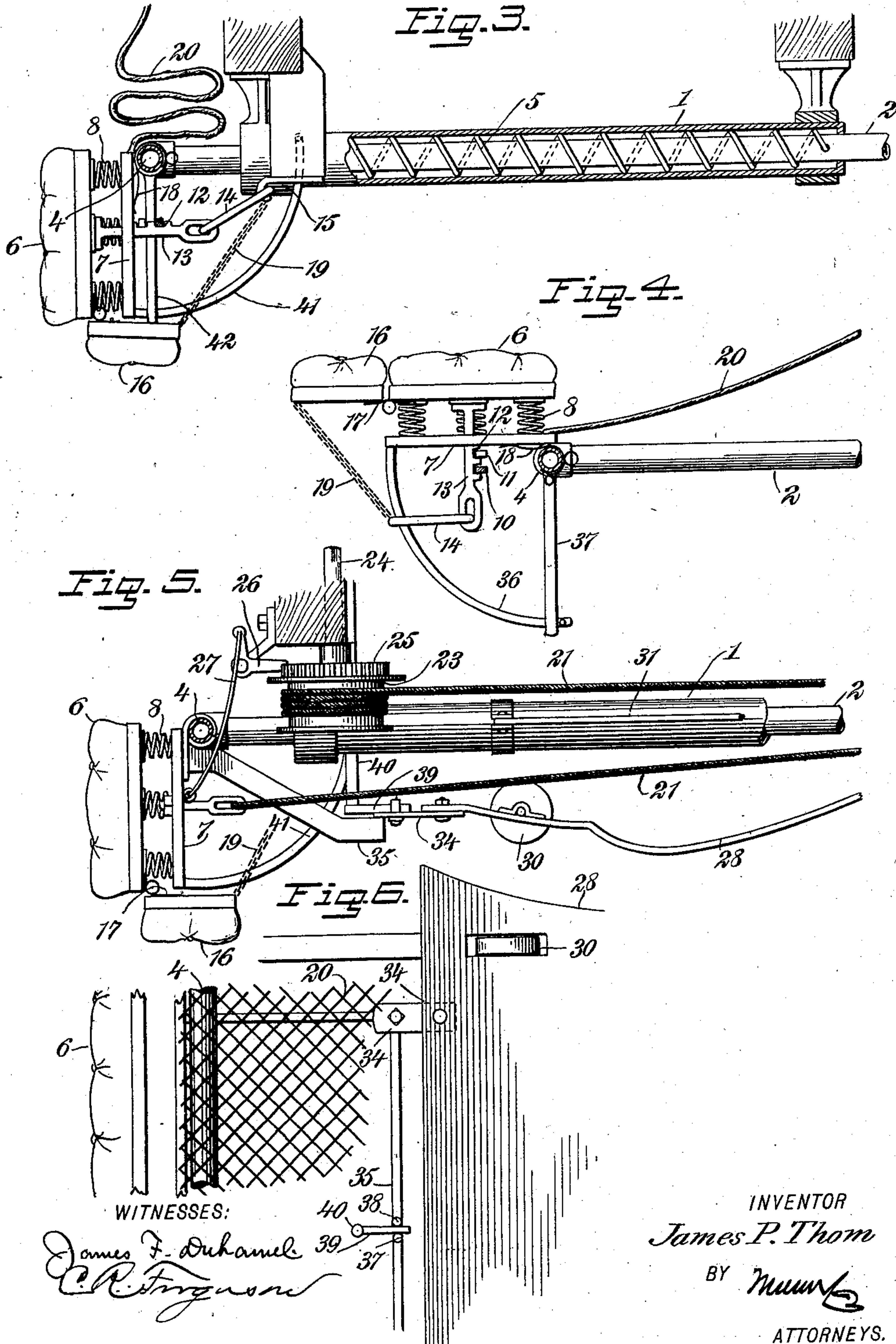
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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

JAMES PAUL THOM, OF NEW ORLEANS, LOUISIANA.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 720,502, dated February 10, 1903.

Application filed July 2, 1902. Serial No. 114,055. (No model.)

To all whom it may concern:

Be it known that I, JAMES PAUL THOM, a citizen of the United States, and a resident of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Car-Fender, of which the following is a full, clear, and exact description.

This invention relates to improvements in fenders for street-cars, the object being to provide a fender of simple construction that will automatically move to safety position upon coming in contact with a person or object, and, further, to provide a wheel-guard that may be instantly lowered should the fender not strike a person or object and therefore not be thrown outward.

I will describe a car-fender embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of a car-fender embodying my invention and looking upward. Fig. 2 is a side elevation thereof. Fig. 3 is a side elevation, partly in section, showing the fender in its inner position. Fig. 4 is a detail showing the fender in its outer or safety position. Fig. 5 is a side elevation illustrating a mechanism for moving the fender to its inner position, and Fig. 6 is a fragmentary plan view showing the wheel-guard and the safety-net employed.

Referring to the drawings, 1 designates guide-tubes arranged on the under side of the car-platform, and movable relatively to these tubes is a frame comprising the side bars 2, the rear cross-bar 3, and the front cross-bar 4. The side bars 2 are movable through the guide-tubes 1, and they are forced forward by means of springs 5, coiled around the side bars within the guide-tubes, the said springs being connected at their rear ends to the side bars and at their front ends to the guide-tubes, so that when the device is released the springs have a drawing action on the fender-frame.

Mounted to swing on the front cross-bar is a fender-cushion 6, which is mounted on a base-board 7, and between the cushion and

the base-board are coil-springs 8. Pins 9 are extended from the inner side of the cushion loosely through openings in the base-board 7, and the rear ends of these pins are connected to bars 10 11, which extend from opposite sides of the frame and normally are designed to engage in keeper-notches 12, formed in the holding-bar 13, extended rearward from the base-board 7. A link 14, loosely connected to the holding-bar 13, is designed for engagement with a hook 15, attached to the car-platform.

Pivoted to the forward end of the cushion 6 is a supplementary cushion 16, which when the fender is in its inner or normal position will be held at substantially right angles to the cushion 6, and consequently above the railway-track. When released, however, the cushion 16 will be moved into parallelism with the cushion 6 and form practically a continuation thereof, and this swinging motion will be imparted, by means of the spring-connections 17, between the cushions 6 and 16. When the cushion 6 is released, it will be swung upward relatively to the frame by means of springs 18, connected to the front cross-bar 4 and engaging with the base-board 7. It may be here stated that the cushions when released have a movement forward and an upward sweeping movement, thus causing the same to catch and elevate a person contacting therewith. The cushion 16 is held in its normal position, as indicated in Fig. 3, by means of a chain 19, which extends from said cushion and is connected to the link 14. A safety-netting 20 is connected at its lower end to the base-board 7 and at its upper end to the dashboard of the car.

A resetting device that may be operated by a motorman to draw the fender to its innermost position consists of a rope or cable 21, connected at one end to the base-board 7 and then extended rearward around a pulley 22, attached to the under side of the platform, and thence forward to a winding-drum 23, which has a shaft 24 extended upward through the platform and designed to be provided with a handle or engaged by a key, so that the drum may be turned. On the upper side of the drum 23 is a ratchet 25, engaged by the horizontally-disposed member of a pawl 26, and

from the upper or vertically-disposed member of this pawl a rod 27 extends to a connection with the base-board 7.

Arranged underneath the platform is a wheel-guard to prevent persons from coming in engagement with the wheels should the cushions not be raised. This wheel-guard consists of a resilient metal plate 28, which at its rear upper edge is swiveled to a cross-bar 29, so that the guard may swing downward and also have a lateral swing to accommodate it to turning curves or the like. The forward end of the guard is provided with rollers 30 to engage upon the car-tracks or upon the road-bed. The cross-bar 29 is mounted to slide on guide-rods 31, attached to the guide-tubes 1, and extended from the rear cross-bar 3 of the frame is a push-rod 32, which passes loosely through an opening in the cross-bar 29, and on this push-rod 32 is a collar 33 for engaging with the rear side of said cross-bar.

The wheel-guard is held normally in raised position by means of plates 34, mounted to swing on the forward end of the guard and designed to engage with brackets or arms 35, extended downward and rearward from the front bar 4 of the frame. The two plates 34 are pivotally connected to the ends of a rod 36, and on this rod 36 are upwardly-extended pins 37 38, between which a finger 39 on a vertical rod 40 engages. This rod 40 extends upward to the platform of the car and is designed to be engaged by a key or other suitable device whereby a motorman may shift the rod to move the plates 34 out of engagement with the brackets 35. This need not be operated by the motorman, however, unless the fender should fail to work or move to its outermost position.

In operation should the cushion 6 come in contact with a person or other object it would be moved slightly rearward, so that the link 14 will drop off the hook 15, and then the springs 5 will quickly force the fender forward, the cushions moving to horizontal positions, as before described. Of course during this movement the brackets 35 will be released from the plates 34, permitting the wheel-guard to drop. The fender-cushions are held from lateral play or swinging by means of curved rods 41, attached to the base-board 7 and movable through openings in hangers 42, depending from the front cross-bar 4.

When the fender is released, as above described, the collar 33 by coming into engagement with the cross-bar 29 will slide the wheel-guard forward, so that the forward end of the wheel-guard will be extended somewhat underneath the cushions or to a point near the forward end of the car-platform.

As the brake-shoe-operating lever 42 is connected by a chain 43 to the sliding frame, it is obvious that upon a forward movement of the frame the brake will be set, and it may also be set in the ordinary manner.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. A car-fender, comprising a frame, guides on the under side of the car in which said frame is movable, springs for forcing the frame forward, a cushion mounted to swing on the forward end of said frame from a substantially vertical to a substantially horizontal position, and an automatically-released means for holding the fender in its innermost position.

2. A car-fender, comprising a frame, guide-tubes on the under side of the car through which the side members of the frame are movable, springs in said guide-tubes for moving the frame forward, a cushion mounted to swing on the forward end of the frame, a cushion having swinging connection with the first-named cushion, and automatically-operated means for releasing the fender.

3. A car-fender, comprising a frame, guides on the under side of the car-platform in which said frame is movable, springs for moving the frame forward, a base-board mounted to swing on the forward end of said frame, springs connected at one end to the front bar of the frame and at the other end to said base-board, a cushion supported by said base-board, springs arranged between the cushion and base-board, a cushion mounted to swing on the first-named cushion, spring connections between the two cushions, and automatically-released means for holding the fender in its innermost position.

4. A fender comprising a frame, guide-tubes on the under side of the car-platform in which the side members of the frame are movable, springs for moving the frame forward, a cushion mounted to swing on the forward end of the frame, automatically-released means for holding the fender in its rearmost position, and a vertically-swinging wheel-guard held in its uppermost position by the fender and permitted to drop upon a forward movement of the fender.

5. A car-fender, comprising a frame, guide-tubes on the under side of the car-platform in which the side members of the frame are movable, springs for moving the frame forward, a cushion mounted to swing on the forward end of the frame, automatically-released means for holding the frame in its innermost position, a swinging wheel-guard held in its uppermost position by means of the fender and released upon a forward movement of the fender, and means carried by the fender for moving said guard forward.

6. A car-fender comprising a frame movable along the under side of the car, springs for moving the frame forward, a cushion mounted to swing on the forward end of the frame, a rod extended rearward from said cushion, a link attached to said rod, a hook on the car for engaging with said link, a winding-drum, a rope or cable connection between said winding-drum and the cushion, a ratchet-wheel on said drum, a pawl engaging the said ratchet-

wheel, and a connection between a member of the pawl and the cushion.

7. A car-fender comprising a frame movable along the under side of the car-platform, 5 springs for moving the frame forward, a cushion mounted to swing on the forward end of the frame, a netting connected to said cushion and to the car-dashboard, and automatically-released means for holding the fender in its 10 innermost position.

8. A car-fender, comprising a frame, guide-tubes on the under side of the car through which the side members of the frame are movable, springs in said guide-tubes engaging at 15 one end with the side members of the frame and at the other end with the tubes, a cushion mounted on the forward end of the frame, an automatically-released connection between the cushion and the car, a wheel-fender, a 20 cross-bar on which said fender is swiveled,

guide-rods on the guide-tubes and on which said cross-bar is movable, a push-rod extended from the rear portion of the fender-frame through an opening in the cross-bar, and a collar on the push-rod for engaging with said 25 cross-bar.

9. A fender comprising a frame movable along the underside of a car, means for forcing the frame forward, and cushions attached to said frame whereby they will be moved forward with the forward movement of the frame 30 and will have an upward swinging sweep.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES PAUL THOM.

Witnesses:

J. A. MASQUÈRE,
JNO. H. COLLINS.