

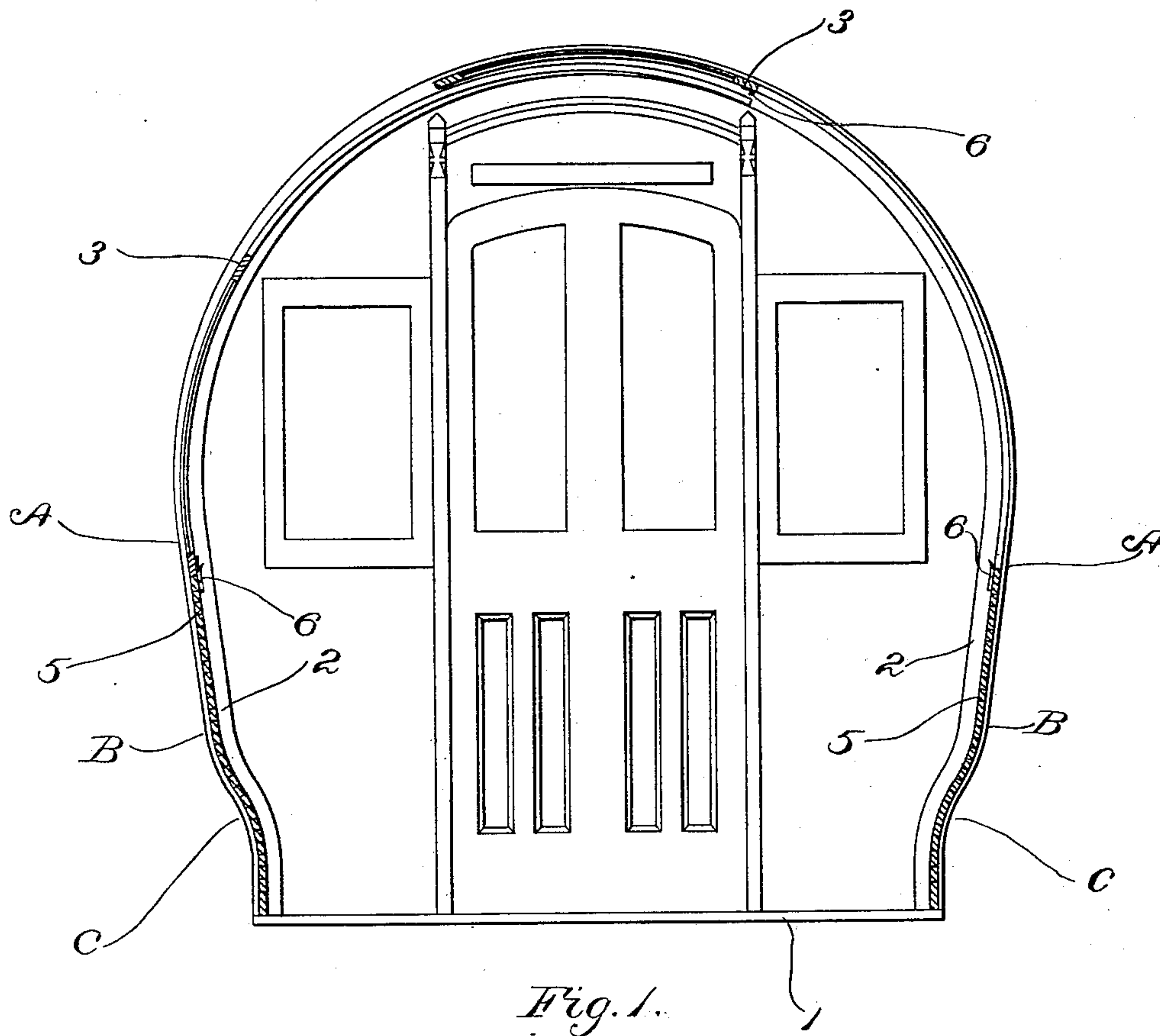
(No Model.)

3 Sheets—Sheet 1.

G. MOORE.
CONVERTIBLE STREET RAILWAY CAR.

No. 602,604.

Patented Apr. 19, 1898.



Witnesses:

Oscar F. Bill
Saul G. Stephens.

Inventor:

George Moore
by Maceo Calver & Randall
Attorneys.

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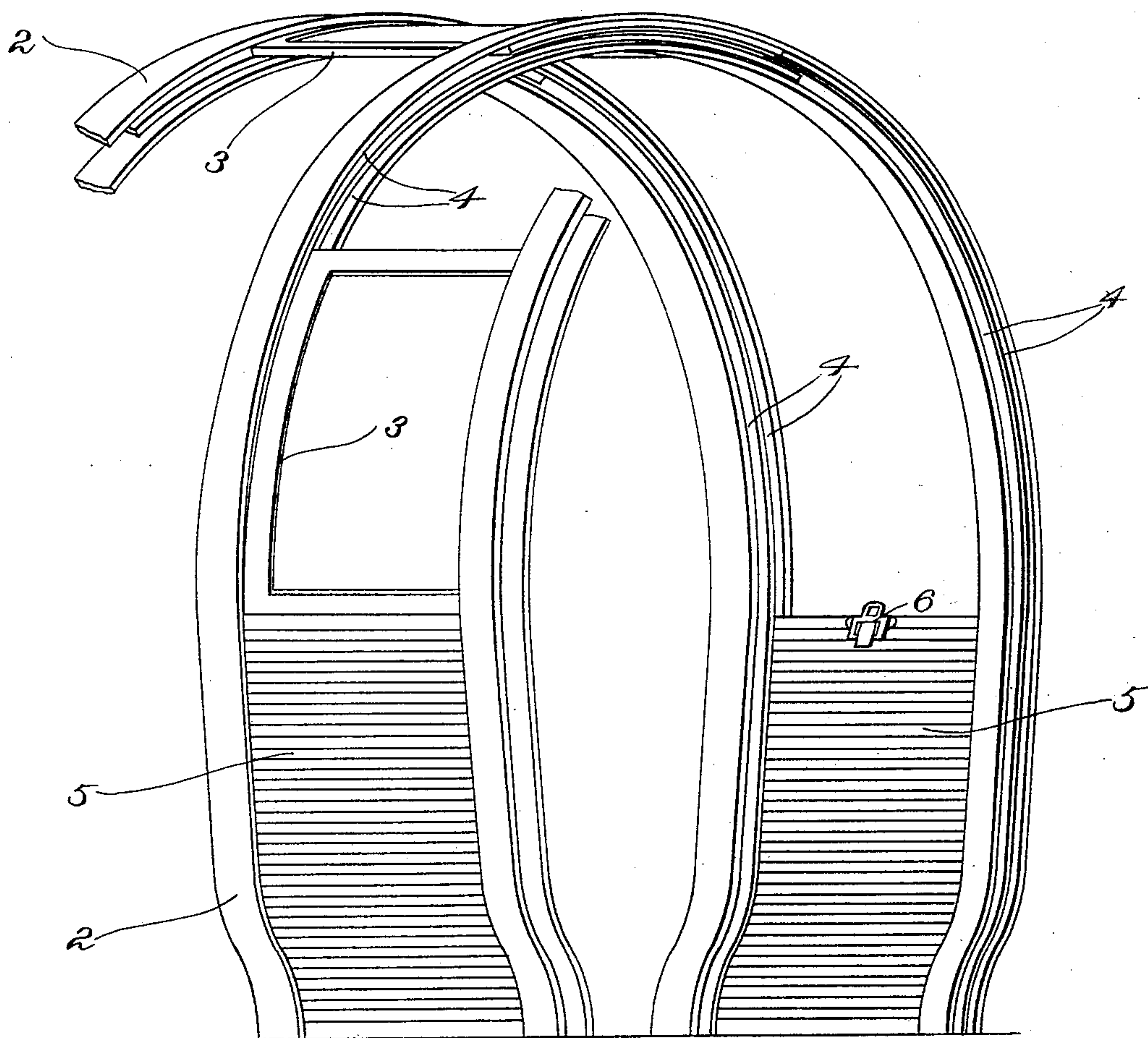


Fig. 2.

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G. MOORE.

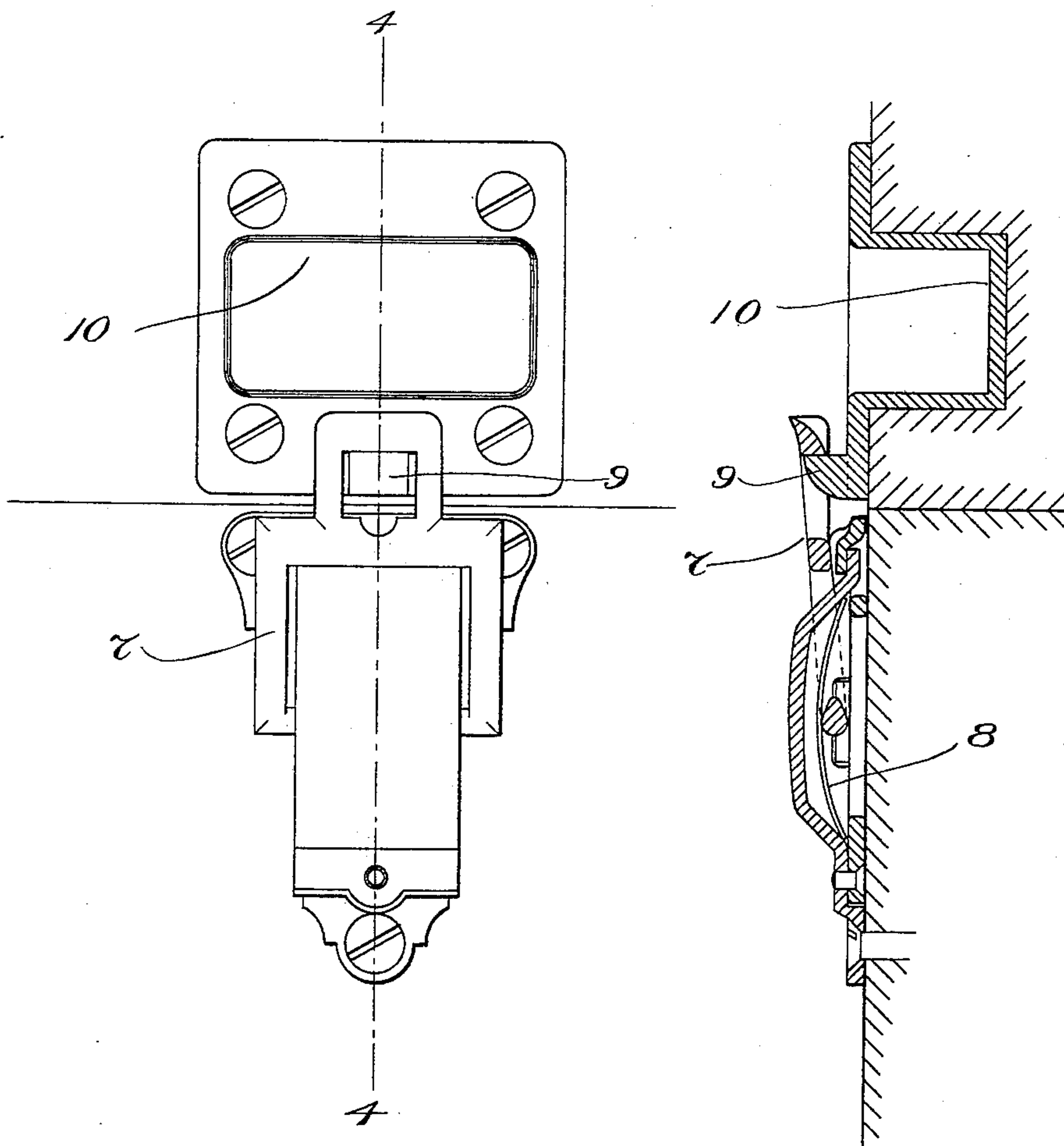
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Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE MOORE, OF BOSTON, MASSACHUSETTS.

CONVERTIBLE STREET-RAILWAY CAR.

SPECIFICATION forming part of Letters Patent No. 602,604, dated April 19, 1898.

Application filed September 14, 1897. Serial No. 651,655. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MOORE, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Convertible Street-Railway Cars, of which the following is a specification, reference being had therein to the accompanying drawings.

10 My present invention is designed as an improvement upon the construction that is shown in the Letters Patent which were re-issued to me December 26, 1893, No. 11,396. In the said Letters Patent I have presented a
15 street-railway car capable of conversion from a closed car to an open car suitable for summer use, it having upright frames of circular form from near the floor on one side of the car to a corresponding point on the opposite
20 side of the car, the said upright frames having on each side thereof two concentric grooves, the car having also rigid and inflexible movable side sections which are fitted at their edges to the grooves in the upright frames,
25 the said sections having the same curvature as the upright frames and being arranged to slide up and down upon the latter and to partly pass each other and overlap, when in a raised position, under the roof of the car,
30 the said movable side sections having window-sashes mounted therein with a capacity to slide within said side sections and also having flexible portions connected to their lower ends and forming the bottoms of the movable
35 side sections.

The present improved construction is characterized by the following features: The curvature of the frames terminates at about the level of the lower edge of the window-sash.
40 The upper part of the sliding section consists of a curved window-sash sliding directly in the guides of the upright frames, and all or nearly all the sliding section below the window-sash is constituted of a flexible slatwork
45 curtain, and the sash and the flexible curtain are separable and are independently movable and are separably connected together by a spring-catch.

50 My invention will be described first with reference to the accompanying drawings, which illustrate the best embodiment thereof that I have yet contrived, and afterward the dis-

tinguishing characteristics of the invention will be defined in the claims at the close of this specification.

Figure 1 is a view in cross-section of a car having the said embodiment applied thereto, taken through one set of sliding sections and omitting the roof and other parts not necessary to an understanding of the invention. 55
60 Fig. 2 is a perspective of two of the upright frames with sliding sections thereon, part of one section being broken away. Fig. 3 is an elevation of the parts of the form of spring-catch which I prefer to employ. Fig. 4 is a
65 view of the same in section on the line 4 4 of Fig. 3.

1 is the floor of the car.

2 2 are the upright frames or ribs springing from the floor at distances apart corresponding, preferably, to the spacing of the seats of the car. The contour of each frame is symmetrical, its upper portion being the arc of a circle and the said arc extending down about to the lower edge of the sash at
70 A. Thence on each side it runs tangentially to the point B nearly to the floor and then bends inwardly in an ogee curve C. In my former construction I made the contour of the frames circular from about B to B; but
80 my present improvement secures the same height with a wider floor-space.

3 3 are the sashes, running in grooves 4 4 in the frames 2 2. 5 5 are the flexible curtains or lower portions of the movable side
85 sections, such flexible portions also running in the said grooves and joining the sashes, but separable therefrom. The sashes are made curved, with the same curvature as the upper portions of the grooves.
90

In my Letters Patent aforesaid I have shown and described each sash as mounted in grooves in upward extensions of the vertical side rails of the movable side section, the latter in turn being mounted in the grooves 4 4 of the frames
95 2 2. This mode of construction is expensive and increases the number of parts. It is, moreover, of prime importance that the windows of the car shall be large and commodious, inasmuch as the sliding sashes and cur-
100 tains of my car are not merely designed for temporary protection, but are intended to serve permanently to inclose the interior as effectively and satisfactorily during the entire

winter season as would the fixed walls of a car designed only for that season. My present construction enables the space that formerly existed between the groove of the frame 5 2 and the groove of the side rail of the movable section to be thrown into the width of the glass and thus produces not only a simpler and less expensive, but a more satisfactory car.

10 By forming the sash separate from the lower flexible portion or curtain of the movable side section I enable the upper part of the sides of the car to be completely opened by running up the sashes, while the lower part is still 15 protected by the lower flexible portions or curtains 5 5.

The spring-catches for connecting the sashes with the lower flexible portions of the movable side sections consist, preferably, each of 20 the latch 7 on the lower flexible portion, the same being actuated by the spring 8 and caused thereby to engage with the projection 9, cast on the lift 10, the latter being applied to the sash. Such engagement takes place 25 when the lower flexible portion and sash are brought together. Consequently when the sash is fully raised and rests in the upper portion of its groove at the top of the car it may readily be brought down by pushing up 30 the flexible portion 5 to meet it, when the spring-catch will lock, after which at any desired time the two may be drawn down together.

By the improvements described above I re- 35 tain the advantages of my former construction, its compact storage of the sliding sections in summer, its strong, permanent, and close-fitting body in winter, and its capability of ready and immediate change from one form 40 to the other to meet a temporary emergency,

while at the same time I produce a car-body of more advantageous shape, simplify the shifting parts, enlarge the glass of each window; and enable the sashes conveniently to be drawn down after being raised. 45

What I claim is—

1. In a railway-car, the combination of grooved upright frames located in the sides and top of the car-body, the upper portions of said frames being curved in the arc of a 50 circle and the grooves thereof extending across the top of the car, with movable side sections each consisting of a curved window-sash having its side edges fitted to the curved portions of said grooves and adapted to slide 55 therein, and a flexible lower portion sliding in the same grooves with said sash below the latter and filling the space below the sash, substantially as described.

2. In a railway-car, the combination of 60 grooved upright frames located in the sides and top of the car-body, the upper portions of said frames being curved in the arc of a circle and the grooves thereof extending across 65 the top of the car, with movable side sections each consisting of a curved window-sash having its side edges fitted to the curved portions of said grooves and adapted to slide therein, and of a flexible lower portion sliding 70 in the same grooves with the sash below the latter and filling the space below the sash, and having a spring-catch to connect the said sash and flexible portion together in a separable manner, substantially as described.

In testimony whereof I affix my signature 75 in presence of two witnesses.

GEORGE MOORE.

Witnesses:

WM. A. MACLEOD,
CHAS. F. RANDALL.