

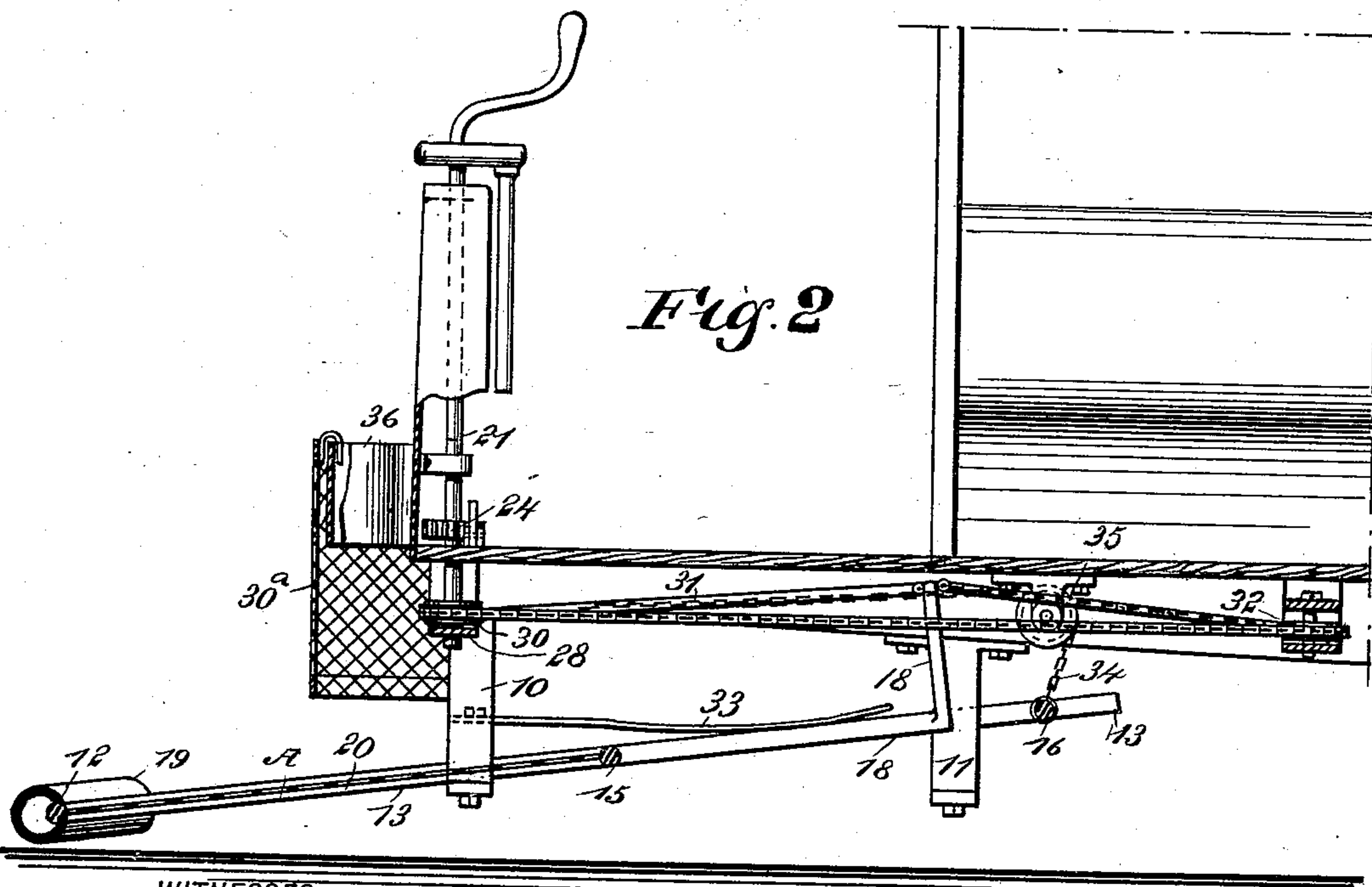
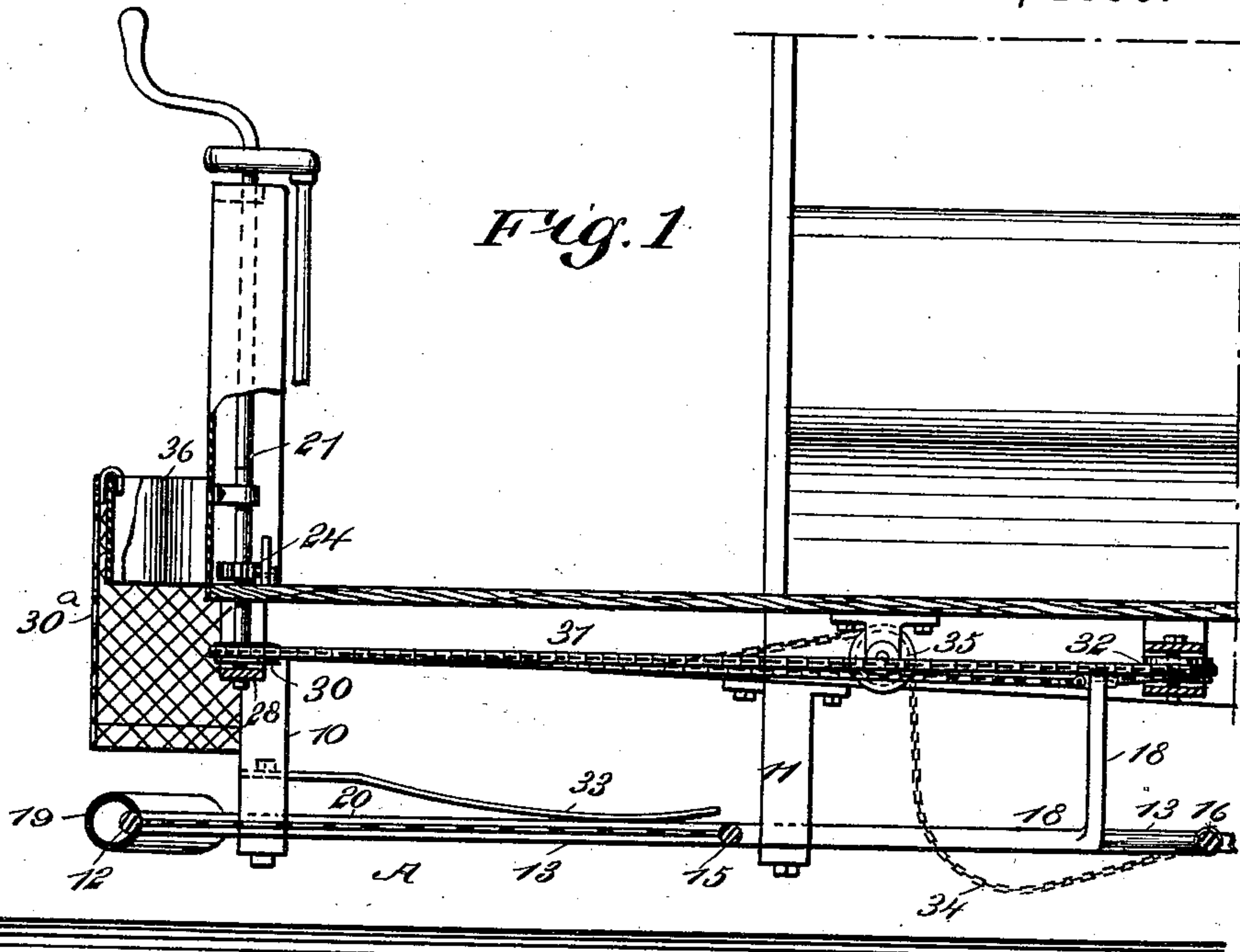
(No Model.)

J. W. McKINNON.
CAR FENDER.

2 Sheets—Sheet 1.

No. 547,522.

Patented Oct. 8, 1895.



WITNESSES:

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J. W. McKinnon
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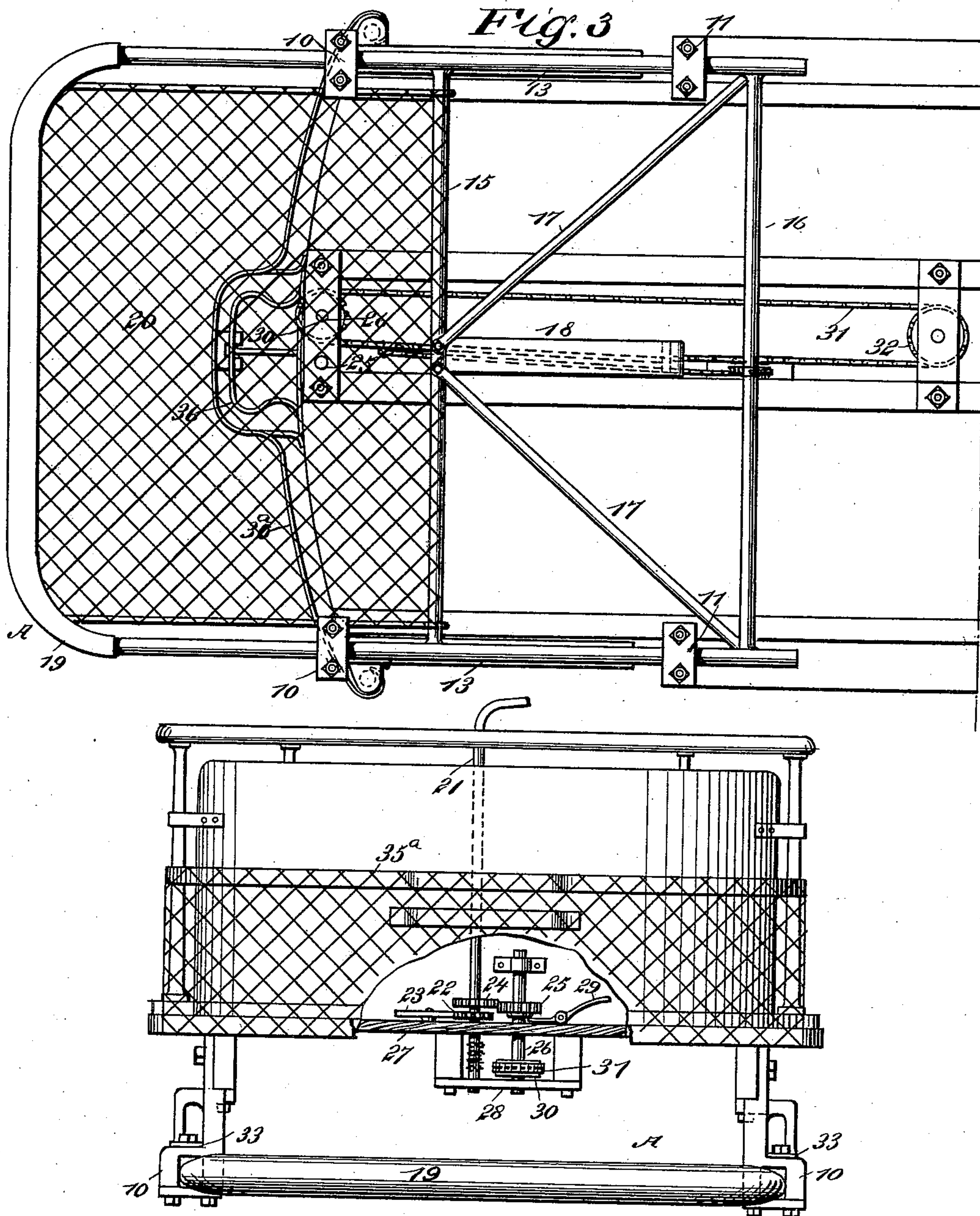
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WITNESSES:

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Fig. 4

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UNITED STATES PATENT OFFICE.

JAMES W. MCKINNON, OF NEW YORK, N. Y.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 547,522, dated October 8, 1895.

Application filed December 21, 1894. Serial No. 532,615. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. MCKINNON, of New York city, in the county and State of New York, have invented a new and Improved Car-Fender, of which the following is a full, clear, and exact description.

My invention relates to an improvement in car-fenders; and it has for its object to provide a car-fender of exceedingly simple, durable, and economic construction, and one in which the fender may be attached to a car without in the least interfering with any of the attachments applicable to a car-body when the car is electrically propelled or utilized as a cable-car.

A further object of the invention is to construct the fender in such a manner that it may be expeditiously and conveniently carried beneath the platform of the car, and when so placed the outer edge of the fender will be substantially in line with the buffer, if one is used, and whereby, also, the fender may be quickly projected outward from beneath the car-body to a receiving position; and, furthermore, whereby when the brake is applied on the car the fender will be automatically carried outward to extend beyond the front of the car, and, furthermore, whereby, if it is found desirable, the fender may be disconnected from the brake mechanism and readily placed in connection therewith.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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

Figure 1 is a vertical longitudinal section through a portion of the front platform of a car and the improved fender, illustrating the latter as in its inner position or beneath the car. Fig. 2 is a section similar to Fig. 1, in which the fender is shown as projected forward beyond the front of the car and in position to receive an object. Fig. 3 is a bottom plan view of that portion of the car and the fender shown in Figs. 1 and 2, and Fig. 4 is a front elevation of a car-platform and the improved fender.

In carrying out the invention, at each side of the platform and beneath the same, preferably,

two hangers 10 and 11 are secured. Each hanger is provided with a slot therein, the slot of the rear hanger being usually of much greater length than the forward hanger. These hangers are preferably placed one at each end of the step leading to the platform.

The fender A consists of a frame comprising a front section 12, two side bars 13, and two cross-bars 15 and 16, one being located at or near the ends of the side bars and the other about intermediate of their length; and in addition to the side and cross bars the frame of the fender is ordinarily made to comprise braces 17, extending from a point at or near the junction of the rear cross-bar with the side bars to a point at or near the center of the intermediate cross-bar, from which point a bracket 18 is rearwardly projected, the said bracket being preferably of an angular shape, as shown in Fig. 1.

The front bar 12 of the fender is ordinarily and preferably covered by a cushion 19 of any approved character, and between the front bar and intermediate side bar a bed 20 is formed, made of woven wire or other desirable material, said bed being supported by the intermediate cross-bar and the front bar of the fender. The bed does not extend to the side bars of the frame, since a sufficient space must be left adjacent to said side bars to permit the bars to move in the hangers 10 and 11.

A brake-shaft 21 of the usual formation is located adjacent to the dashboard in the ordinary way, being provided with a ratchet-wheel 22, engaged by a pawl 23. The said brake-shaft is further provided with a gear 24, which is firmly attached thereto, and this gear is made to mesh with a second gear 25, located on a shifting shaft 26, adjacent to and parallel with the brake-shaft. The shaft 26 extends both above and below the platform of the car and is journaled at its lower end in the same bracket 28 as the brake-shaft. The gear 25 on the shifting shaft 26 may be raised so as to carry it out of engagement with the gear 24 on the brake-shaft through the medium of a foot-lever 29 or its equivalent 7 and beneath the car the shifting shaft 26 is provided with a sprocket-wheel 30, secured thereon, which receives an endless link belt 31, the said belt being carried rearwardly beneath the car and over and around a sprocket-wheel 32, preferably at the rear of the platform. The vertical member of the bracket

18 is attached to this chain 31, and thus when the brake is applied the shaft 26 will be rotated in a direction to force the fender outward, the fender being held normally in engagement with the base or bottom of the slots in the hangers 10 and 11 by means of springs 33, which springs may be attached to the forward hangers and have bearing upon the side bars of the fender-frame between the two hangers at each side of the car.

A chain 34, cable, or the equivalent is preferably secured to the rear cross-bar 16 of the fender-frame and this chain is passed upward over a pulley 35, secured to the bottom of the car and to an attachment with the endless chain 31. The length of the auxiliary chain 34 is such that when the fender has been carried outward to substantially its full outer position the endless chain 31 will so draw upon the auxiliary chain 34 as to elevate the rear end of the fender-frame and depress the forward end of the fender, thereby preventing any object from slipping beneath the fender, and compelling any object in its path to be caught on the fender and supported by it.

It will thus be observed that whenever the brake is applied the fender will be forced outward and downward to the receiving position, and when the brake is released the fender will be carried to its normal position under the car, except when the gear on the shifting shaft 26 of the fender is disconnected from the gear on the brake-shaft; but if in practice it is found desirable the fender may be carried or permitted to remain normally in its outer position. A guard 30^a, of wire or an equivalent material, is usually placed upon the front of the dashboard, being removably suspended from the side banisters or supports for said board and from the buffer 36.

I desire it to be distinctly understood that it is not necessary to carry the fender to an outer position in order that its forward end may be dropped. It is sometimes desirable that the fender should remain in an inner position with its outer end substantially flush with the dashboard—as, for example, in the matter of cable cars. When the fender is to be so maintained the hangers will be moved farther rearward than shown in the drawings, so as to permit the fender when in this position to be forced downward to the rails. The guards at the front of the car will prevent persons from being injured by the buffer, and may extend well down to the fender. Furthermore, the fender may be provided with a rear guard, if in practice it is found desirable.

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

1. A car fender, a manipulating shaft capable of being controlled from the brake shaft, a shifting connection between the car fender and shifting shaft, and means, substantially as shown and described, for depressing the forward end of the fender when in its outer position, as and for the purpose set forth.

2. A car fender, a shifting shaft, adapted to be controlled from the brake shaft, the said brake shaft, an endless chain operated from the shifting shaft and connected with the fender, and a connection between the rear of the fender and the said endless chain, whereby the fender is depressed when in its outer position, as and for the purpose specified.

3. The combination, with a car, hangers projected from the said car, having vertical openings therein, a shifting shaft, an endless chain operated from said shaft, a brake shaft, and a shifting connection between the brake shaft and shifting shaft, of a fender held to slide in the said hangers, the rear portion of the said fender being connected with the said endless chain, and a cable connection between the endless chain and the rear of the fender back of its direct connection with the endless chain, as and for the purpose set forth.

4. The combination, with a car, of a car fender having sliding movement beneath the car, the rear end of which fender is capable of being elevated and its forward end depressed, a brake mechanism, a connection between the brake mechanism and the fender, operating to slide the latter, and a connection, substantially as described, whereby when the fender is substantially at its outer limit its rear end will be elevated, as and for the purpose set forth.

5. In a car fender, the combination of a fender mounted to slide in guides under the car, and means actuated by the movement of the brake staff for moving said fender in its guides, substantially as set forth.

6. In a car fender, the combination of a tilting fender mounted to slide in guides under the car, and means actuated by the movement of the brake-staff for tilting the fender and moving the same along said guides, substantially as set forth.

7. In a car fender, the combination of a tilting fender slidably mounted in guides under the car, means for moving said fender forward in its guides and means for automatically tilting said fender and holding the same tilted when moved in its guides, substantially as set forth.

8. In a car fender, the combination of a tilting fender slidably mounted in guides under the car, means actuated by the movement of the brake-staff for moving said fender in its guides, and means actuated by the movement of the brake-staff for tilting the fender when moved forward in its guides, substantially as set forth.

9. A car fender comprising a fender frame having side bars adapted to slide in guides and a bed secured to the front and back part of the frame and having its lateral edges spaced apart from the said side bars, substantially as set forth.

JAMES W. MCKINNON.

Witnesses:

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