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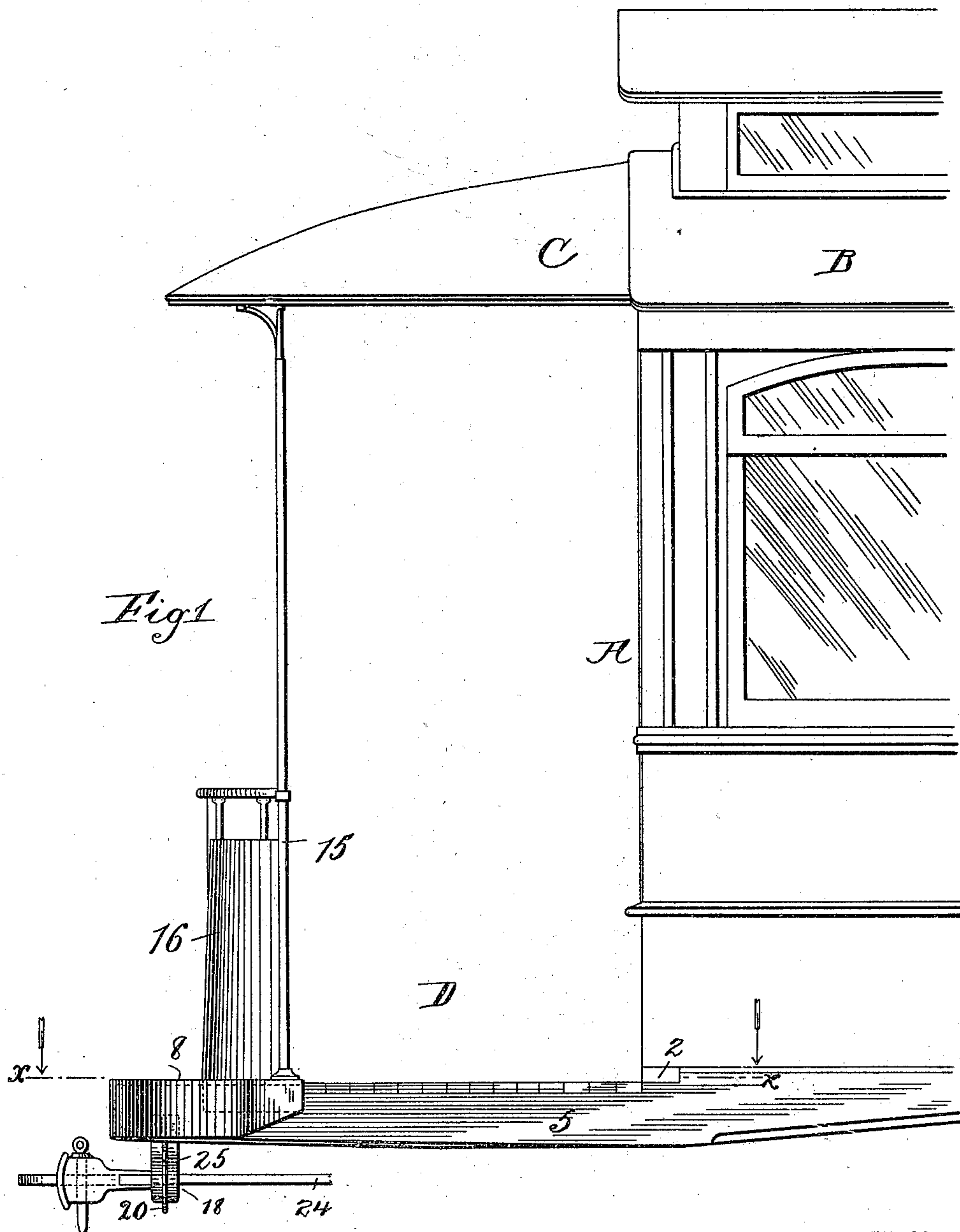
3 Sheets—Sheet 1.

J. A. BRILL.

PLATFORM CONSTRUCTION FOR STREET OR OTHER CARS.

No. 554,235.

Patented Feb. 11, 1896.



WITNESSES:

C. W. Benjamin
Wm. Johnson

INVENTOR

John A. Brill

BY

Joseph L. Levy

ATTORNEY

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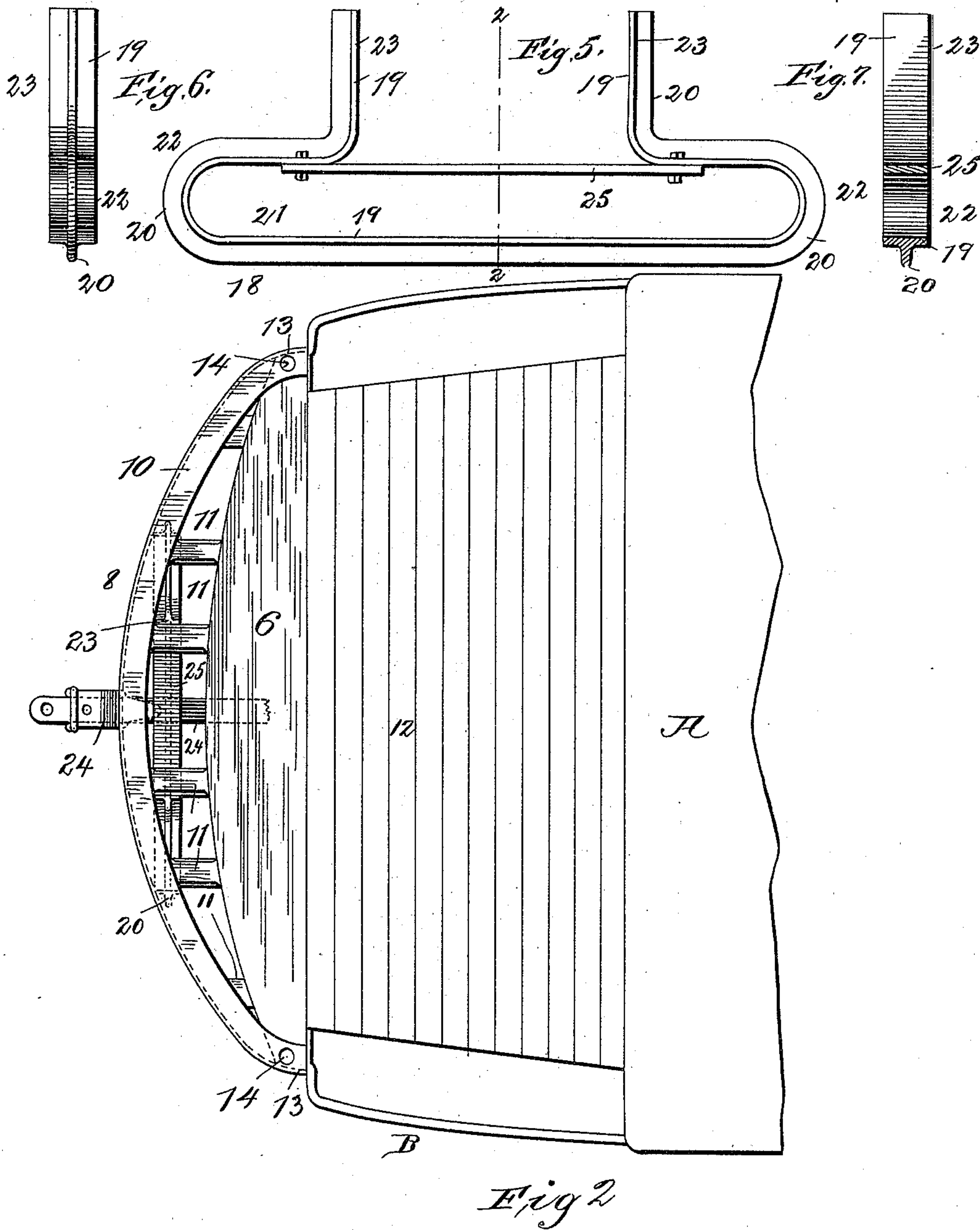
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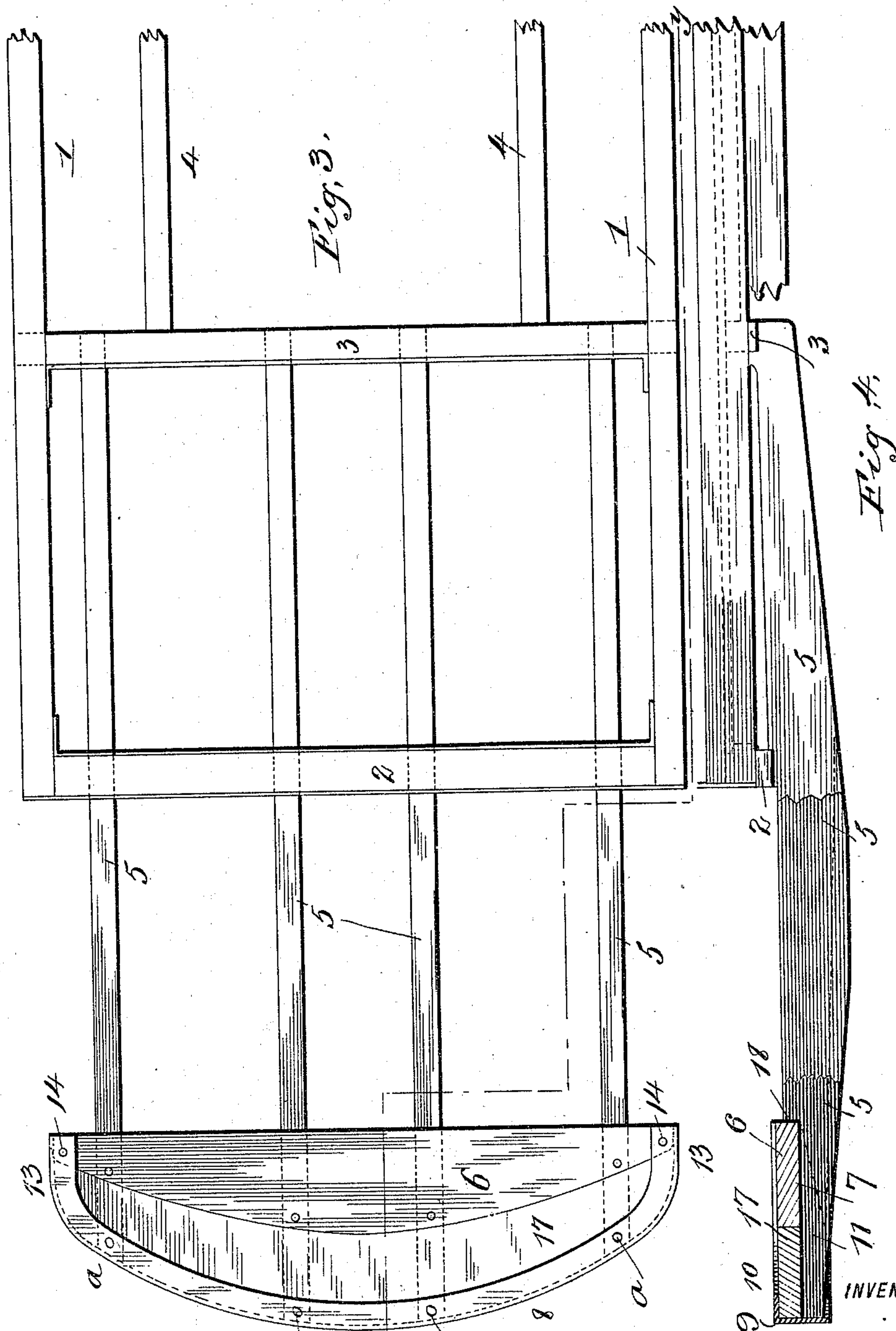
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Attest:
C. W. Benjamin
Wm. Jacobson

INVENTOR
John A. Brill.
BY Joseph L. Levy
ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN A. BRILL, OF PHILADELPHIA, PENNSYLVANIA.

PLATFORM CONSTRUCTION FOR STREET OR OTHER CARS.

SPECIFICATION forming part of Letters Patent No. 554,235, dated February 11, 1896.

Application filed November 15, 1895. Serial No. 569,007. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. BRILL, 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 Platform Constructions for Street or other Cars, of which the following is a specification.

My invention relates to improvements in the construction of platforms for cars, and has special reference to the construction of the buffing end of street-cars.

My invention consists in the construction and combination of parts hereinafter described and more fully set forth in the claims.

My invention also relates to the support for the draw-bar; and in this regard my invention consists in the construction of the draw-bar hanger and its method of support from the car-platform.

Reference is had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of one end of a car provided with my improved construction. Fig. 2 is a plan view of the same, with the platform-hood, stanchions, and dashboard removed, on the line *xx*, Fig. 1. Fig. 3 is a plan view of the framework of one end of the car, showing my improvements thereon; and Fig. 4, a side elevation of the same, partly in section, taken approximately on the line *yy*, Fig. 3. Fig. 5 is a side elevation, enlarged, of the hanger for the draw-bar detached from its support. Fig. 6 is a side elevation, and Fig. 7 is a sectional elevation on the line *zz*, Fig. 5.

Similar numerals of reference indicate like parts throughout the several views.

In the operation of street-cars in crowded thoroughfares, and especially those propelled by motor, cable, or like means, it is highly desirable that an efficient bumping or buffing device be secured to the platform end. This end has been secured in a greater or less degree by securing to the end of the buffer-beam a casting, which extends out beyond the dashboard and sometimes entirely across the platform end and sometimes for a short distance from the center.

The "buffer-beam," as the term is used in car construction, refers to the extreme cross-beam at the end of the longitudinal sills, and

is used for the purpose of bracing the sills, and also to receive shocks and to carry the draft and buffing devices.

In street-car construction the part hereinbefore termed the "buffer-beam" is termed the "platform end timber" or "crown-piece," and instead of being secured to the platform-sills "end on" it is laid within recesses in the ends of the sills, and instead of the platform-sills being continuous from end to end of the car they extend only a short distance beyond the door-sill and are bolted to the door-sill and to the next succeeding cross-sill. These end longitudinal sills are in street-car construction called the "platform-knees," and it is to the end of these knees that the crown-piece is secured, tying their ends together, and between the crown-piece and the door-sill and on the platform-knees the platform-flooring is laid.

It has been the custom to secure the roof-stanchions or dash-posts to the end of the crown-piece, and the dashboard has been secured to the outer edge of the crown-piece and held in place either by the dash-posts or by the roof-stanchions, or by both. In prior constructions the dashboard and the crown-piece form the terminal of the car-platform to which a buffer of the kind hereinbefore described has been secured, and the entire strain of the buffing action has been taken on the crown-piece.

The end of the crown-piece being flush or substantially so with the dashboard, it has been found that the buffer in the previously-described structures has been insufficient in its forward extension to prevent injury or demolition of the dashboard in case of collision, and the crown-piece has been very often injured or torn from its fastenings, due to the securement of the buffer directly thereto.

It is the object of my invention to overcome these disadvantages; and to accomplish this end I make the platform-knees longer than they would be in another car with equal length of platform, so that they will extend quite some distance beyond the crown-piece, and instead of securing the buffer directly to the crown-piece or to the ends of the knees below the crown-piece I secure the buffer to the extended ends of the knees and "end on." I carry this out in the following manner:

Referring to Fig. 1, A is a portion of a car; B, the roof; C, the hood, and D the platform; and again referring to Fig. 3, the numerals 1 indicate the outside longitudinal sills of the car, 2 the door-sill, and 3 the inner cross-sill. 4 are further longitudinal sills within the outer sills, and the platform-knees 5, which form the support for the platform, extend from the inner cross-sill 3 to the door-sill 2, and extend out beyond said door-sill to form the platform, the platform-knees being firmly secured to the cross-sills 2 3.

In prior constructions the crown-piece, which is shown at 6, is let into a recess 7 at the proximate ends of the knees 5, and has formed the end of the car-platform, to which the buffer, in some cases comprising a casting of metal or a curved piece of angle-iron, has been secured.

As before stated, instead of securing the buffer to the end of the crown-piece directly or substantially under the dashboard, I extend the platform-knees beyond the crown-piece and secure the buffer to their ends, the buffer in this case consisting of a circular piece of angle-iron 8, having a vertical buffing-face 9 and a horizontal and inwardly-extending web or flange 10.

In Fig. 2 it will be noticed that the flange 10 rests directly on the extensions 11 of the platform-knees, which are so apportioned as to length that their ends follow the curve of the buffer 8, the face 9 of which abuts "end on," as shown in Fig. 4.

In Fig. 2 the recess 7 for the crown-piece is formed deeper so as to let said crown-piece 6 lie flush with the platform-flooring 12, which enables the horizontal web 10 of the buffer 8 at its inwardly-curved ends 13 (which inclose the sides of the crown-piece) to lie directly on the crown-piece and tops of the ends of the platform-knees. Bolts *a* or the like, passing through the flange 10, may be used, if desired, to secure the buffer 8 down onto the ends of the platform-knees. The web 10 at the inner ends 13 of the buffer is provided with holes 14, which may pass into the crown-piece, in which or through which the roof-stanchions or dashboard-posts 15 pass and are secured, or through which bolts may pass to secure the ends of the buffer and the crown-piece together.

The dashboard 16 (see Fig. 1) is secured at its ends to the post 15 and at the bottom to the edge of the crown-piece, so that the buffer 8 and extensions 11 of the platform-knees extend beyond the dasher and protect it from injury. By passing the ends of the buffer around to the sides of the crown-piece and securing it and the crown-piece together at this point the buffer is not only securely tied in place, but forms a very strong protection, both to the platform-knees and to the crown-piece, bracing them transversely.

It will be further noticed with reference to Fig. 4 that the buffing action will not be taken directly upon the end of the crown-piece, but

is taken on the end of the platform-knees, thus not only placing the shock or strain where it can be better resisted, but relieving the crown-piece of practically all strain due to such shock and preventing it from being sheared off.

I prefer the construction shown in Fig. 2, wherein the space between the vertical face 9 of the buffer or the outer edge of the crown-piece is free and clear; but should it be desired to fill this space up it can be done, as shown in Fig. 4, where the filling-block 17 is inserted between the outer edge of the crown-piece 6 and the vertical face 9 of the buffer 8, and the horizontal flange 10 of said buffer lies on the upper surface of both the crown-piece and filling-block. In this case strains due to shock of collision will be taken up directly on the ends of the platform-knees and partly on the filling-block and transmitted therefrom to the crown-piece and from thence to the shoulder 18, formed by cutting the recess 7 in the ends of the platform-knees. Whichever of these forms is employed, highly increased efficiency in resisting strain due to collision will result.

The second part of my invention relates to the support for the draw-bar.

At 18, Figs. 5, 6 and 7, is shown the hanger, which comprises a piece of metal having an integral and horizontal web or face 19 and an integral and outwardly-extending flange 20 central of and continuous with said face. The said bar 18 is bent between its ends to form a channel or way 21, the bending of the bar forming partial loops 22, from the ends of which extend upwardly the ends 23, which are disposed at right angles to the arms or loops. The flange 20 is continuous with the face 19 and materially strengthens it. The ends 23 are secured directly to the two central extensions 11 of the platform-knees, as shown in Fig. 2, and they are securely bolted to the sides thereof.

The hanger is shown pending below the platform in Fig. 1, the draw-bar, conventionally illustrated in Fig. 1, resting on the horizontal web 19 of the hanger and in the way or channel 21, in which it is adapted to swing responsive to the evolutions of the car.

In order to prevent the draw-bar from being lifted out of the channel 21, I secure to the face 19 of the loops 22 a flat bar 25, against which the upper surface of the bar can impinge and prevent it from getting out of place.

Having described my invention, I claim—

1. In a car, the combination with the platform-knees, of the crown-piece secured transversely to the platform-knees to the rear of their outer ends, and a buffer secured to the extended ends of the platform-knees "end on," substantially as described.

2. In a car, the combination with the platform-knees, of the crown-piece secured transversely thereon to the rear of their ends, and a buffer secured "end on" to the ends of the platform-knees, and to the ends of the crown-piece, substantially as described.

3. In a car-platform, the combination with the longitudinal platform-knees, the ends of which are cut on a segmental line, the crown-piece secured transversely to the platform-knees to the rear of their ends, and an angle-iron conformed to the disposition of the ends of the platform-knees and having a vertical buffing-face and a horizontal web, said web resting on the ends of said knees and the vertical face abutting against the ends of said knees, substantially as described.

4. The combination, in a car-platform, of the platform-knees having the extensions 11, the segmental buffing-piece 8, having a vertical web secured "end on" to the end of said knees and a horizontal web lying on the tops of the ends of said knees, and a crown-piece secured transversely to said knees, the ends of the buffing-piece 8 inclosing the ends of the crown-piece, substantially as described.

5. In a car-platform, the combination with the platform-knees, the crown-piece secured transversely thereon to the rear of the outer ends of said knees, the buffing-piece 8 having the vertical web 9 abutting "end on" to the ends of the said knees, and a horizontal web 10 resting on the ends of the crown-piece, both the crown-piece and the web 10 having aligned apertures, the posts 15 secured in said apertures and a dashboard 16 extending between said posts to the rear of the buffing-piece 8, substantially as described.

6. In a car-platform, the combination with

the platform-knees, and having a recess 7 at their proximate ends and a shoulder 18 at the ends of said recesses, a crown-piece transversely secured in said recesses to the platform-knees and abutting against the shoulder 18, a buffing-piece 8 having a vertical face abutting "end on" to the ends of the platform-knees, and a filling-block 17 secured between said vertical face and the outer edge of said crown-piece, substantially as described.

7. The combination, with the platform-knees, of the draw-bar hanger comprising a bar of metal, having an integral horizontal web or face 19 and an integral and continuous rib 20 bent to form a horizontal channel 21, and upwardly-extending ends 23, the horizontal web or face 19 of said ends being secured to the sides of the platform-knees, substantially as described.

8. The draw-bar hanger comprising a continuous metallic bar, having integrally formed therewith a transverse web and an outwardly-extending, continuous, and centrally-located rib bent to form the channel 21, loops 22, upwardly-extending ends 23, and the cross-bar 25 secured to the web above the channel, substantially as described.

Signed at the city, county, and State of New York November 7, 1895.

JNO. A. BRILL.

Witnesses:

JOSEPH L. LEVY,
B. S. WISE.