

(No Model.)

R. P. WILLIAMS.

COMBINED AUTOMATIC SAFETY BRAKE AND WHEEL GUARD FOR
STREET CARS.

No. 554,762.

Patented Feb. 18, 1896.

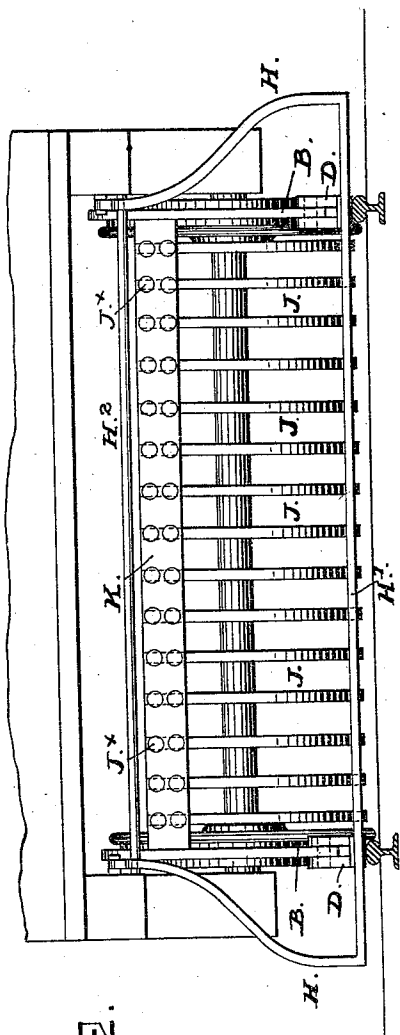
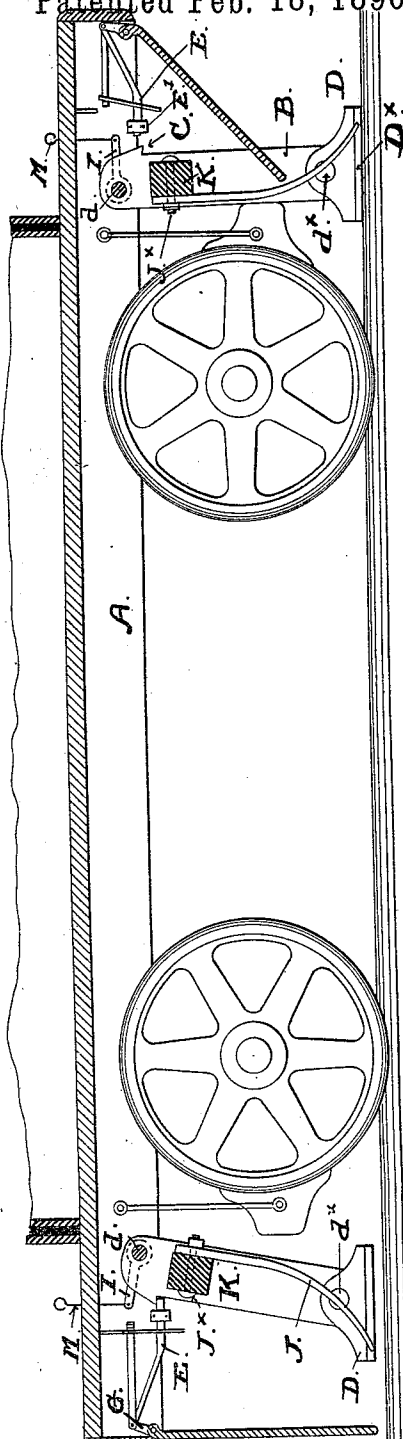


FIG. 2.

FIG. 1.



WITNESSES

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UNITED STATES PATENT OFFICE.

R. P. WILLIAMS, OF GRANT'S PASS, ASSIGNOR OF ONE-HALF TO JOHN P. SHERIDAN, OF ROSEBURG, OREGON.

COMBINED AUTOMATIC SAFETY-BRAKE AND WHEEL-GUARD FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 554,762, dated February 18, 1896.

Application filed June 5, 1895. Serial No. 551,758. (No model.)

To all whom it may concern:

Be it known that I, R. P. WILLIAMS, a citizen of the United States, residing at Grant's Pass, in the county of Josephine and State of Oregon, have invented a certain new and useful Combined Automatic Safety-Brake and Wheel-Guard for Street-Railway Cars, of which the following is a specification.

My invention relates to certain improvements in wheel-guards or safety appliances for the front of railway-cars; and the same consists in the described construction and combination of parts producing a guard or appliance by which a brake is instantly and automatically applied in case of a person falling in front of the car and being struck by the guard, as hereinafter fully explained, and pointed out in the claims, reference being had to the accompanying drawings, forming a part of this specification.

In the said drawings, Figure 1 is a longitudinal section of a car-body and the automatic guard applied to both ends. Fig. 2 is a front view of one of the ends.

To the longitudinal beams A A of the car and in front of the wheels are loosely pivoted the hanging brake-bars B B, composed preferably of flat metal bars and swinging loosely on the pivots. A notch C is formed in the edge of the bar near the head, and to the lower end is attached by a pivot d^x a jointed brake-block D, having a detachable shoe or face D^x . These bars hang in direct line with the faces of the rails, and the brake blocks or shoes are so hung that their heavier part is in front of the pivots d^x , so that when the bar is allowed to drop down on the rail the shoe will pinch and be pressed against the rail as the bar assumes a vertical position. The momentum and weight of the car acting on the bar at such time cause the shoe to bite the track with great force. Should the momentum of the car, however, be so great as to carry the brake-bars beyond the vertical, they will be arrested by coming in contact with the brake-blocks of the car-wheels.

Each bar B is held up out of action by a sliding bolt E, movable in a guide E' and engaging a notch C on the front of the bar, and the two bolts E E are connected by short arms

or levers G G to an open frame composed of the rigid side bars, H H, the bottom bar, H', and the rod or shaft H², on which the side bars are set to swing loosely. This part, which I have termed the "trigger-frame," hangs loosely across the front of the car-body in close relation to the track, and by its backward movement it draws the bolts and releases the two brake-bars B B at the same moment. This frame is of sufficient width to take in both rails, and it is hung so delicately that the slightest blow will cause it to fly backward and move the bolts.

Fig. 1 shows at one end the position of the parts when out of action and at the other end the position at the time of operation when the shoes engaging the rails on their respective sides have stopped the car.

In order to set the brakes again, a jointed lever I engaging with the pivot of the brake extending at right angles is connected to a rod M, that passes up through the floor of the car within easy reach of the operator, and by lifting up the lever the brake and trigger-frame will again assume their normal positions, as shown at the left-hand side of Fig. 1.

The wheel-guard consists of a series of curved spring-bars J J connected by bolts J^x J^x to a transverse beam K, that is joined at the ends to the brake-bars. These bars J are curved outwardly and extend nearly to the face of the track, as their function is to take up the body of a person falling in front of the car and carry it along, keeping it away from the wheels until the progress of the car is arrested. This guard acts in conjunction with the brakes, and being attached to the bars B it is raised and lowered by the same mechanism or means employed in operating it.

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

1. The automatic safety device for railway-cars herein described consisting of the vertical brake-bars pivoted to the car-body, the slide-bolts engaging notches on the brakes and the swinging trigger-frame to which the bolts are attached, substantially as described.

2. The combination of the pivoted brake-bars carrying brake-shoes the rigid cross-

beam between the bars, the curved fingers at-
tached to the said cross-beam, catches adapted
to hold up the brake-bars, and the swinging
trigger-frame to which such catches are con-
5 nected suspended in front of the curved fin-
gers and in close relation to the track, sub-
stantially as described.

In testimony that I claim the foregoing I
have hereunto set my hand and seal.

R. P. WILLIAMS. [L. S.]

Witnesses:

C. W. M. SMITH,
CHAS. E. KELLY.