

No. 803,663.

PATENTED NOV. 7, 1905.

T. R. BROWN.
METALLIC CAR CONSTRUCTION.
APPLICATION FILED MAY 20, 1905.

Fig. 1.

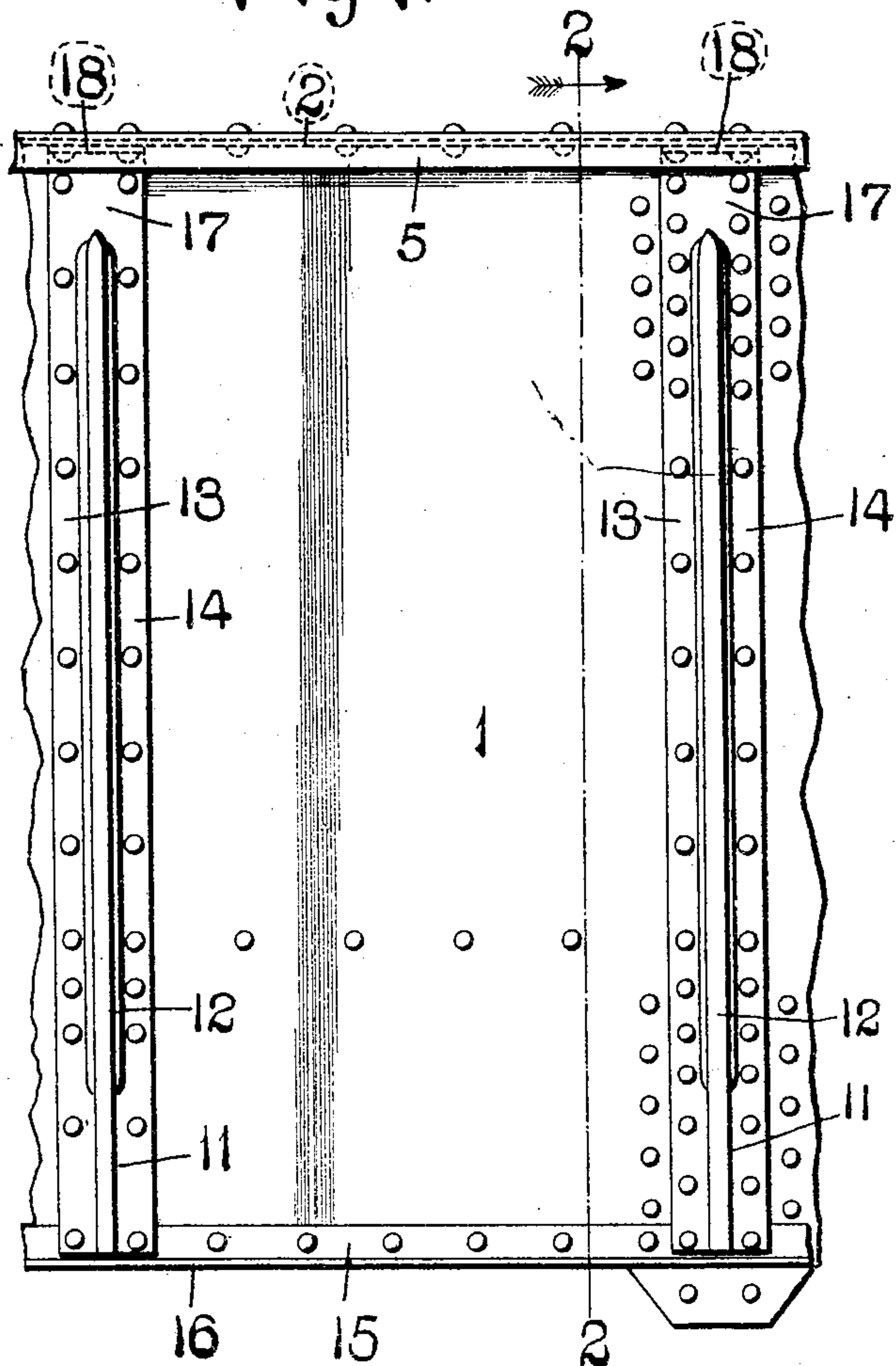
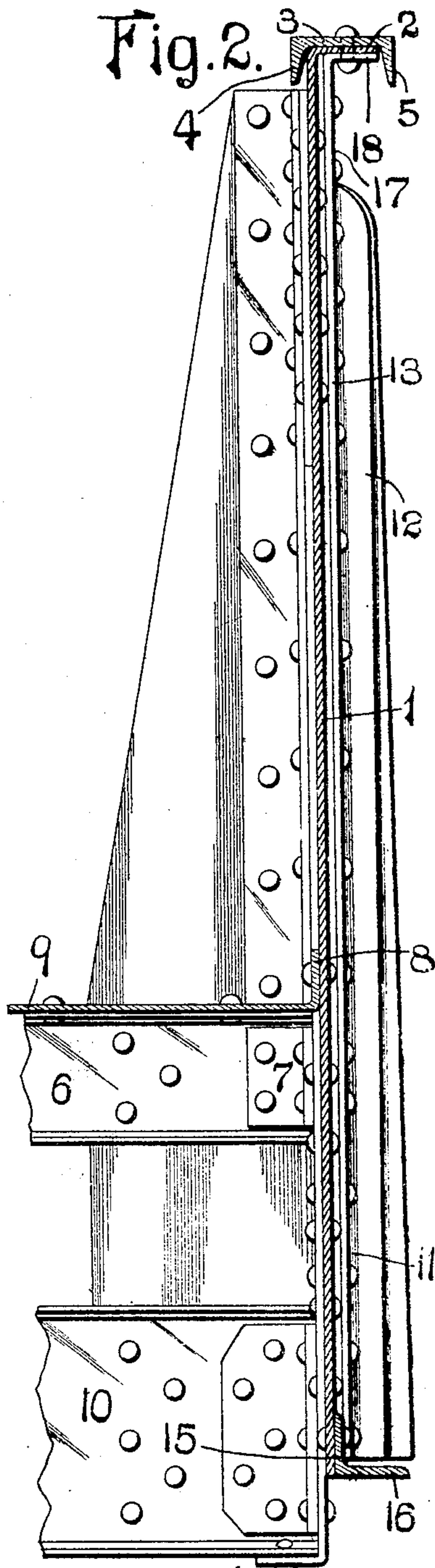


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS R. BROWN, OF NEW YORK, N. Y., ASSIGNOR TO AMERICAN CAR & FOUNDRY COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

METALLIC-CAR CONSTRUCTION.

No. 803,663.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed May 20, 1905. Serial No. 261,454.

To all whom it may concern:

Be it known that I, THOMAS R. BROWN, a citizen of the United States, residing in the city, county, and State of New York, have invented a certain new and useful Improvement in Metallic-Car Construction, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevational view of a portion of the plate-girder side, showing the stakes applied thereto; and Fig. 2 is a cross-sectional view through the same.

This invention relates to metallic cars, particularly to the type of car having plate-girder sides with reinforcing stakes or posts cooperating therewith.

One of the objects of the invention is to provide a plate-girder side which will be amply reinforced and braced to impart sufficient strength thereto.

Referring now to the drawings by numerals of reference, 1 designates a side plate comprising the web of the girder of the car side, the upper edge of which is outwardly bent to form a flange 2. Connected to this flange is the horizontal web portion 3 of a channel whose flanges 4 and 5 project downwardly. The plate 1 is connected to the cross-bearers 6 by angle tie-plates 7 and by the upturned flanges 8 of the floor-sheet 9, supported on said cross-bearers 6. Each plate 1 extends below the cross-bearers 6, and both sides are connected to the respective ends of the cross-beam 10, which divides the hopper of the car. The stakes 11 are provided with outwardly embossed or pressed ribs 12. In the longitudinal center of each stake and extending from the respective sides of the central longitudinal rib are flanges 13 and 14, which flanges aline with each other and are adapted to be secured to the side plates 1. The lower edges of the respective stakes are fastened to the vertical flange 15 of the channel, constituting the tension member of the girder and whose horizontal flange 16 projects outwardly. The flanges 13 and 14 merge into a flat plate extension 17 above the end of the

longitudinal rib 12, which extension is provided with an outwardly-projecting horizontal flange 18, secured to the outwardly-projecting flange 2 of the plate 1.

From the foregoing it will be seen that the compression member or edge of the plate-girder side is materially reinforced, so as to relieve the strains on the plate 1. This reinforcing results not only from the fact that the compression member is materially braced by the channel and the outwardly-disposed flange, but by the fact that the stakes are secured to the tension members and are provided with longitudinal ribs extending from the bottom of each stake to a point near the top, the remaining portion of the stake extending upwardly and outwardly in the shape of an inverted L.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. The combination with a plate-girder side having its top edge bent at right angles to the body portion to form a flange, a stake riveted to the plate-girder side and having its upper end bent at right angles to and secured to the flange of the plate-girder side, and a channel whose web is secured to the top face of the flange of the plate-girder side and whose flanges depend; substantially as described.

2. The combination with a plate-girder side having an outwardly-disposed flange at its upper edge and an outwardly-disposed flange at its lower edge, a stake having a pressed rib extending from the lower edge to a point below the upper edge, a flat extension on the end of the stake and secured above the rib and having a right-angularly-extended portion connected to the outwardly-disposed flange on the upper edge, and a channel connected to the upper flange of the plate-girder side and having its flanges depending; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 15th day of May, 1905.

THOMAS R. BROWN.

Witnesses:

ROBT. G. JEFFERY,
JOHN McE. AMES.