

No. 733,786.

PATENTED JULY 14, 1903.

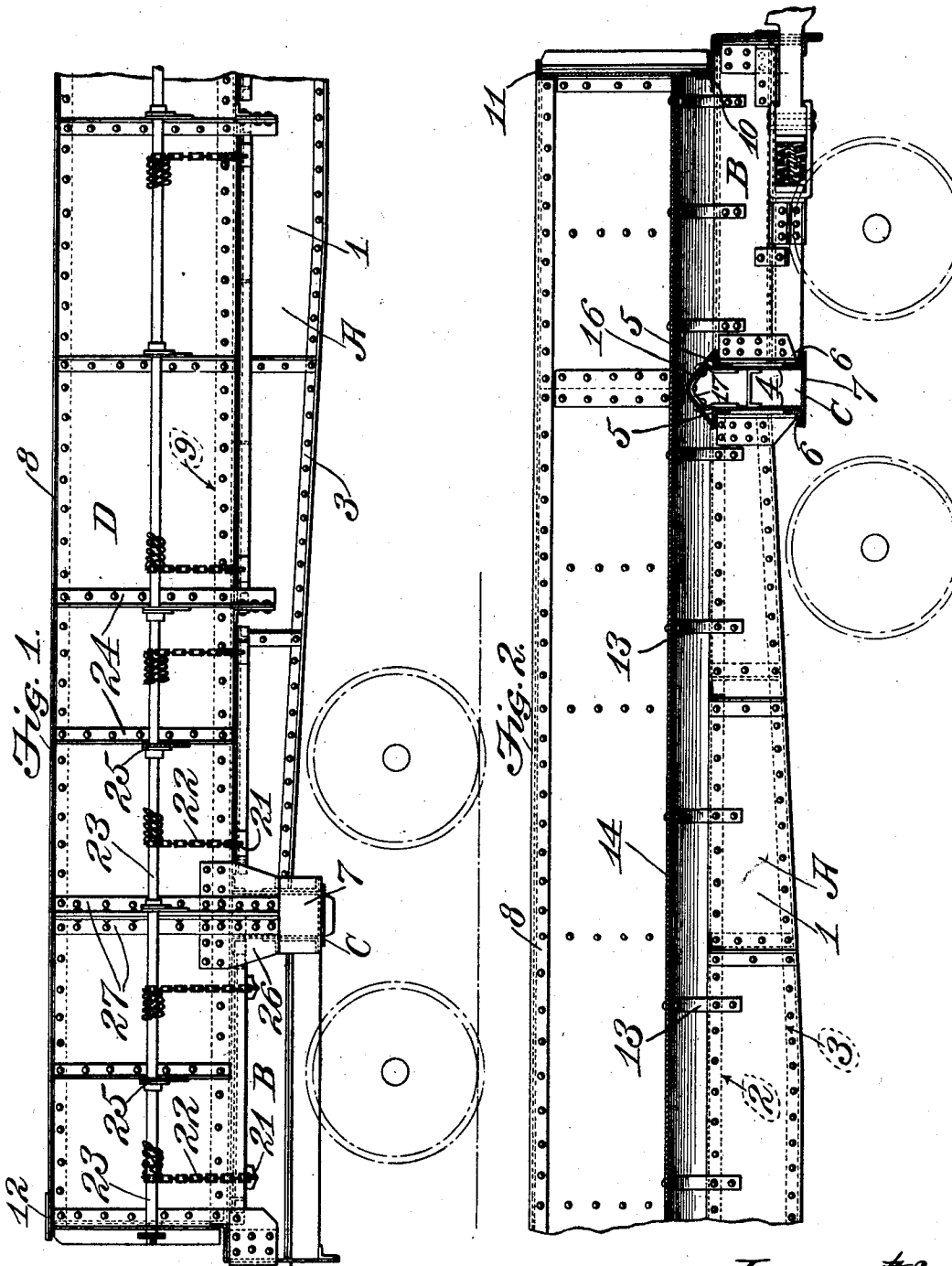
H. W. WOLFF & A. LIPSCHUTZ.

DUMP CAR.

APPLICATION FILED MAR. 20, 1903.

NO MODEL.

4 SHEETS—SHEET 1.



Witnesses:
G. A. Pennington
J. H. Gibbs

Inventors,
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Arthur Lipschutz,
by Bakewell & Cornwall
Attys.

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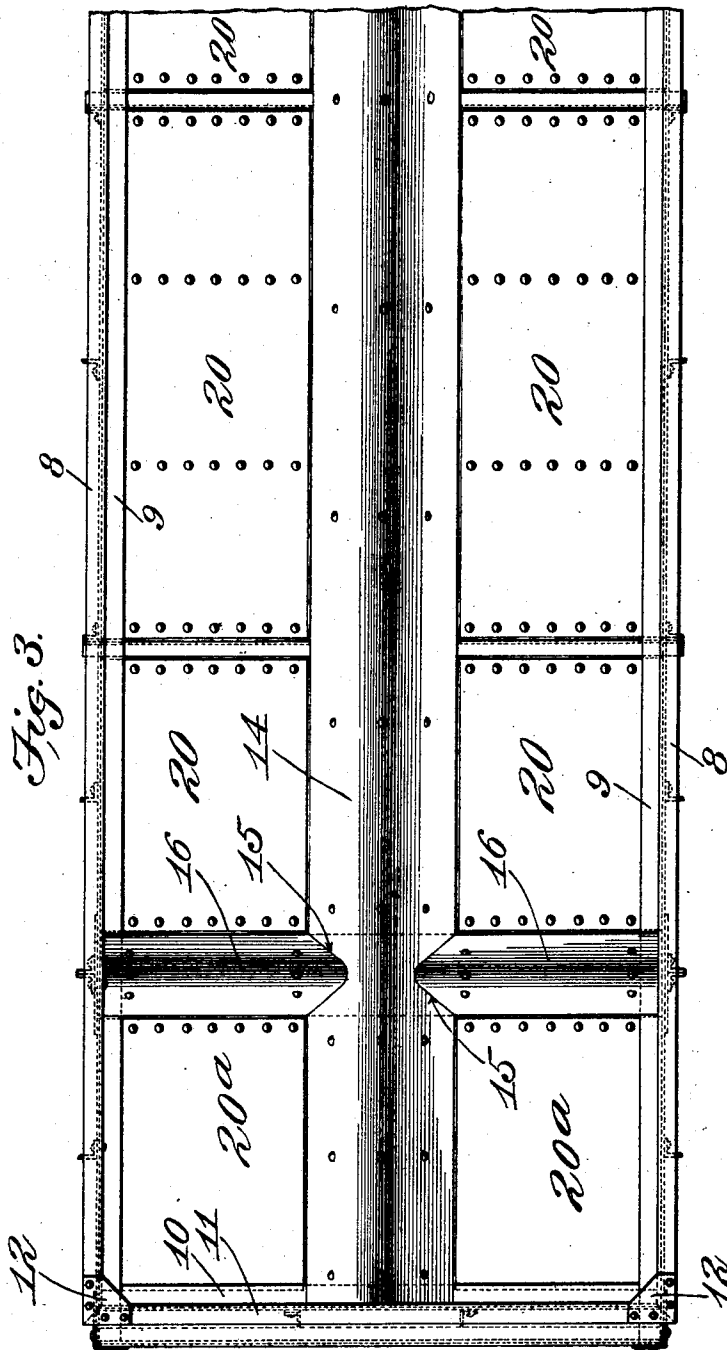
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4 SHEETS—SHEET 2.



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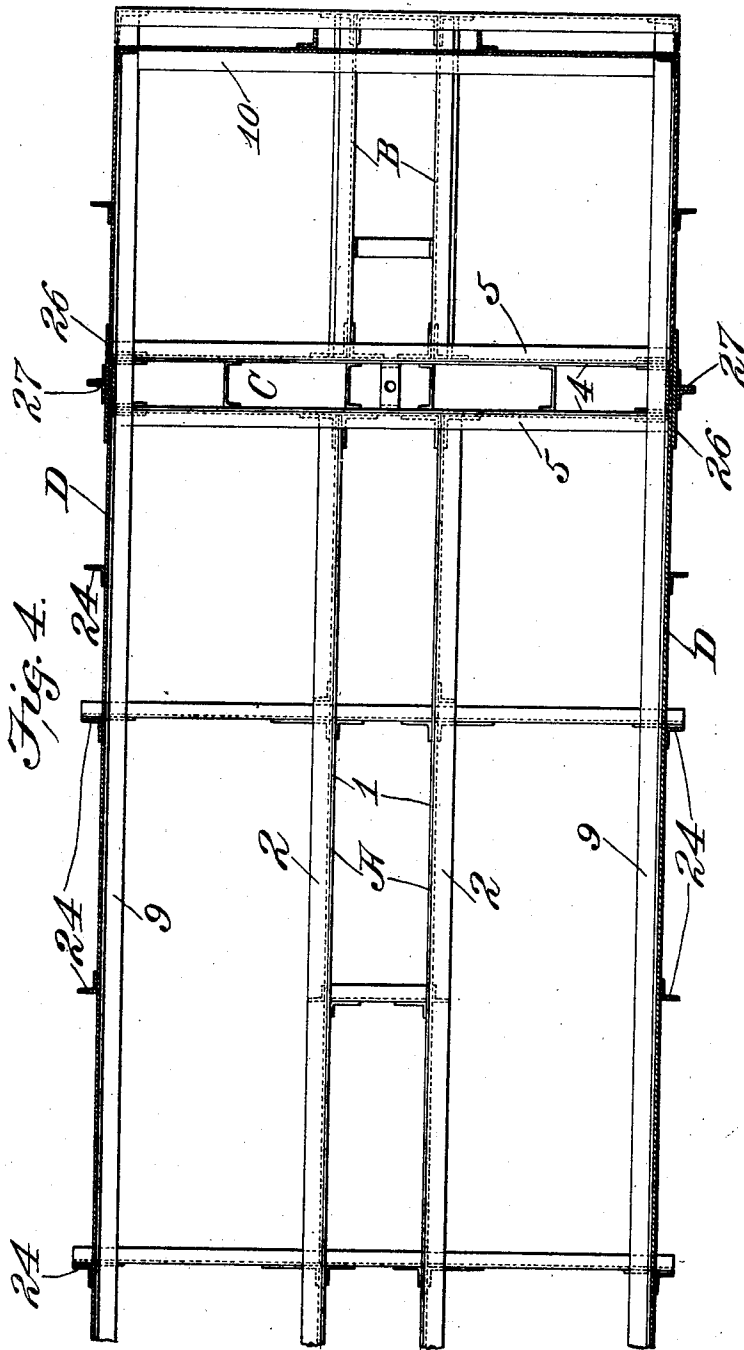
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4 SHEETS—SHEET 3.



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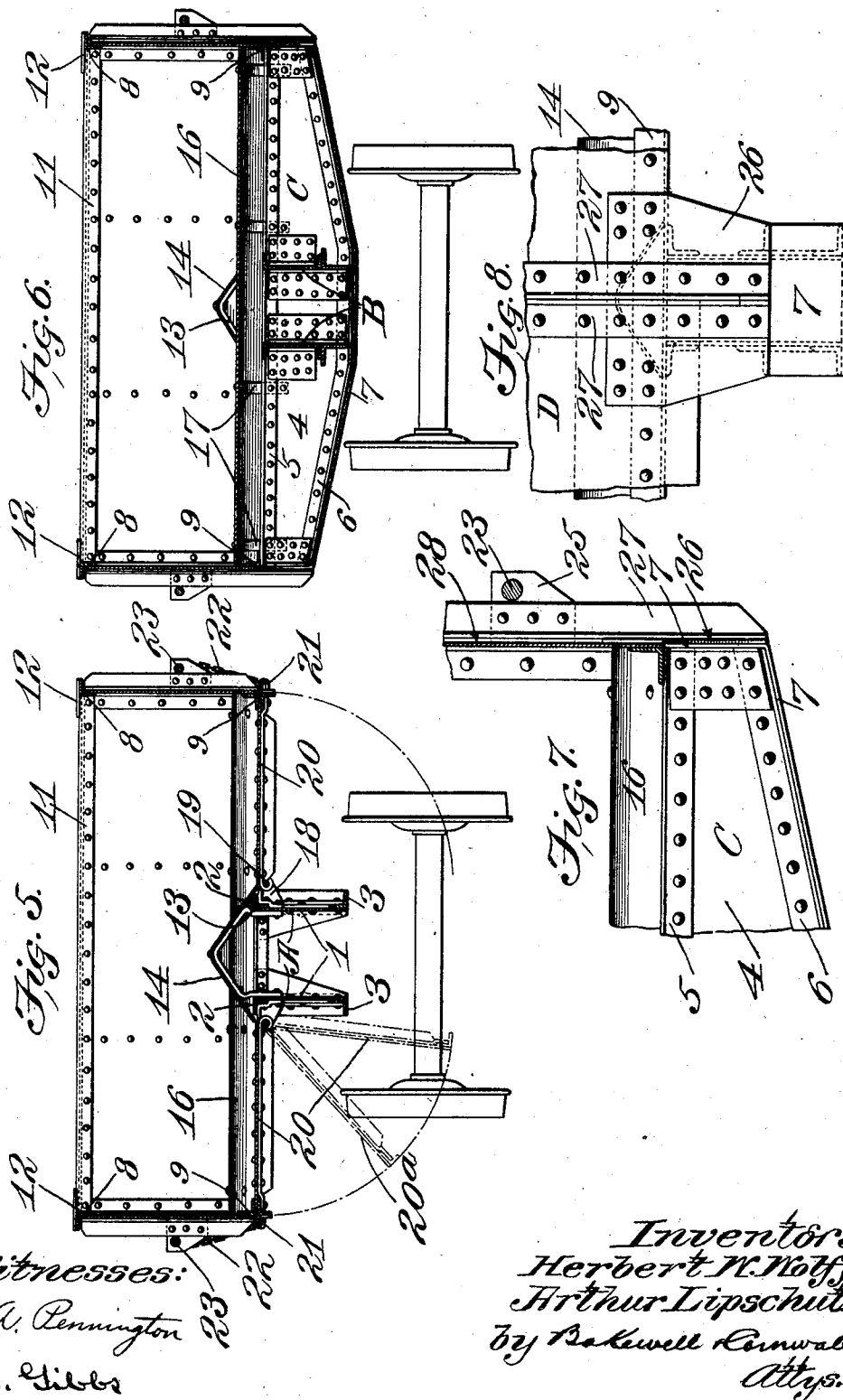
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NO MODEL.

4 SHEETS—SHEET 4.



UNITED STATES PATENT OFFICE.

HERBERT W. WOLFF AND ARTHUR LIPSCHUTZ, OF ST. LOUIS, MISSOURI,
ASSIGNORS TO AMERICAN CAR & FOUNDRY COMPANY, OF ST. LOUIS,
MISSOURI, A CORPORATION OF NEW JERSEY.

DUMP-CAR.

SPECIFICATION forming part of Letters Patent No. 733,786, dated July 14, 1903.

Application filed March 20, 1903. Serial No. 148,741. (No model.)

To all whom it may concern:

Be it known that we, HERBERT W. WOLFF and ARTHUR LIPSCHUTZ, citizens of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Dump-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 side elevational view. Fig. 2 is a longitudinal central sectional view of one end of a car. Fig. 3 is a plan view of one end of the car. Fig. 4 is a sectional view showing the plan of the underframing. Fig. 5 is a transverse section on line 5 5 of Fig. 1. Fig. 6 is a similar section on the line 6 6 of Fig. 1. Fig. 7 is an enlarged detail view of one end of a transom and its connections, and Fig. 8 is a side view of the same.

This invention relates to new and useful improvements in dumping-cars of the type wherein the bottom doors are pivotally supported at the center sills and extend thence to the outer sides of the car, where they are connected to operating means adapted to control the same.

The object of the invention is to produce a car of this type which is provided with a continuous load-shedding crown extending from end to end thereof and in which incidentally the center sills are protected by such crown from the load carried in the car.

Referring to the drawings, A represents center sills extending, preferably, from bolster to bolster, though, if desired, they may extend from end sill to end sill. The webs of said center sills are deeper at the middle portions than at the ends, while angles 2 and 3 are attached, respectively, to the top and bottom edges of said webs and are coextensive therewith, the horizontal flanges of said angles projecting outwardly from said center sills toward the side of the car, thus being oppositely disposed.

B represents draft-sills, preferably used and extending from the bolsters to end sills and may be of any convenient type.

C C are the bolsters, which are provided with vertical web portions 4 and oppositely-disposed flanges 5 at the top portion and similar oppositely-disposed flanges 6 at the bottom portion of said webs, while a bottom plate 7 extends continuously from one end of the bolster to the other and, if desired, may, as shown in Fig. 7, be continued at the ends of said bolsters upwardly to form closures for the open ends thereof. Strictly speaking, these are no side sills, though the sides of the car are reinforced at the top and bottom, respectively, by means of angles 8 and 9, extending longitudinally thereof throughout the length of the car, while similar angles 10 are provided at the sides of the car at the end. Across the end portions of the body portion of the car at the top are angles 11, and gusset-plates 12 connect the upper angles, secured, respectively, to the sides and ends of the car.

Secured to the inner face of the center-sill webs are yokes 13, which extend thence upwardly and form arches between the center sills, to which arches are connected the crown-sheet 14, which extends continuously from one end of the car to the other. This crown-sheet is preferably continuous and in the same plane from end to end, as it has been found in practice that where different angles of inclination of the sides thereof are employed the load will "hang" and fail to dump as quickly as where a continuous crown is employed. This crown-sheet is cut away at 15 above the body-bolsters, and the crown-sheet 16, secured above said bolsters, passes thereunder at that point, thereby providing a crown-sheet over the bolsters which merges with the longitudinal crown-sheet above said center sills.

The bolster crown-sheet 16, as will be seen in Fig. 2, is supported in the same manner as the crown-sheet 14 by means of yokes connected to the web portions of the said bolster and extends entirely across the interior portion of the car, whereby said crown-sheets form a perfect shedding-surface for the load carried in said car above the center sills and transoms.

Attached to the center sills at convenient

intervals are brackets 18, carrying pintles 19, to which pintles are connected the pivoted doors 20 and 20^a, forming the bottom portion of the car, the doors 20 being the doors in that portion of the car between the bolsters and the doors 20^a being the doors between the bolsters and the end sills. At convenient intervals the doors are provided with loops 21, to which are connected the chains 22, extending thence around the shaft 23, which shaft extends the entire length of the car and preferably projects for a short distance therebeyond, as best shown in Fig. 1, where an angular portion thereof is provided for the attachment of means for rotating said shaft and the usual pawl and ratchet incident to this class of devices. Disposed at convenient intervals along the outer side of the car-body D are vertically-disposed angles 24, riveted to said car-body, to the outwardly-projecting flange of which are connected brackets 25, in which rotates said longitudinal shaft 23, whereby said shaft is suitably supported for proper operation. At the ends of the bolsters C gusset-plates 26 are connected to the sides of the car and to said bolsters, while flanges 27 are connected to said gusset-plates 26 and extend thence upwardly, as best shown in Figs. 1 and 8, where they are connected to the sides of the car. When the bottom plate of the transom is carried upwardly, as shown in Fig. 7, filler-blocks 28 are interposed between the car-body sides and the flanges of said angles, the rivets connecting the angles extending through the sides of the car and through said filler-blocks 28 and holding the same firmly together.

When it is desired to fill the car, the doors are supported as shown in full lines in Fig. 5, and when it is desired to dump the load the doors 20 and 20^a are released by means of the pawl and ratchet before referred to, when the weight of the load carried in the car will carry said doors downwardly to the positions shown in dotted lines at the left-hand side of Fig. 5, the doors 20 extending substantially vertically, while the doors 20^a will rest upon the wheels of the car and be supported thereby.

We are aware that minor changes in the construction, arrangement, and combination of the several parts of our device can be made and substituted for those herein shown and described without in the least departing from the nature and principle of our invention.

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

1. In a metallic dumping-car, end sills, continuous transoms, center sills extending therebetween, draft-sills extending to end sills, a longitudinal deflecting-crown extending from end sill to end sill, in substantially the same plane throughout its length, transom-crowns merging with said longitudinal crown above said transoms, and doors extending to the sides of the car, which doors are hung below

the longitudinal crown; substantially as described.

2. In a metallic dumping-car, end sills, continuous transoms, center sills comprising built-up channels, deepest near their middle portion, extending therebetween, draft-sills extending to end sills, a longitudinal deflecting-crown extending from end sill to end sill, in substantially the same plane throughout its length, transom-crowns merging with said longitudinal crown above said transom, and doors extending to the sides of the car, which doors are hung below the longitudinal crown; substantially as described.

3. In a metallic dumping-car, continuous transoms, center sills, draft-sills beyond said transoms, a longitudinal load-deflecting crown extending the whole length of said center sills and said draft-sills, and transom-crowns merging therewith, which transom-crowns serve as a portion of the floor of the car; substantially as described.

4. In a dumping-car, flanged center sills, end walls, a longitudinal load-deflecting crown extending from end wall to end wall, continuous transoms, and continuous transom-crowns connected therewith which serve as a portion of the floor of the car; substantially as described.

5. In a dumping-car, a continuous crown-sheet above the transoms forming cover-plate therefor and also serving as a portion of the floor of the car; substantially as described.

6. In a car, a transom with web portions connected with the center sills, top and bottom angles connected with said web, a crown-sheet extending substantially the length of said web portion and supporting means therefor connected to said webs; substantially as described.

7. In a dumping-car, center sills extending from bolster to bolster, draft-sills extending from bolster to end sills and a crown-sheet extending substantially the length of the car and supported from means extending between and connected with the web portions of said center sill; substantially as described.

8. In a car, a transom comprising parallel flat web members connected with the center sills, angles secured to the top and bottom portions of said webs, a continuous bottom plate and a continuous crown-sheet connected to said transom; substantially as described.

9. In a dumping-car, center sills extending from bolster to bolster, draft-sills extending from bolster to end sills, a bolster comprising parallel web portions, supporting means connected to the webs of said sills and said bolsters, and crown-sheets supported thereby; substantially as described.

10. In a dumping-car, center sills, draft-sills, continuous transoms, a load-deflecting crown extending longitudinally of said center sills and draft-sills, in substantially the same plane from end to end, and transom-crowns merging therewith which extend to a

plane below the upper line of said longitudinal crown; substantially as described.

11. In a dumping-car, flanged center sills, flanged draft-sills, continuous transoms extending transversely between said center and draft sills, a load-deflecting crown extending longitudinally of and supported from the web portions of said center sills, and transom-crowns forming a portion of the floor of the car; which transom-crowns are supported by means connected with the web portions of said transoms; substantially as described.

12. In a dumping-car, flanged center sills, flanged draft-sills, continuous transoms extending transversely between said center and draft sills, a load-deflecting crown extending longitudinally of and supported from the web

portions of said center sills, and continuous transom-crowns the upper line of which is in a lower plane than the upper line of said longitudinal crown and forms a portion of the floor of the car, which transom-crowns are supported by means connected with the web portions of said transoms; substantially as described.

In testimony whereof we hereunto affix our signatures, in the presence of two witnesses, this 7th day of March, 1903.

HERBERT W. WOLFF.
ARTHUR LIPSCHUTZ.

Witnesses:

FREDERICK H. GIBBS,
GEORGE BAKEWELL.