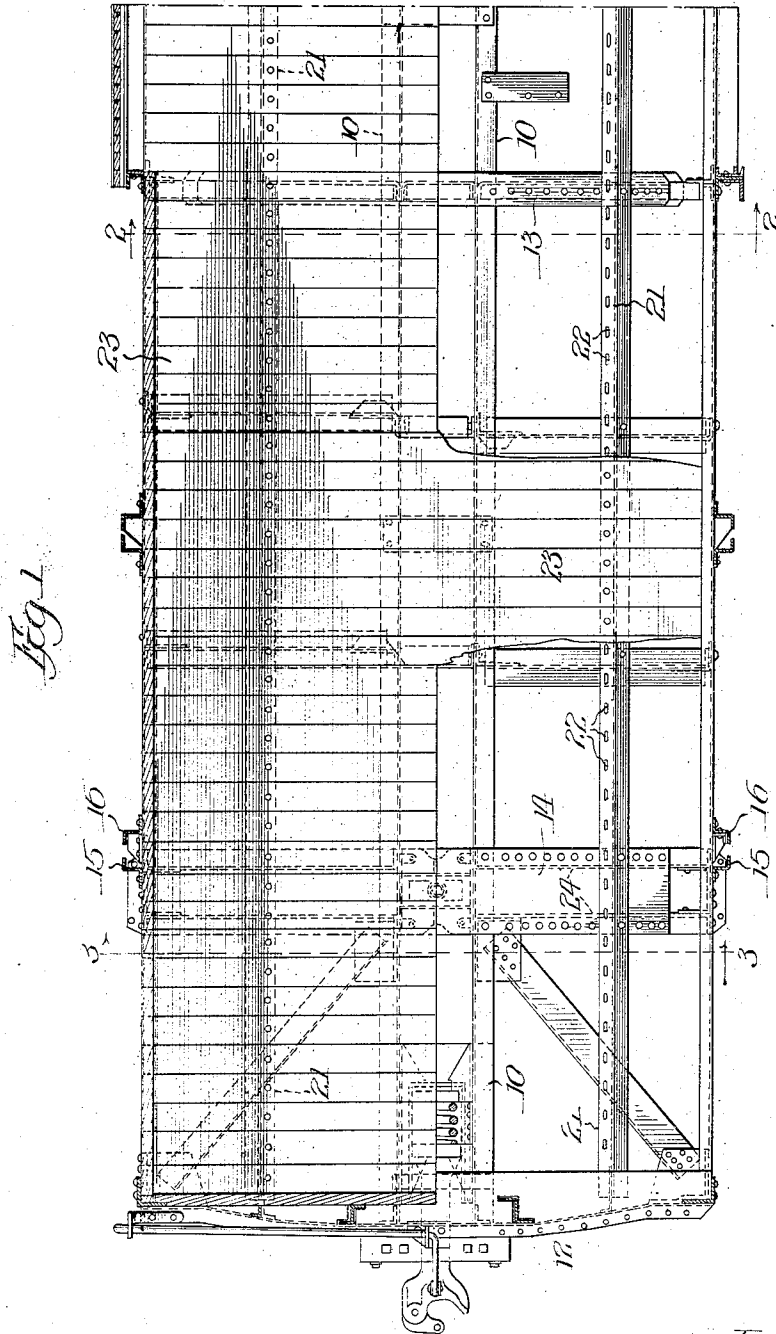


W. E. FOWLER, SR.
CAR FLOOR CONSTRUCTION.
APPLICATION FILED SEPT. 16, 1912.

1,062,701.

Patented May 27, 1913.

2 SHEETS—SHEET 1.



Witnesses:

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2 SHEETS—SHEET 2.

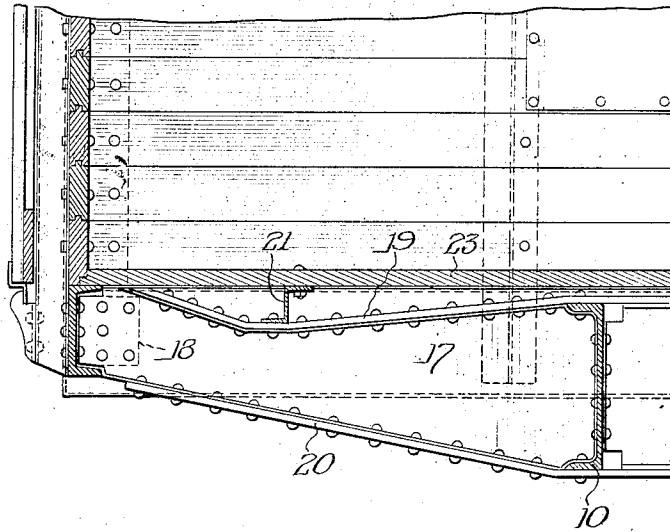


Fig. 2

Fig. 3.

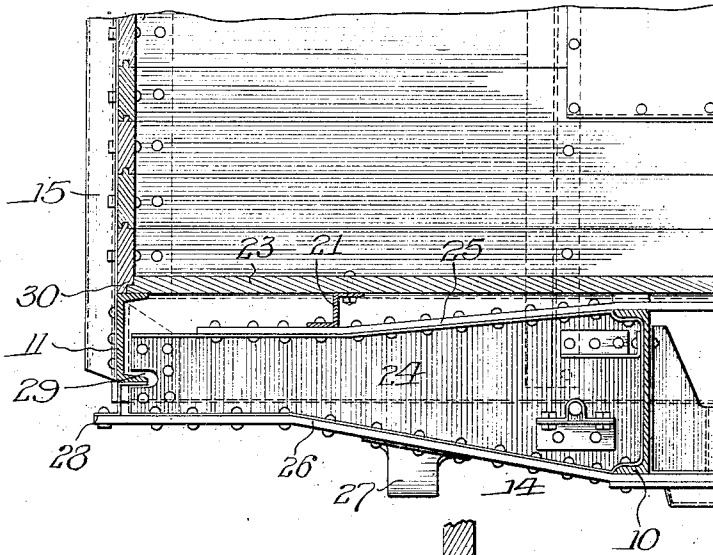
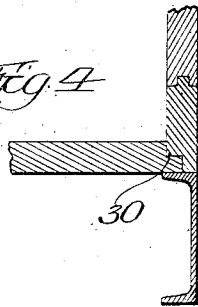


Fig. 4



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UNITED STATES PATENT OFFICE.

WILLIAM E. FOWLER, SR., OF CHICAGO, ILLINOIS, ASSIGNOR TO THE FOWLER CAR COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CAR-FLOOR CONSTRUCTION.

1,062,701.

Specification of Letters Patent.

Patented May 27, 1913.

Application filed September 16, 1912. Serial No. 720,550.

To all whom it may concern:

Be it known that I, WILLIAM E. FOWLER, Sr., a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Floor Constructions, of which the following is a specification.

My invention relates to railway-cars, and has particular reference to a novel floor and under-frame construction therefor.

The type of car to which the present invention particularly applies is best shown in my earlier Patent No. 962,425, that is, a box-car without interior framing composed of boards placed edge on edge, these boards being bolted or otherwise secured to a metal exterior frame-work, the car having only a single sheath, this sheath being placed inside of the framing as to sides, ends, and floor. The floor construction of such a car is an important point, and I have found in practice that a floor such as shown in the accompanying drawings is most suitable. The under-framing remains much the same as found in standard practice, that is, with channel center-sills, body bolsters, cross bearers, the transverse-members being united and a portion of the load carried by channel side-sills. However, in my construction, I have eliminated floor nailing strips and have provided for maintaining the floor in tight condition through the use of only two rows of bolts, the ends of the floor-boards being held by the side-boards. The end-construction is so arranged that moisture is excluded without the use of increased material or at added expense.

The invention will be more readily understood by reference to the accompanying drawings, wherein,

Figure 1 is a plan view partly in section showing a half of a car, a portion of the floor being removed to show the underframe construction; Fig. 2 is a section on line 2—2 of Fig. 1; Fig. 3 is a section on line 3—3 of Fig. 1, and Fig. 4 is an enlarged sectional detail of the connecting-means between the floor and side-wall.

Referring more particularly to the drawings, it will be seen that the under-frame is composed of channel center-sills 10, channel side-sills 11, end-sill 12, cross-bearers 13, and body-bolsters 14. Side stakes 15 and diagonals 16 extend upwardly at intervals forming the side-frame of the car. The cross-bearers, as shown in Fig. 2, are composed of pressed channel-shaped filling-members 17 suitably riveted to the channel center-sills, and secured to the channel side-sill by means of angle-plate 18. Top and bottom cover-plates 19, 20, complete the construction. It will be noted, that the cross-bearers, at a point midway between the channel center-sill and the channel side-sills, are depressed to accommodate Z-bars 21. These Z-bars extend from end to end of the car, being suitably riveted to the transverse-members as shown. The upper leg of the Z-bars is slotted at intervals as shown at 22 in Fig. 1, whereas the floor-boards 23 are apertured to accommodate bolts. By this construction, the boards may be moved longitudinally by means of wedges or screws in order to take up any shrinkage which may occur. This is not difficult of accomplishment, it being required only to loosen the bolts by means of which the boards are attached to the Z-bars, and after such shrinkage is taken up again tightening the bolts.

The body-bolster, as shown in Fig. 3, is composed of two channel-shaped filling-members 24, the flanges of both channels extending inwardly and forming in effect a box. The fillers are secured to the center-sills and to the channel side-sills, and is completed by top cover-plate 25 and bottom cover-plate 26. The bottom plate 26 carries a side-bearing 27 and is extended at 28 to form a bearing for a jack in case the car-body is to be lifted. The filler-members 24 are recessed at 29 to accommodate the lower leg of the channel side-sill 11. This is made necessary by the downward deflection of the body-bolster in order to provide space for the location of the Z-bars 21, heretofore described. By this construction, a continuous Z-bar is provided which reduces expense in assembling and renders the floor more accessible and more easily repaired.

The ends of the floor-boards 23 are stepped and cooperate with a similar stepped portion on the side-boards, as at 30. By this construction the side-boards hold the floor-boards in place and, furthermore, the side-boards extending over the ends of the floor-boards, moisture is prevented from

entering and a grain-tight joint is effected. I consider this an important advantage in the floor construction in that another row of bolts is made unnecessary and all the advantages are secured that would be present with another fastening-means.

The construction described for the connection of the floor and side-walls is likewise followed for the end-walls.

10 I am aware that modifications may be made in the construction described, and such modifications as are within the scope of my claims I consider within the spirit of my invention.

15 I claim:

1. In a railway-car, the combination of center-sills, side-sills, transverse-members having depressed portions, slotted metallic angular bars seated in said depressed portions and extending from end to end of the car, and floor-members bolted to said angular bars through said slots, substantially as described.

25 2. In a railway-car, the combination of center-sills, side-sills, and transverse-members having depressed-ports, slotted Z-bars seated in said depressed-ports and extending from end to end of the car, and

floor-members bolted to said Z-bars through said slots, substantially as described. 30

3. In a railway-car, the combination of center-sills, side-sills, and transverse-members having depressed-ports, a pair of Z-bars resting in said depressed-ports and extending from end to end of the car, floor-boards resting on said center-sills, side-sills, and Z-bars, and being positively connected to said Z-bars only, substantially as described. 35

4. In a railway-car, the combination of center-sills and side-sills, transverse-members, angular members seated on said transverse-members and extending from end to end of the car, floor-boards resting on said side-sills and angular members, means for securing said boards to said angular members and a side-wall, said side-wall having a rabbeted connection to said floor-boards and adapted by interlocking engagement to hold said floor-boards in position, substantially as described. 40 45 50

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