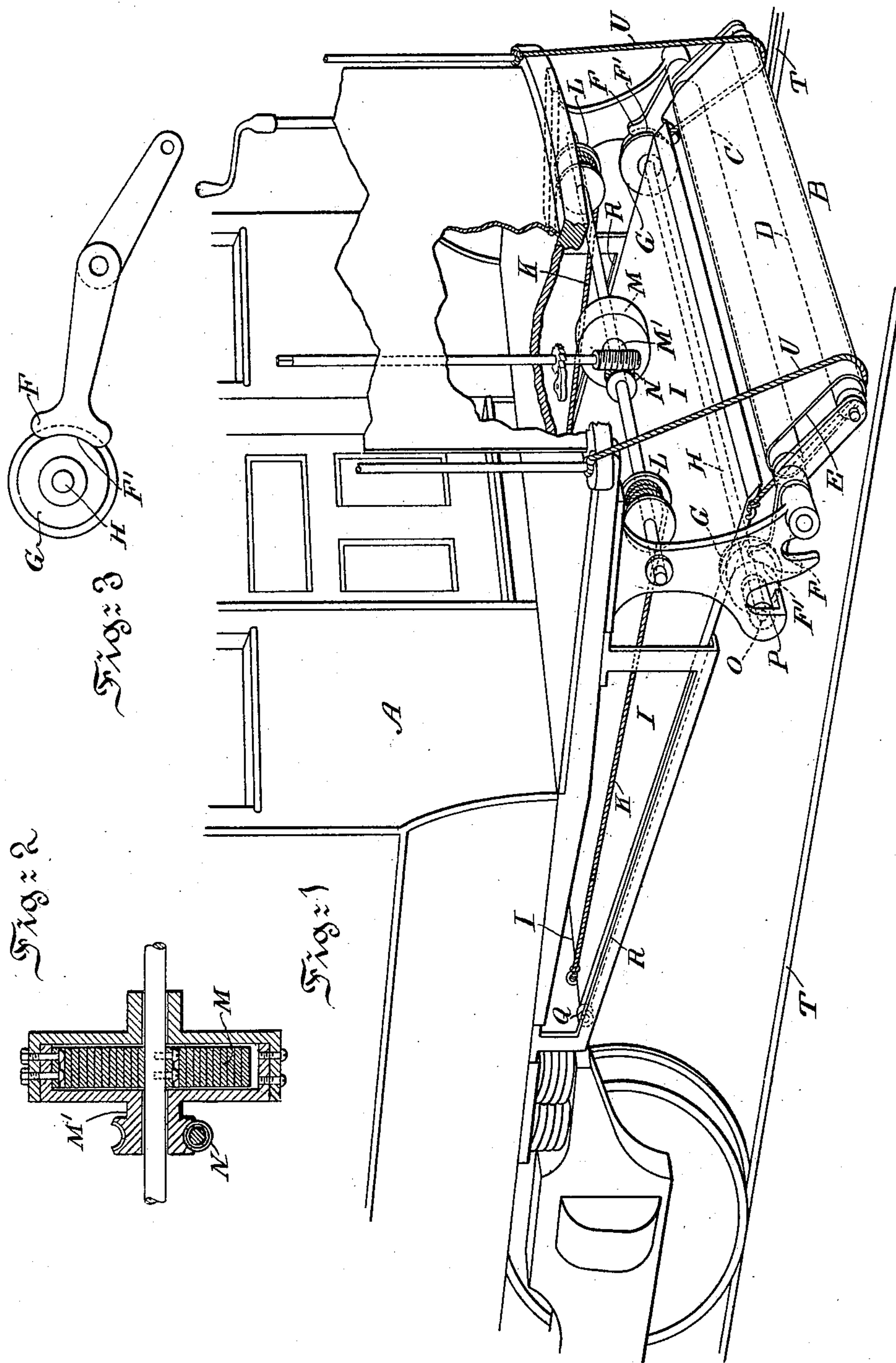


(No Model.)

F. FIECHTER.
STREET CAR FENDER.

No. 552,281.

Patented Dec. 31, 1895.



Witnesses:
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UNITED STATES PATENT OFFICE.

FREDERICK FIECHTER, OF PHILADELPHIA, PENNSYLVANIA.

STREET-CAR FENDER.

SPECIFICATION forming part of Letters Patent No. 552,281, dated December 31, 1895.

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To all whom it may concern:

Be it known that I, FREDERICK FIECHTER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Street-Car Fenders; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to the construction of a fender for preventing injury to persons by street-railway cars; and it consists in a device whereby when a person is in the way of a car it is prevented from running over him, and a movable platform is extended from the car under him and he is carried thereon until the car is stopped.

My device consists essentially of a guard slightly in front of the body of the car, hinged at or near the top, preferably having two rollers, one at the top and one at the bottom, and an endless belt or apron over these rollers, and a movable platform under the car, resting at its forward end against supports connected to the guard, and so holding the guard in position, held in forward tension and adapted to be thrust forward by a spring, and adapted when released by the movement of the guard when in contact with a person to be projected in front of the car close to the ground and under the person, and at the same time, by friction on the apron, to cause that to move upward on its forward side and assist in the lifting of the person from the ground.

Referring to the accompanying drawings, Figure 1 is a perspective view of the front of a street-car with my fender attached. Fig. 2 is a detail of the shaft extending across the movable platform, a sleeve thereon carrying the spring whereby the platform is impelled and the worm-gear by which the spring is wound up. Fig. 3 is a detail of a wheel on the shaft across the platform and a sector extending from the guard, by the connection between which the platform and guard are held in po-

sition and by the displacement of which the platform is released.

A is the body of the car.

B is a guard in front of the car, consisting of a frame supporting two rollers C D, at or near the upper of which it is pivoted, on which rollers is the endless belt or apron E.

F F are sectors of circles attached to the guard B and engaging, in a slight flattening or depression F', with wheels G G on a shaft H extending across the movable platform I, which movable platform is held in forward tension by cords K K extending from the drums L L adapted to be rotated by the spring M on the sleeve M' when wound up by the worm-gear N.

O is an extension of the shaft H, (a corresponding extension on the other side of the car not shown,) engaging in a pocket P, (similarly on the other side,) and supporting the front end of the platform, the back end of which is supported by projection Q running in rail R and similarly on the other side.

S is a guide (similarly on the other side) engaging with the shaft projection O when the movable platform is released by pressure on the guard and resultant displacement of the sectors F F, and directing the front of the platform promptly downward and the wheels G G into proper connection with the rails of the track T T.

U U are guard-ropes extending from the front of the platform under the guard B to a point on the car, adapted when extended by the forward movement of the platform to prevent a person thereon from being thrown off sidewise.

When a person falls in front of a car he is first struck by the lower roller of the guard, which is thus pushed backward. The backward movement of the lower edge of the guard gives an upward movement to the sectors connected to it, and these by this movement release the movable platform, which, thrust forward by the spring and guided downward as to its front, engages its wheels with the rails of the track and passes under and in contact with the endless belt or apron on the guard, imparting to it a movement which tends to carry up onto it a person bearing against it.

The movable platform, continuing its forward movement, close to the ground, passes under the person, aided therein by the continued movement of the apron, and carries the person on in safety until the car stops. The forward movement of the movable platform is caused, as stated, by cords or chains K K on the drums L L rotated by the spring M in the sleeve M'. After an accident has happened the tension of the spring is relaxed to allow the return of the parts to their normal position, when the spring is again wound up, using the brake-lever on the upright shaft for that purpose.

I claim as my invention—

1. A fender for street railway cars consisting essentially of a guard hinged at its upper edge, adapted to yield at its lower edge under pressure from in front and having a backward projecting arm rigidly attached thereto, and a movable platform having means whereby it is adapted to be projected with its front close to the ground in front of the car and having means whereby, normally, its front is supported and brought into bearing against the arm of the guard, supporting in position the guard and restraining the forward movement of the platform except as released by the backward movement of the guard.

2. A fender for street railway cars consisting essentially of a guard, having an endless apron, adapted to yield under pressure against an obstacle and a movable platform supported in position by and supporting in position said guard, adapted to be released by movement of the guard and having means whereby it is adapted when so released to be projected close to the ground in front of the car and to cause said apron to move upward as to its front side.

3. In a street railway car fender, in combination, a guard hinged at its top, adapted to yield at its bottom under pressure and having a backward projecting arm, a movable platform having means whereby, except when restrained, it is adapted to be projected with its front close to the ground in front of the car, and means whereby said platform is supported with its front in contact with said arm except when released therefrom by the backward movement of the guard.

4. In combination with a movable platform under a car adapted, when released, to be

projected in front of the car and a guard adapted to yield under pressure and to release the platform an endless apron upon rollers on said guard adapted to be moved thereon and upward as to the front side of said apron by the forward movement of the platform.

5. In combination with a movable platform under a car adapted, when released, to be projected in front of the car, and means adapted to release said platform, and a guard in front of the car, an endless apron upon rollers on said guard adapted to be moved thereon and upward as to the front side of said apron by the forward movement of said platform.

6. In combination with a movable platform under a car having wheels adapted to engage with the rails of the track and means whereby said platform may be projected in front of the car a guide adapted to engage with the axles of said wheels and to direct the wheels into bearing on the rails.

7. In combination with a movable platform under a car and means whereby it may be projected in front of the car and a guard having a backward-projecting arm wheels on the front of said platform adapted to engage with said projecting arm and hold said platform and guard in place and when displaced by a movement of said guard to engage with the rails of the track.

8. In combination with a movable platform under a car and means whereby it may be projected in front of the car a guard rope connected to the front of the platform and the front of the car, adapted to arrest the forward movement of the platform and, when extended thereby, to form a guard on the side of the platform.

9. In combination with a movable platform under a car adapted except as restrained by a guard, to be projected in front of the car, and a guard adapted to yield under pressure, supported in position by and supporting in position said platform and adapted upon its backward movement to release said platform, a wheel as a bearing at the point of support between said platform and said guard.

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Witnesses:

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