No. 840,797. PATENTED JAN. 8, 1907.

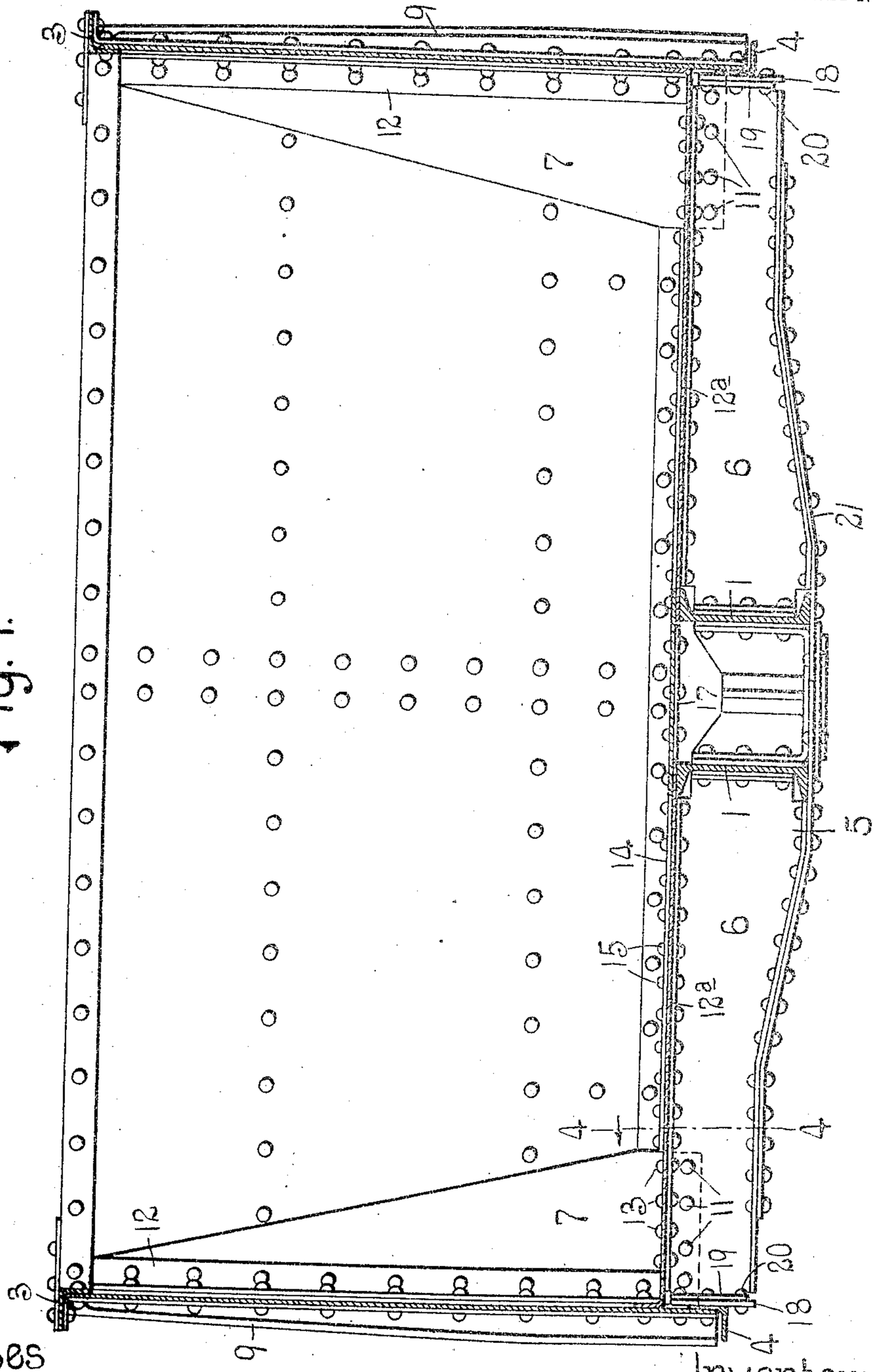
A. E. OSTRANDER.

GONDOLA CAR.

APPLICATION FILED JUNE 29, 1906.

3 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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3 SHEETS—SHEET 2.

Fig. 2.

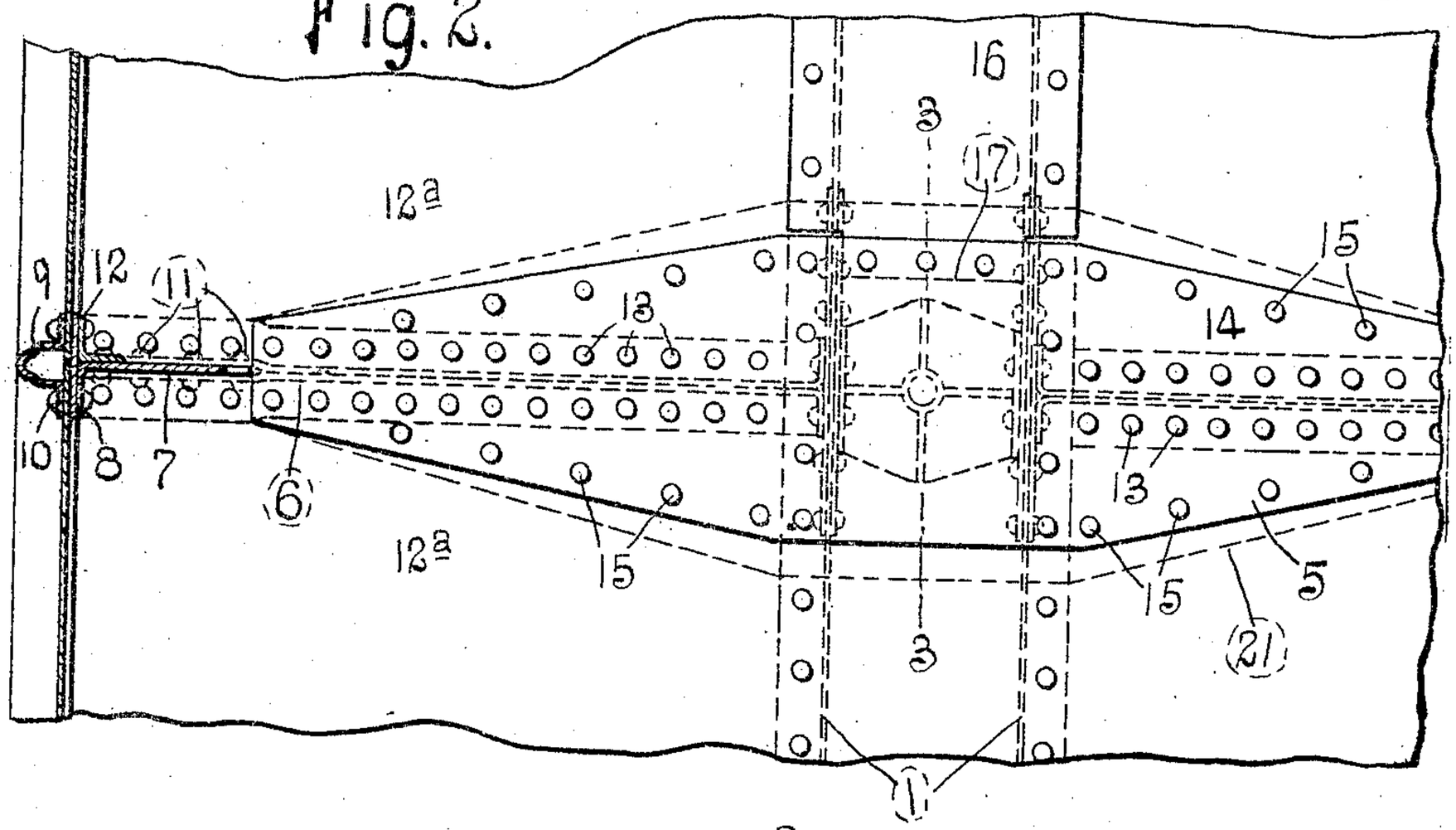


Fig. 3.

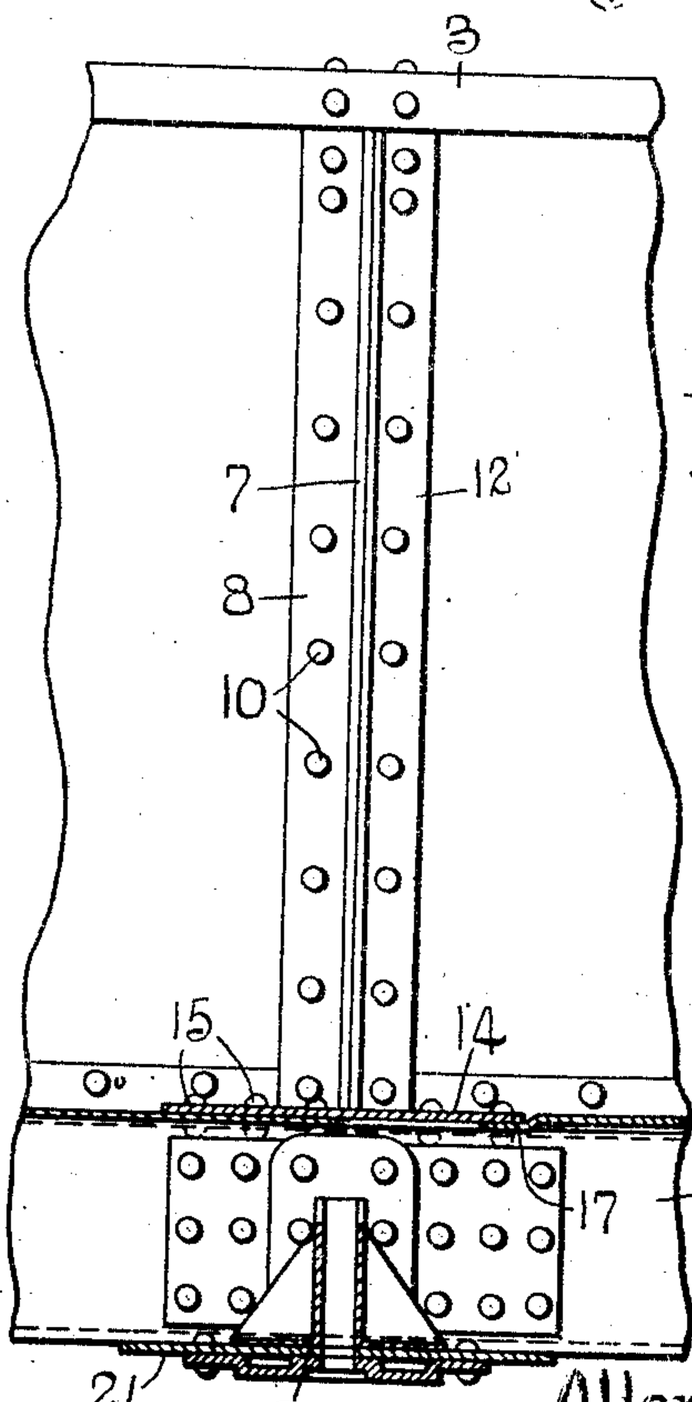
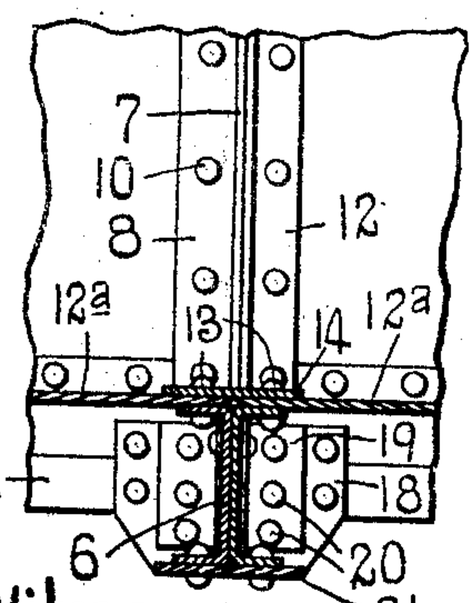


Fig. 4.



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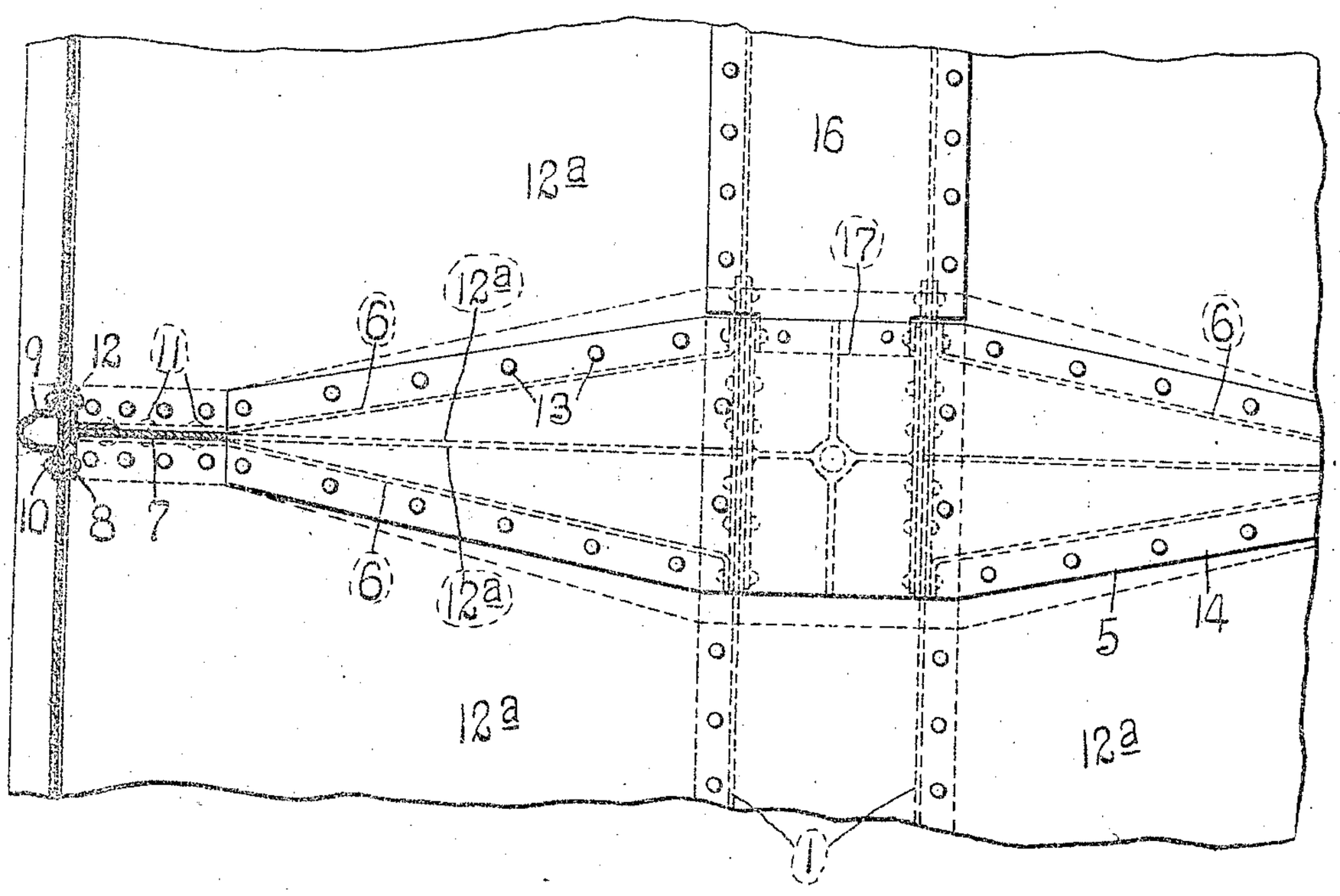
3 SHEETS—SHEET 3.

Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

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GONDOLA CAR.

No. 840,797. Specification of Letters Patent. Patented Jan. 8, 1907.

Application filed June 29, 1906. Serial No. 324,033.

To all whom it may concern:

Be it known that I, ALLEN E. OSTRANDER, a citizen of the United States, residing at Paterson, New Jersey, have invented a certain new and useful Improvement in Gondola 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 a cross-sectional view through a car embodying the features of my invention. Fig. 2 is a top plan view of a portion of the car, showing the manner of connecting the floor-plates to the bolster. Fig. 3 is a detail view, partly in section and partly in elevation, taken on the line 3 3 of Fig. 2. Fig. 4 is a detail view taken on the line 4 4 of Fig. 1, and Fig. 5 is a top plan view showing a modified form of bolster.

This invention relates to cars, and particularly to that type known as "gondola" cars.

The object of my invention is to provide a pressed-metal gondola car which will be light, but still possess the strength required for carrying heavy loads.

Referring to the drawings, which represent the preferred form of my invention, 1 designates the center sills of the car, which are preferably of channel form.

2 designates the plate-girder sides, provided at their upper and lower edges with angles 3 and 4, and 5 designates one of the body-bolsters of the car. Said bolster consists of flanged web-plates 6, arranged back to back and extending laterally from the center sills, to which they are connected.

The sides of the car are strengthened by gusset-plates 7, each having a pressed flange 8, which is connected to the plate-girder side and also to the flange of a pressed-metal side stake 9 by rivets 10. Said gusset-plate extends below the floor of the car, as shown in dotted lines in Fig. 1, and is arranged between the web-plates 6, which are bent slightly, as shown in dotted lines in Fig. 2, said gusset-plate being connected to said web-plates by rivets 11. A strengthening-angle 12, which extends from the upper edge of the plate-girder side to the floor of the car, is connected to said gusset-plate and to the other flange of the side stake 9, as shown in Fig. 2.

The floor-plates 12^a of the car preferably abut at the bolster and are connected to the upper flanges of the web-plates 6 by rivets 13, so that it is unnecessary to notch or cut the floor-plates to provide a clearance for the gusset-plates 7, which extend below the floor of the car. The top cover-plate 14 of the bolster is arranged over the abutting edges of the floor-plates and is connected to the upper flanges of the web-plates 6 by the same rivets 13 which secure the floor-plates to the upper flanges of the web-plates, said top cover-plate being also connected to the floor-plates by rivets 15. The top cover-plate 14 is of greatest width at the center of the car, as shown in Fig. 2, and is also connected to the upper flanges of the center sills, the center floor-plate 16 terminating at the edge of the top cover-plate and having an extension 17, which projects underneath the top cover-plate and is riveted thereto, as shown in Figs. 2 and 3. The center floor-plate 16 extends from bolster to bolster of the car, and as it is connected to said bolsters a very rigid construction is insured. Connecting-plates 18 are fastened to the angles at the lower edge of the plate-girder sides, and the end flanges 19 of the web-plates 6 are fastened to these connecting-plates by rivets 20. The bottom plate 21 of the bolster is a continuous member that extends under the center sills and is connected to the lower flanges of said sills and to the lower flanges of the web-plates 6.

From the foregoing description it will be seen that I have produced a car which is constructed principally of pressed-metal members and in which the sides of the car and the floor are connected to the bolster in a novel manner that insures a very rigid construction that is capable of carrying heavy loads.

While I have herein shown and described the gusset-plate 7 and the side stake 9 as being connected to the bolster of the car, it will be obvious that they could be connected to a cross-bearer or floor-support to perform the same function, and such a construction of course would be within the scope of my invention.

In Fig. 5 I have shown a slightly-modified

form of bolster in which the flanged web-plates or diaphragms 6 are spread apart where they connect with the center sills for the purpose of giving a greater lateral stiffening.

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

1. In a car, side plates, a bolster, gusset-plates secured to the side plates and being connected to the bolster below the floor of the car, floor-plates which abut at the bolster, and a top cover-plate for the bolster arranged over the abutting edges of said floor-plates and being connected to the floor-plates and to the bolster; substantially as described.

2. In a car, a bolster, floor-plates which abut at the bolster, a top cover-plate for the bolster arranged over the abutting edges of said floor-plates, and a center floor-plate provided with an extension which is deflected below the top cover-plate of the bolster; substantially as described.

3. In a car, center sills, a bolster, floor-plates that terminate at the bolster, a top cover-plate arranged above the floor-plates and being connected to the bolster, and a center floor-plate connected to the center sills and having its end deflected below the top cover-plate to which it is connected; substantially as described.

4. In a car, center sills, side plates, connecting-plates depending from the side plates, and laterally-projecting members fastened to said connecting-plates and to the center sills; substantially as described.

5. In a car, center sills, side plates, connecting-plates depending from the side plates, and web-plates provided with flanges for fastening them to the connecting-plates and to the center sills; substantially as described.

6. A car comprising center sills, plate-girder sides, connecting-plates carried by said sides, flanged web-plates arranged back to back and fastened to the center sills and to said connecting-plates, gusset-plates connected to the plate-girder sides and extending between the web-plates, abutting floor-plates connected to the upper flanges of said web-plates, and a top cover-plate arranged over the abutting edges of said plates and being secured to said plates and to the upper flanges of the web-plates; substantially as described.

7. In a car, plate-girder sides, center sills, flanged web-plates connected at one end to the center sills and at their other ends to the plate-girder sides, gusset-plates connected to the sides and to the web-plates below the floor of the car, floor-plates abutting at the gusset-plates and connected to the upper flanges of the web-plates, a top cover-plate arranged above the floor-plates and also connected to the upper flanges of the web-plates, and a bottom plate extending beneath the center sills and being fastened to the lower flanges of the web-plates; substantially as described.

8. In a car, center sills, bolsters comprising top cover-plates, a continuous central floor-plate extending between said bolsters and connected to said center sills, and to the top cover-plates of the bolsters, and floor-plates abutting at the bolsters and extending underneath the top cover-plates of the bolsters; substantially as described.

9. In a car, a side, a transversely-extending floor-support, a gusset connected to the side and to the floor-support, and floor-plates terminating at said floor-support and being connected thereto; substantially as described.

10. In a car provided with side sills and center sills, connecting-plates depending below said side sills, and laterally-projecting members fastened to said connecting-plates and to the center sills; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses this 20th day of June, 1906.

ALLEN E. OSTRANDER.

Witnesses:
ROBT. G. JEFFERY,
WILLIAM N. WYETH.