

No. 814,497.

PATENTED MAR. 6, 1906.

H. W. WOLFF.
END BRACE FOR CARS.
APPLICATION FILED DEC. 11, 1905.

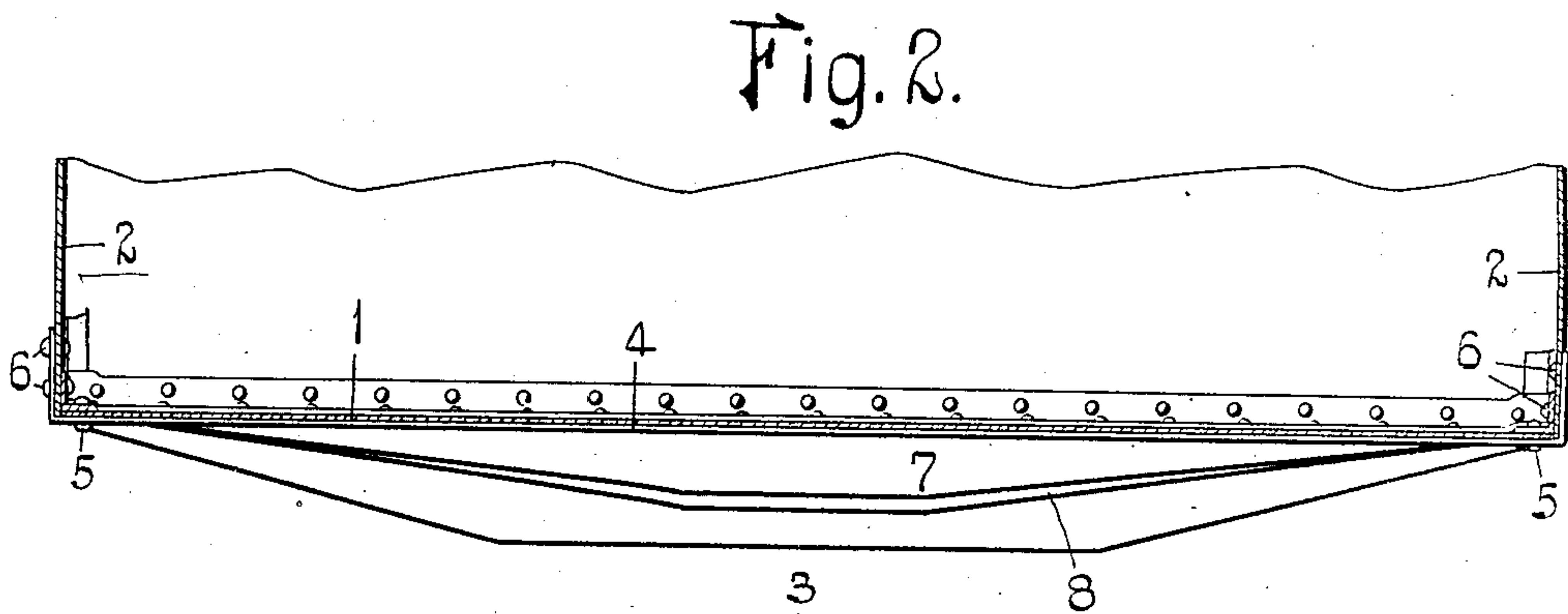
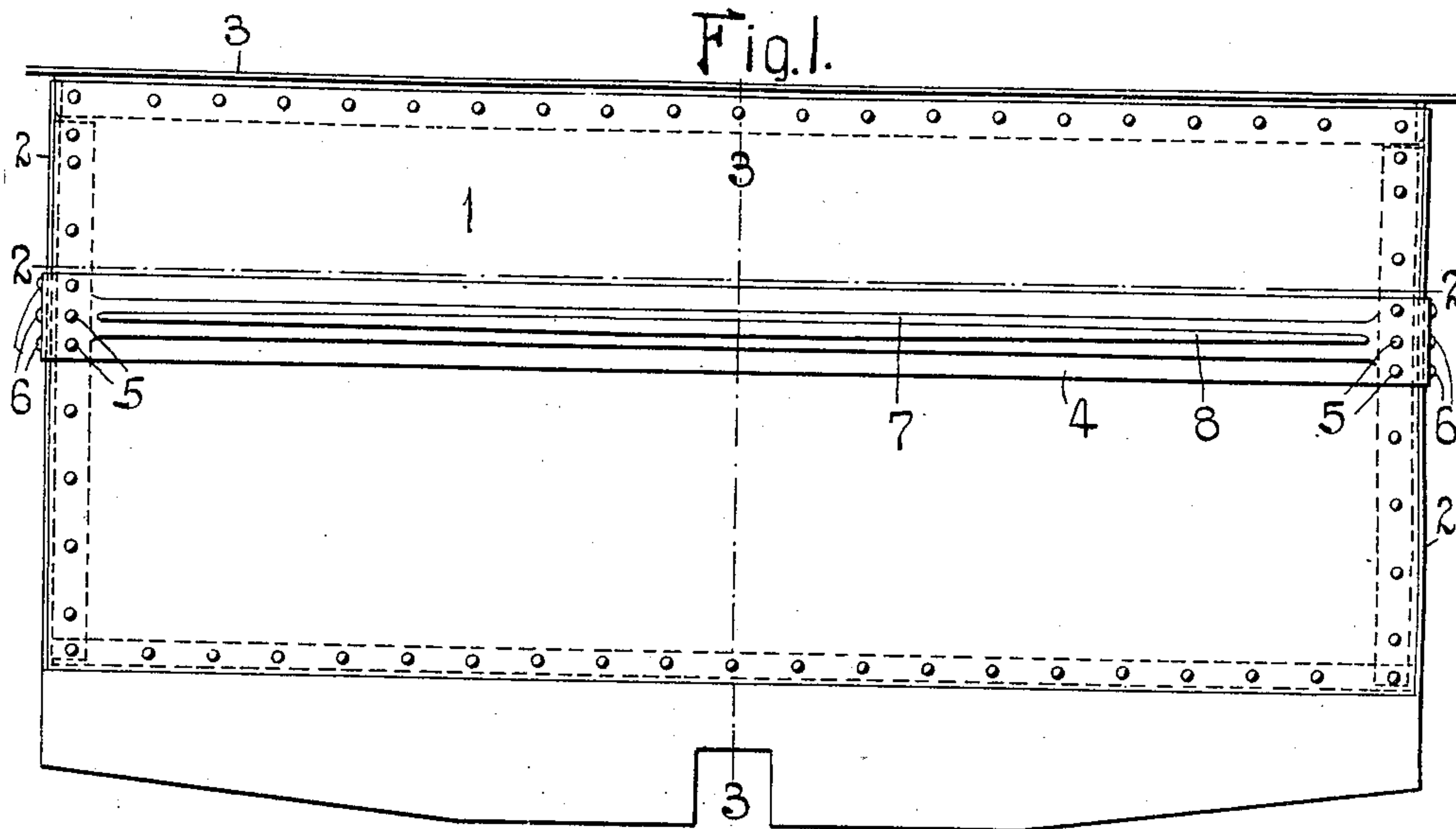
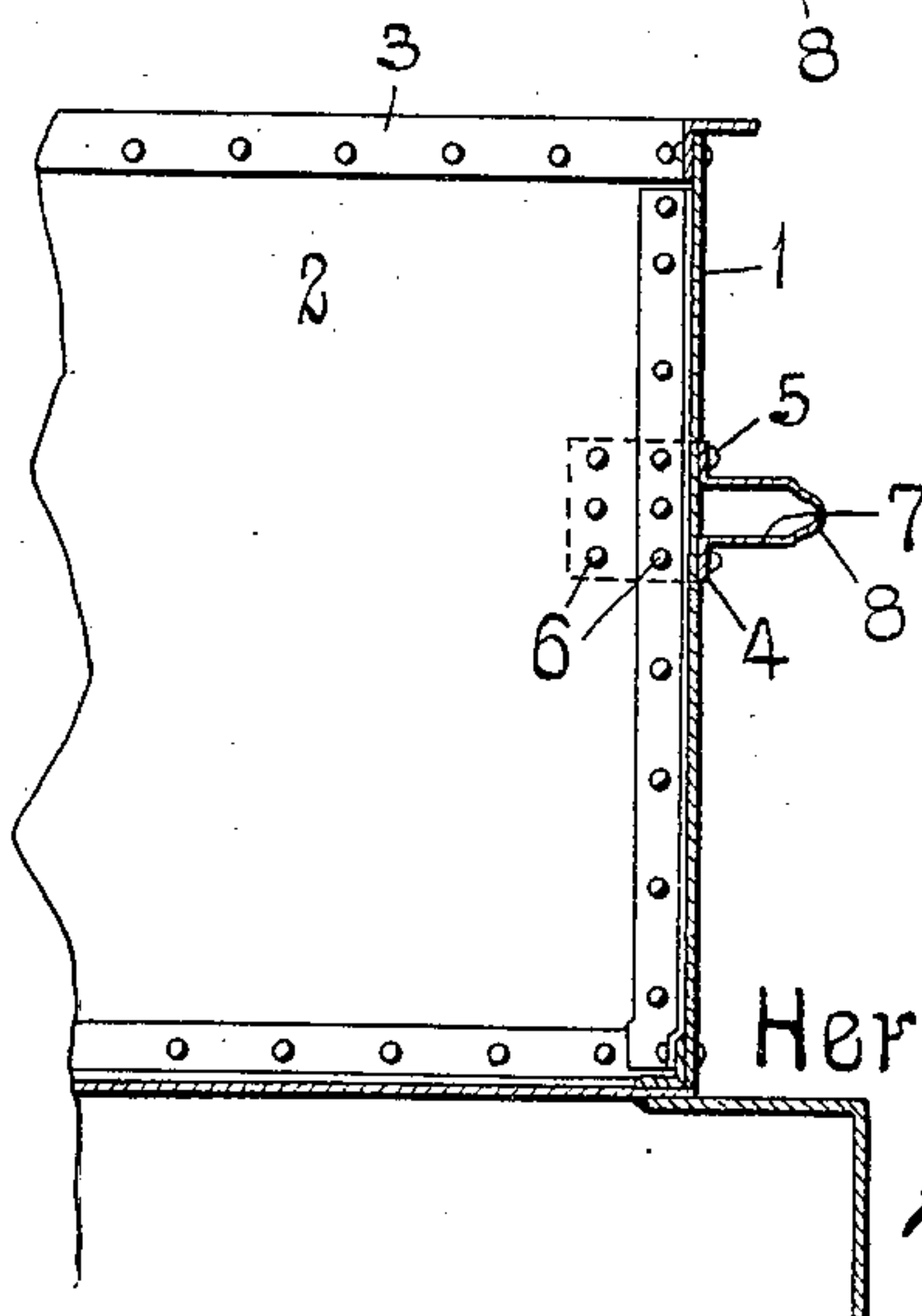


Fig. 3.



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END BRACE FOR CARS.

No. 814,497.

Specification of Letters Patent.

Patented March 6, 1906.

Application filed December 11, 1905. Serial No. 291,258.

To all whom it may concern:

Be it known that I, HERBERT W. WOLFF, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in End Braces for Cars, 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 an elevational view of the end of a gondola car provided with my improved end-wall brace. Fig. 2 is a plan view of the parts shown in Fig. 1, and Fig. 3 is a sectional view on the line 3 3 of Fig. 1.

This invention relates to the construction of cars, and particularly to that type of car known as "gondola" cars.

The object of my invention is to provide a brace for the end wall of the car which will impart great rigidity to said wall and prevent it from bulging and also operate to effectively tie said wall to the side walls of the car.

Referring to the drawings which represent the preferred form of my invention, 1 and 2 designate, respectively, the end wall and the side walls of a gondola car, which walls are provided at their upper edges with angles 3, as is usual in cars of this type. Extending transversely of the end wall is my improved brace, comprising a strip 4, connected thereto by means of rivets 5 and having its ends extending around the side walls and connected thereto by rivets 6. Said strip is preferably formed of sheet metal and is provided with a longitudinally-extending portion 7, that is substantially U shape in cross-section at the central part of the strip and of uniform dimensions for a portion of its length and then gradually tapers to the opposite ends of the strip, where it merges into the body portion thereof. Preferably the crown of said U-shape portion is so formed that a rib 8 is provided, which adds materially to the strength of the strip. As shown in Fig. 2, this rib 8 is also of greatest dimensions at the central portion of the strip and tapers gradually to the opposite ends thereof, so that it practically varies in dimensions as the dimensions of the portion 7 vary.

It is obvious that an end brace constructed in this manner and connected to the end and side walls of a car will impart great rigidity

to the end wall and will prevent it from buckling, and as the brace can be manufactured at a small cost the cost of construction of the car is materially reduced.

It will be observed that my improved brace is in the nature of a dish-shaped truss whose channel portion is deepest at the center of the car and tapers thence toward the sides of the car.

While I have shown the ends of the brace extending around the corners of the car and riveted to the side walls thereof, it is obvious that these bent portions of the brace can be dispensed with and the brace riveted to the end wall of the car, the vertically-extending flanges affording ample securing means to said end wall.

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

1. A brace for strengthening the end wall of a car, said brace being in the form of a dish-shaped truss extending transversely across the end of the car and provided with marginal flanges through which fastenings pass to secure said brace to said end wall; substantially as described.

2. An end brace for cars comprising a member in the form of a dish-shaped truss which extends transversely of the end wall of the car, said member being widest at its center and having its ends secured to the end wall near the sides of the car; substantially as described.

3. An end brace for cars, the same being in the form of a dish-shaped truss widest at its center and whose ends extend around the corners of the car and secured to the side walls thereof; substantially as described.

4. An end brace for cars, the same being in the form of a dish-shaped truss widest at its center and having marginal flanges throughout its length, the ends of said brace extending around the corners of the car and being secured to the side walls thereof; substantially as described.

5. A brace adapted to extend transversely of the end wall of a car comprising a strip of sheet metal provided with a substantially U-shaped portion which is of greatest dimensions at the central portion of the strip and varies gradually in dimensions toward the opposite ends of the strip; substantially as described.

6. A sheet-metal brace adapted to extend transversely of the end of a car and comprising a portion which is substantially U-shaped in cross-section, said portion being of greatest dimensions at the central part of the brace and decreasing gradually toward the opposite ends of the brace and merging into the body portion thereof, and marginal flanges extending throughout the length of said brace; substantially as described.

7. A sheet-metal brace adapted to extend transversely of the end of the car and comprising a U-shaped portion which is of greatest dimensions at the central part of the brace and decreases gradually in dimensions toward the opposite ends of the brace, a rib formed on the crown of said U-shaped portion, and marginal flanges extending throughout the length of said brace; substantially as described.

8. A sheet-metal brace adapted to extend transversely of the end of a car and having its ends deflected to extend around the side walls of the car, said brace being provided with a substantially U-shaped portion which for a part of its length is of uniform dimensions and then gradually tapers toward the opposite ends of the brace, the crown of said U-shaped portion being provided with a rib

which varies in dimensions as the dimensions of the U-shaped portion vary; substantially as described.

9. An end brace for cars, the same being in the form of a dish-shaped truss extending across the end of the car and having its ends secured to the side walls of the car; substantially as described.

10. A device for bracing the end wall of a car, comprising a member in the form of a dish-shaped truss having ribs formed on the crown of the dish-shaped portion, said member being arranged horizontally on the end wall of the car and secured to said wall; substantially as described.

11. A sheet-metal brace adapted to be arranged horizontally on the end wall of a car, the same having a U-shaped portion, marginal flanges provided with openings to receive fastenings for securing said brace to said end wall, and a rib on the crown of said U-shaped portion; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 7th day of December, 1905.

HERBERT W. WOLFF.

Witnesses:

CORA BADGER,

GEORGE BAKEWELL.