S. BRISAC & W. BARBE.

Fender for Street-Cars.

No. 205,471. Patented July 2, 1878.

Fig. 1

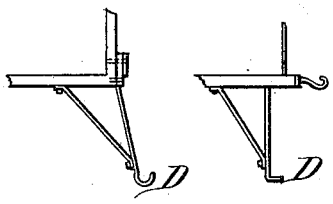


Fig. 2.

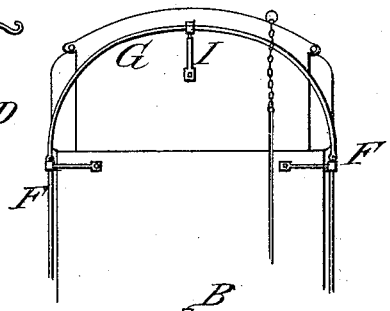
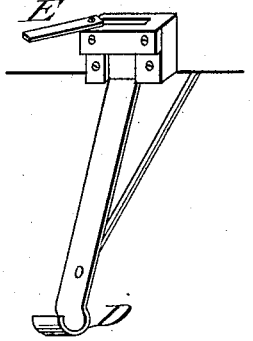


Fig. 3.



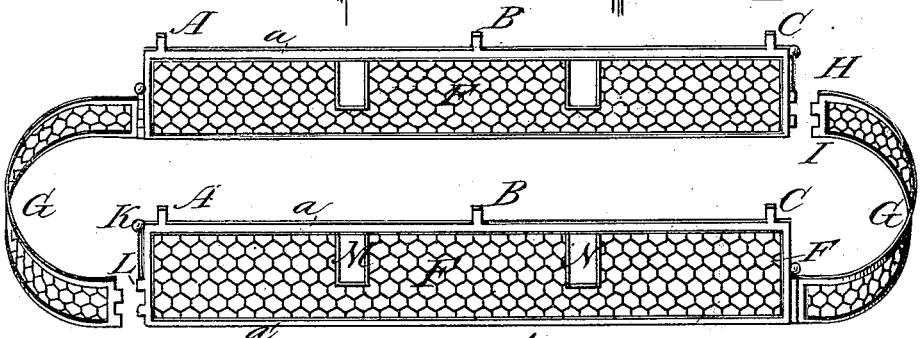


Fig. 4.

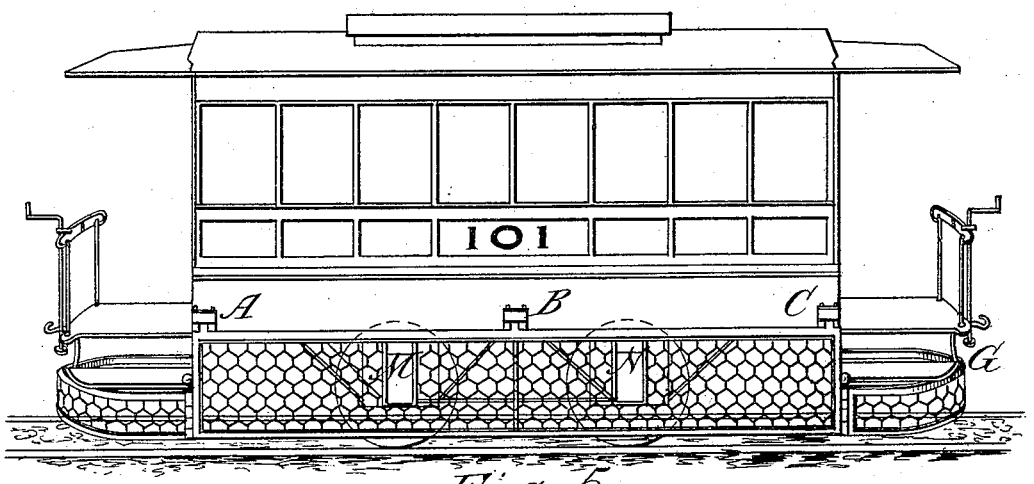


Fig. 5.

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UNITED STATES PATENT OFFICE.

SOLOMON BRISAC AND WILLIAM BARBE, OF NEW YORK, N. Y.

IMPROVEMENT IN FENDERS FOR STREET-CARS.

Specification forming part of Letters Patent No. **205,471**, dated July 2, 1878; application filed July 31, 1877.

To all whom it may concern:

Be it known that we, SOLOMON BRISAC and WILLIAM BARBE, both of the city, county, and State of New York, have invented a new and useful improvement in apparatus to prevent accidents by street-railroad or steam cars, which improvement is fully set forth in the following specification and accompanying drawings.

Our invention consists in providing the lower part of street and other railroad cars with a new and improved apparatus which is entirely independent of the car, to and from which it can be attached and detached at will. When fixed to a car by means of improved braces or supports, the apparatus encircles its lower part and incloses the wheels in such a way that it prevents people from being run over and hurt when falling in front or at the sides of the car.

Referring to the accompanying drawing, the following is a correct description of our invention and of the construction of our apparatus, and how it is to be fixed to a car.

Figure 1 is a side view of two kinds of supports intended to hold and keep the apparatus in place when attached to the car. Fig. 2 is a plan, showing a part of the bottom of a car, and showing also the curved line of the front part of the apparatus and the points where it is attached to the bottom of a car. Fig. 3 is a perspective view of one of the supports. Fig. 4 is a perspective view of the apparatus. Fig. 5 is a perspective view of a car with the apparatus attached.

The apparatus, Fig. 4, is made strong but light, and is composed of two flat parts, F, and two round parts, G, which are joined together by means of hinges L and movable pins K. The two flat parts are intended for the sides, and the two round parts for the front and back of the car, under the platforms. When the apparatus is applied to one-horse cars, only one round end or part is used, and that in front. They are made of a trellis of iron wire or other metal, or of metallic chain, in order to enable a person to see under the car, when necessary, without removing the apparatus. The upper parts of the frames *a* are made of a flat metal band or border, the bar forming the lower edge *a'* being a round one. The spaces M N left in the flat parts or sides of the apparatus, near the wheels, are for the purposes of filling the grease-boxes, when necessary, without removing the sides from the car. The three protuberant parts or tongues A B C are for the purpose of attaching the apparatus to the cars by means of the supports represented in Fig. 3. The round parts or ends of the apparatus are not quite as high as the flat or side parts, on account of the steps of the car. The apparatus thus constructed is then attached to the bottom of a car by means of supports like those represented in Figs. 1 and 3. The tops of the supports, as in Fig. 3, are screwed outside to the bottom of the car at three different points on each side.

There is a hollow part or furrow going through the top of the supports, which is made for the purpose of holding the protuberant parts or tongues A B C of the apparatus. The braces, with their crooked lower ends D, are for the purpose of holding the apparatus after it has been introduced into the supports. Then the cap E, Fig. 3, is drawn over the top of the support, and in that way the apparatus is kept steady and firmly attached to the car.

The branch or arm of the support, Fig. 1, is screwed to the bottom of the car, as shown, and helps to strengthen the support and keep the apparatus steady.

The supports, as represented in Fig. 1, are to keep the round parts of the apparatus at each end of the car steady. They are screwed under the platform of the cars, as shown in Fig. 2, at the point I.

The lower part of the support, Fig. 1, is bent outside, and forms a hook, D, upon which the round part of the apparatus at the front or back of the car rests when closed. That support prevents the vibration necessarily produced upon that part of the apparatus by locomotion. It also helps to strengthen it altogether. The apparatus, after being attached to a car, hangs down around it to within about three inches from the ground, in order to avoid ordinary obstructions in the road; but when unforeseen obstacles are in the way, the driver or conductor has only to remove one of the movable pins K from the hinges L, by which the round parts of the apparatus are joined to the flat parts, and then the round parts work

like a door, closing and opening at will. The pins are made in such a way as to be easily removed. By means of these movable pins the different parts of the apparatus can be unhinged and set apart without trouble whenever it is requisite.

The great advantages of our apparatus or safety-guard over all those heretofore invented for the same purpose consist in its simplicity and the facility with which it can be adapted to any kind of cars without change in their construction, and consequently making the question of expenses for its adoption a matter of no consideration. Besides, our apparatus is by far superior to any other on account of its easy handling and management. Two men can easily attach and detach it, at will, to and from any car; and after it is strongly attached to a car it is not necessary to remove it to look under the car or to fill the grease-boxes; and if any obstructions are on the road they can be avoided without the least trouble by means of the round ends of the apparatus, which open and close like doors at the front and back of the car.

We do not claim as our invention the idea of preventing accidents by encircling the lower part of street or other railroad cars with a shield or safety-guard; neither do we claim the invention of that part of the apparatus called "supports" or "braces;" but

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The shield or guard for cars consisting of the straight side pieces provided with rectangular openings for the axle-boxes of the car, in combination with the hinged semicircular ends, constructed and arranged substantially as and for the purposes described.

2. The shield or guard constructed and operating as described, in combination with the braces by which it is detachably connected with the car, as set forth.

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Witnesses:
L. LACAZE,
C. T. FENS.