(No Model.)

# W. DRYDEN.

## FENDER FOR TRAM CARS.

No. 524,198. Patented Aug. 7, 1894.

Fig. 1

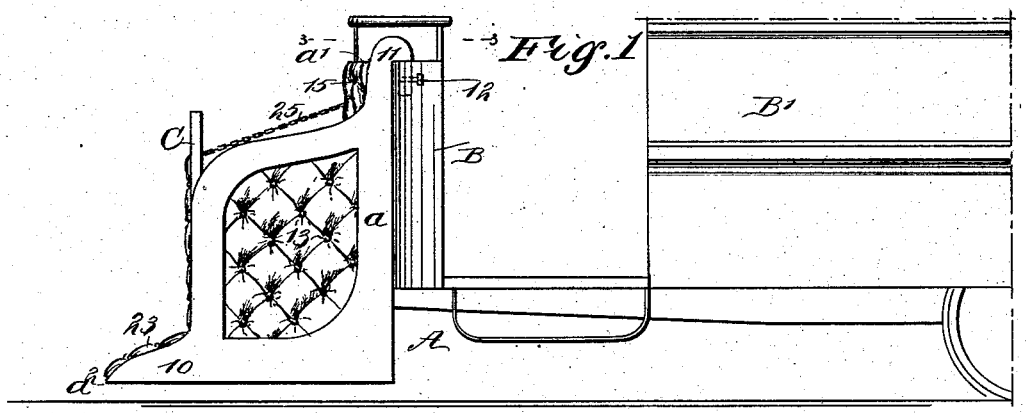



Fig. 2

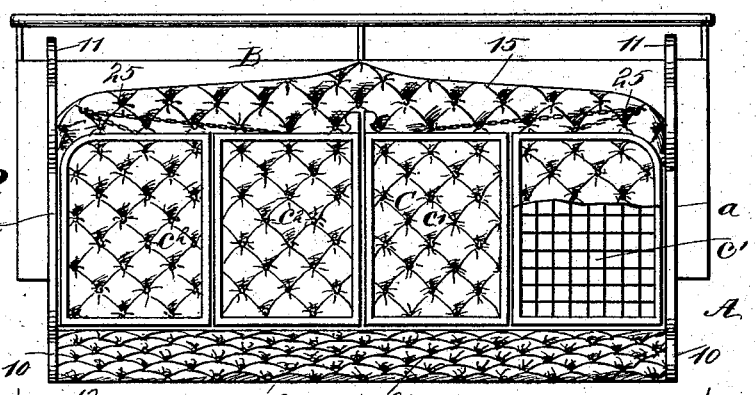



Fig. 3

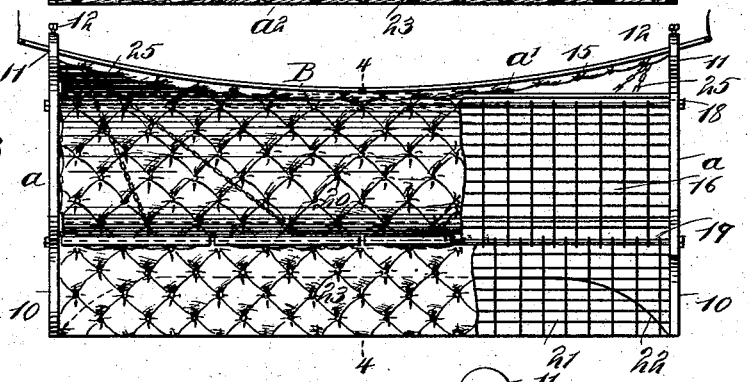
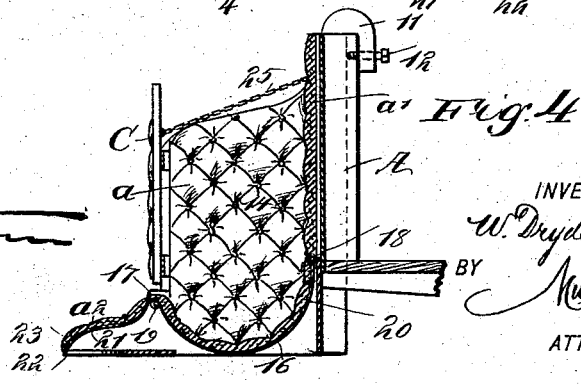



Fig. 4




WITNESSES:

J. a. Berglund

C. Sedgwick

INVENTOR

W. Dryden

BY Munn & Co

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

WILLIAM DRYDEN, OF BROOKLYN, NEW YORK.

## FENDER FOR TRAM-CARS.

SPECIFICATION forming part of Letters Patent No. 524,198, dated August 7, 1894.

Application filed November 3, 1893. Serial No. 489,904. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM DRYDEN, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Fender for Tram-Cars, of which the following is a full, clear, and exact description.

My invention relates to a fender for tram cars, or a life-guard for the same, and it has for its object to provide a guard or fender which will be of exceedingly simple and durable construction, and which may also be applied expeditiously and conveniently to the dash-board of any car.

A further object of the invention is to construct the guard or fender in such manner that when a person is struck thereby the person will be forced to fall upon the guard or fender, and in falling will be received upon padded surfaces and prevented from rolling or dropping from the fender, it being the prime object of the invention to provide a device which will receive and retain persons caught in the path of the car, receiving and retaining them in a manner which will do them no injury.

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 side elevation of a portion of a car and a side elevation of the improved fender attached thereto. Fig. 2 is a front elevation of the guard or fender, a portion of one of its gates being broken away. Fig. 3 is a plan view of the gate or fender, a portion thereof being broken away, or in section, the said figure likewise showing a horizontal section through the dash-board, taken practically on the line 3—3 of Fig. 1; and Fig. 4 is a transverse vertical section taken about centrally through the guard or fender and the dashboard of the car, the said section being indicated by the line 4—4 in Fig. 3.

In carrying out the invention the body A of the guard or fender consists of two end sections $a$, a back section $a'$, and a fender or lower forward section $a^2$. The end sections $a$, may be given any desired shape; preferably, however, they are made wider at the bottom than at the top, being provided at the bottom with a forward extension 10, the top of which is inclined or curved downward, while at the top rear portion of each end section $a$ a hook or clamp 11, is located; and the said hooks or clamps, or their equivalents, are intended to receive the dash-board B of the car B′, as shown in the drawings, and a set screw 12 may be employed to secure the clamps to the dash-board. Through the medium of these clamps 11 the entire guard is connected with the car. Each end section $a$, is provided with an upholstered panel 13 upon its outer face, and in practice, if it is found desirable, the entire outer surface of each end section may be upholstered or cushioned in any suitable manner, but in every event the entire inner face of the body portion of each end section is provided with a cushion 14, as shown in Fig. 4, or the equivalent thereof.

The back $a'$ of the guard may be made of any approved material, as for example, woven wire, or a net-work of any description, and the body portion of the back is provided upon its inner face with a cushion 15, the cushion extending from end to end, and substantially from top to bottom of the said inner face of the back section.

The bottom of the body portion A of the guard is made of woven wire, or a net-work of strong cord or wire, the woven wire or net-work bottom being designated as 16; and the said bottom is curved downward so that at its center it will be decidedly below the front lower portion or threshold 17 of the body, as shown best in Fig. 4. The net-work, or woven wire 16, is supported by rods or bars designated as 18 and 19, one of said bars being located beneath the threshold portion 17 of the body, while the other is located at the back, as is also best shown in Fig. 4; and the bottom of the body section of the guard is covered by a cushion 20, or is padded in any desired manner.

The fender portion $a^2$, extends downward and forward from the threshold 17, and is made up of a woven wire or net-work material 21, shown in both Figs. 3 and 4, said material being connected with the bar 17 and with

a foot board 22, extending between and attached to the forward extensions 10 of the end sections *a* of the body. This fender network is covered by a cushion 23, so that the entire inner surface of the guard, and likewise the entire outer surface of the fender is cushioned in a manner calculated not to injure any person that may be struck by the fender, or that may fall into the body portion of the guard.

The front of the guard is closed by a series of doors C. Four doors are illustrated as being employed in the drawings, and they are arranged in pairs, the pairs of doors being designated as $c'$ and $c^2$. One door of each set is connected with the ends of the body of the guard at their forward portions by means of spring hinges, and the inner door of each set is connected in like manner, namely, by spring hinges, with the outer door of the same set. Both of the doors are capable of opening into the interior of the body, and a center post is not used, so that when the doors are opened, which may be accomplished by gentle pressure only, immediate access is obtained to the interior or upholstered, or cushioned chamber of the body section of the guard. The doors are prevented from moving outward over the threshold 17 by chains 25, or like devices, which connect them with the back of the body section.

Thus in operation, if a person is struck by the fender section of the guard, he will fall against the doors, and the doors opening will permit him to drop upon the cushions in the interior of the body, and the person so falling will naturally roll into the bottom portion of the interior or chamber of the body, and as the said bottom is quite deep the doors will close again, acted upon by their spring hinges, without being obstructed by the body contained in the chamber, and it will thus be readily seen that in addition to the person being prevented from sustaining any injury by contact with the guard, the person will be unable to do himself damage by leaping or falling from the car while it is in motion, since for the time being he is practically imprisoned, but may be readily released by simply opening the doors, or by opening the doors himself, when the car is brought to a stand still.

Since the interior of the body section of the guard is cushioned throughout, likewise the fender, and since cushions may be, and preferably are, applied exteriorly upon the body wherever a person might strike it, the guard can not injure a person, whether he comes in contact with it at its front or at its ends. The guard may be readily removed from one end of a car and carried to the other, and as a light and durable material is contemplated in the construction of the guard it will not necessarily be heavy.

The doors C, are padded or cushioned upon their outer faces, but need not necessarily be padded upon their inner faces; and in order that the doors may be quite light they are made up of a frame, and a network body in addition to the cushions.

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

1. A safety guard for tram cars, the same consisting of a body, a fender located at the forward lower portion of the body, and spring-controlled doors or gates located above the fender and constituting the upper front portion of the body, substantially as shown and described.

2. A safety guard for tram cars, the same consisting of a body adapted for attachment to the front of a car and provided with a chamber open at the top and normally closed at the front by spring-controlled gates or doors, and a fender located at the forward lower portions of the body, the said fender being cushioned and inclined forwardly and downwardly, substantially as shown and described.

3. A life guard for tram cars, the same consisting of a body section adapted for attachment to the front of a car, said body being provided with a chamber, a threshold at the front of the chamber, spring-controlled doors or gates located above the threshold and normally closing the front of the chamber, the bottom of the chamber being below the plane of the threshold, and a fender extending forwardly and downwardly from the threshold of the chamber, substantially as shown and described.

4. In a life guard for tram cars, a body section adapted to be supported by the forward portion of the car, provided with a cushioned chamber, cushioned spring-controlled doors constituting the forward wall of the chamber, and a cushioned fender extending forwardly and downwardly from the threshold of the chamber, substantially as and for the purpose specified.

5. A life guard for tram cars, the same consisting of a body section adapted for attachment to the forward portion of a car, said body comprising a cushioned back, cushioned sides, a cushioned well-like bottom terminating at a forwardly located threshold, and a forwardly and downwardly inclined cushioned fender projected from the threshold, and cushioned spring-controlled doors normally closing the forward portion of the chamber, said doors having free inward movement, their outward movement being limited, as and for the purpose set forth.

WILLIAM DRYDEN.

Witnesses:
JOHN H. HIGGINS,
WILLIAM FALKENMAYER.