(No Model.) 2 Sheets—Sheet 1.

P. PORTOIS.

WHEEL FENDER.

No. 369,553. Patented Sept. 6, 1887.

Fig. 1.

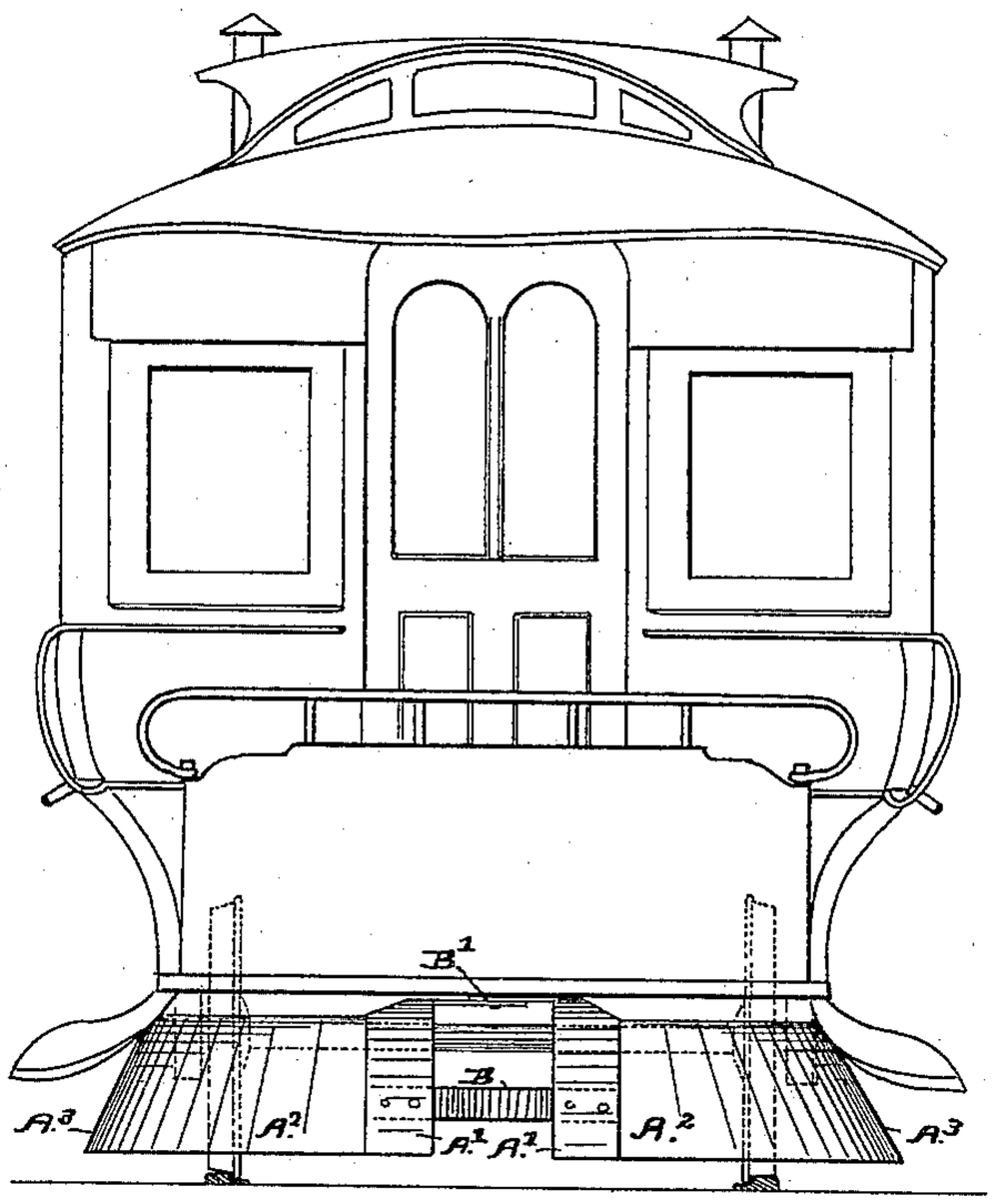
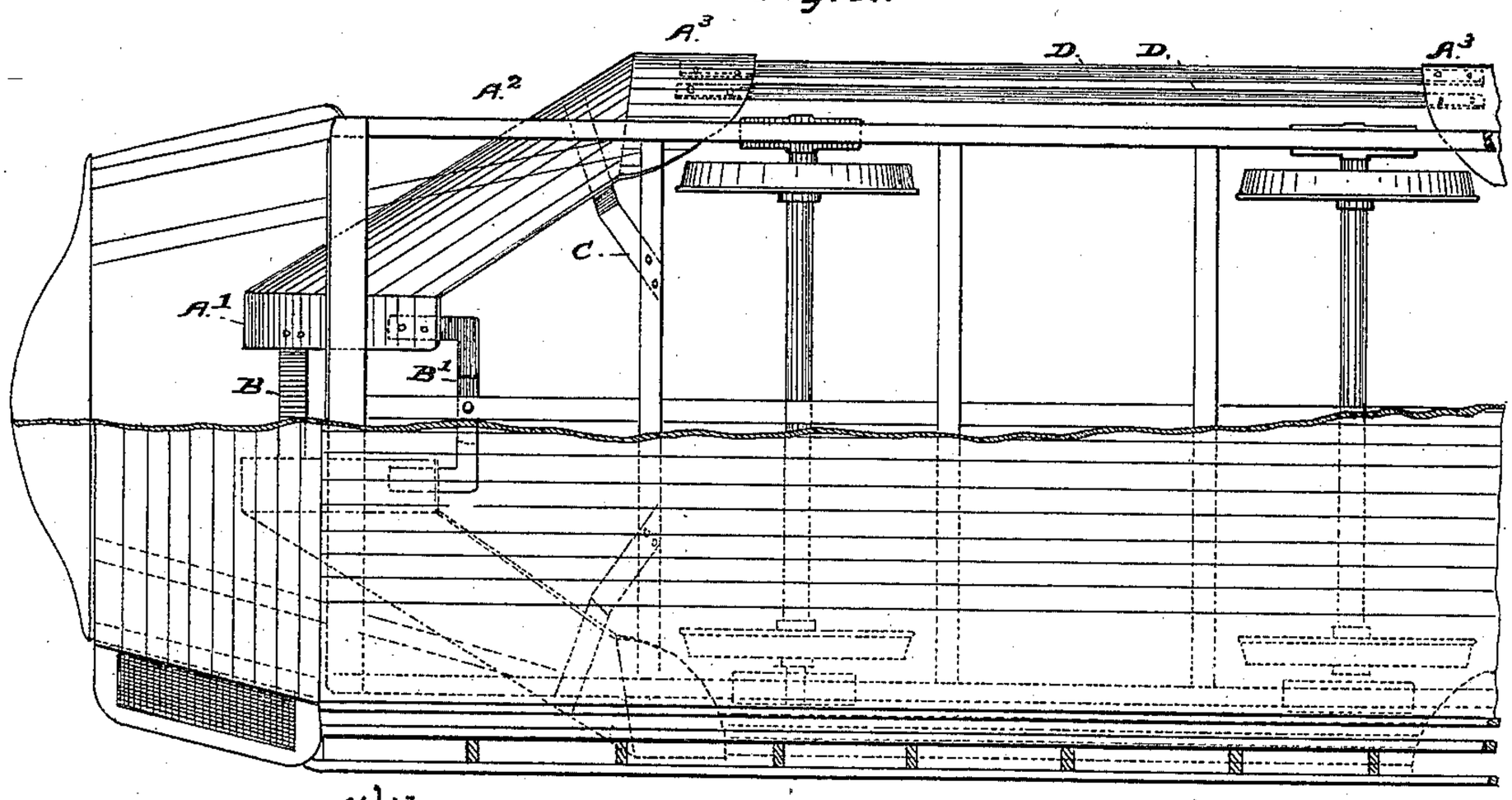


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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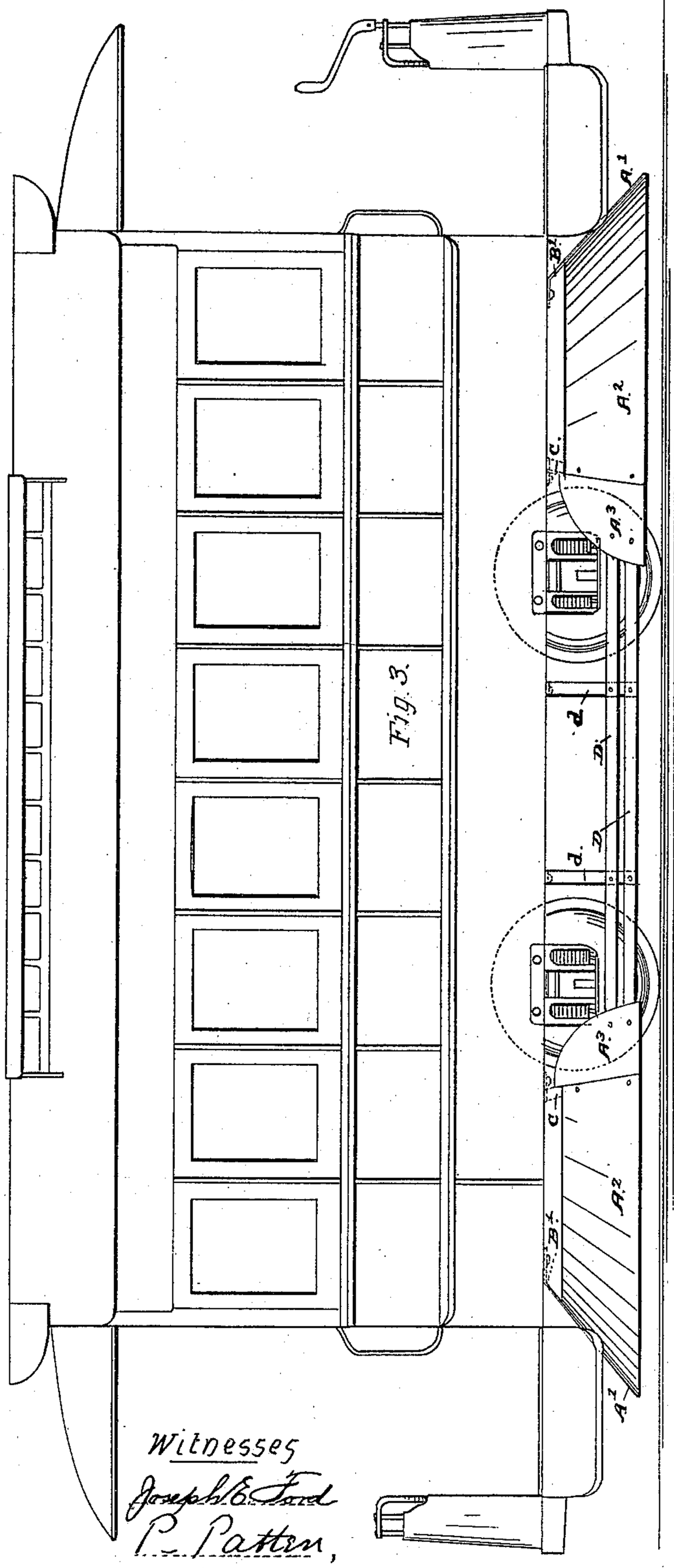
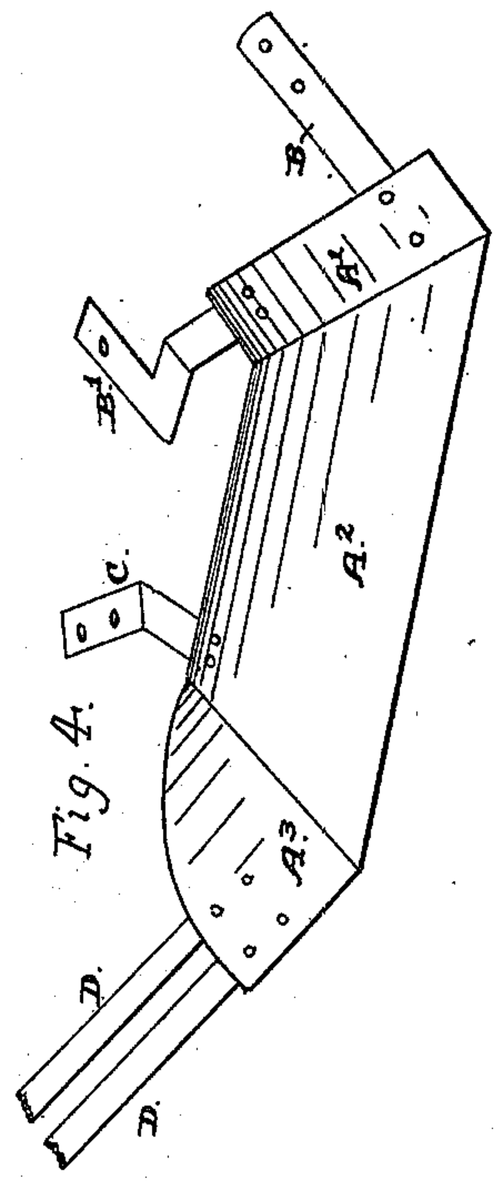
WHEEL FENDER.

No. 369,553 Patented Sept. 6, 1887.





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UNITED STATES PATENT OFFICE.

PETER PORTOIS, OF SAN FRANCISCO, CALIFORNIA.

WHEEL-FENDER.

SPECIFICATION forming part of Letters Patent No. 369,553, dated September 6, 1887.

Application filed June 4, 1887. Serial No. 240,231. (No model.)

To all whom it may concern:

Be it known that I, PETER PORTOIS, a citizen of the United States, residing in the city and county of San Francisco, and State of California, have invented certain new and useful Improvements in Wheel-Guards for Street-Cars; and I do hereby declare that the following is a full, clear, and exact description of my said invention, reference being had to the drawings that accompany and form part of this specification.

My invention relates to an improved wheel-guard of such shape that it constitutes, when fixed beneath a street-car, both a fender in front and a guard at the sides of the wheels; and it consists in the construction and arrangement of plates or surfaces of metal and bars or rods, as hereinafter fully described, producing a device capable of being applied to street-cars of various styles now in use, and when so applied of forming a perfect guard around the wheels.

The following description explains the nature of the said construction and the manner in which I produce and apply it in carrying out my invention, the said drawings being referred to by figures and letters.

Figure 1 represents an end elevation of a street-car with my improved fender and guard applied to it. Fig. 2 is a plan of the floor and bottom frame of the car, with part of the flooring broken away to show the fastenings that hold the fender. Fig. 3 is a side elevation of Fig. 1, and Fig. 4 is a view in perspective of one half or section of the device.

Similar letters of reference indicate corresponding parts in the several views.

A′ A^2 A^3 are three plane surfaces, formed either by cutting and bending a piece of sheet metal in proper manner or by joining together by rivets or otherwise three separate pieces at such angles that while the lower edges stand horizontally the three surfaces incline inwardly toward one another. The surfaces A′ and A^3 set at about a right angle to each other and the intermediate surface, A^2, joins them diagonally. Having these relative positions and so united together, the pieces constitute one half or section of the fender, and two such sections are placed and secured together at the front by straps or tie-rods, while each one is also fastened to the bottom timbers of the car by straps in such manner that the surfaces A′ A′ are presented to the front and in the same plane across the middle of the track and the surfaces A^3 set outside of the wheels. The diagonal surfaces A^2 then, extending from the front to the side, form an inclined fender in front of the wheels from the middle either way to the sides of the track and beyond the track.

B B′ are the fastenings at the front, and C C are straps that secure the side plates to the floor-timbers. If necessary, also, the two sections can be stiffened by brace rods carried across from one diagonal plate to the other, as indicated in Fig. 2.

If the car be a double-ender, or one that has a platform at each end, a fender and guard are placed in position in front of and around both sets of wheels, and the inner ends, A^3, on the same side are joined together by slats or bars D D, the lower one set at suitable height to clear the surface. These bars are supported at intermediate points by straps *d d*, fastened to the car-body above.

Constructed in this manner, the two parts are readily placed under the car and secured to the floor-timbers above by means of the straps.

Instead of using solid plates, the surfaces may have open spaces above the bottom edge to give lightness.

As thus applied, my improved construction affords a perfect protection against accidents. It is both light and sufficiently strong for the purpose, is within the lines of the car-body and platform, and can be made quite ornamental by painting and decorating the surfaces exposed to view.

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

1. The herein-described wheel guard and fender for street-cars, consisting of the sheet-metal sections having the inclined-plane surfaces A′ A^2 A^3, disposed with relation to one another as described, and the fastenings by which they are secured to the car-body, as set forth.

2. The combination, with a street-car, of the fender and guard formed of the three inclined surfaces A′ A^2 A^3, the side bars, D D, and suitable supports and fastenings, B C *d*, substantially as described, for operation as set forth.

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

PETER PORTOIS. [L. S.]

Witnesses:

C. W. M. SMITH,

JAMES L. KING.