W. E. FOWLER, Sr.

CAR FLOOR.

APPLICATION FILED DEC. 16, 1914.

1,146,859.

Patented July 20, 1915.

2 SHEETS—SHEET 1.

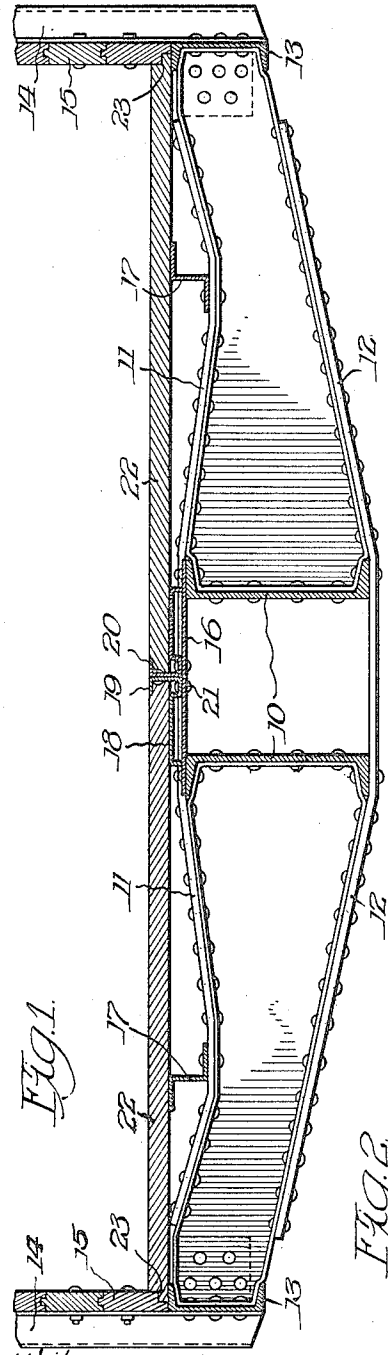


FIG. 1.

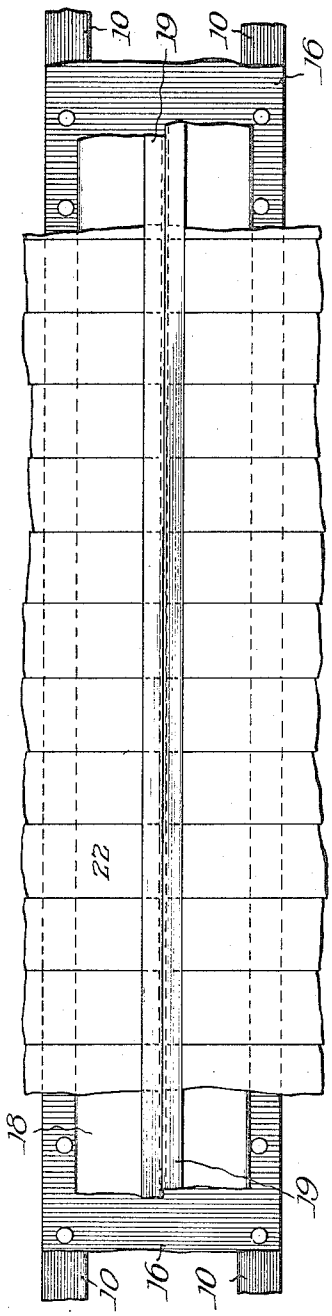


FIG. 2.

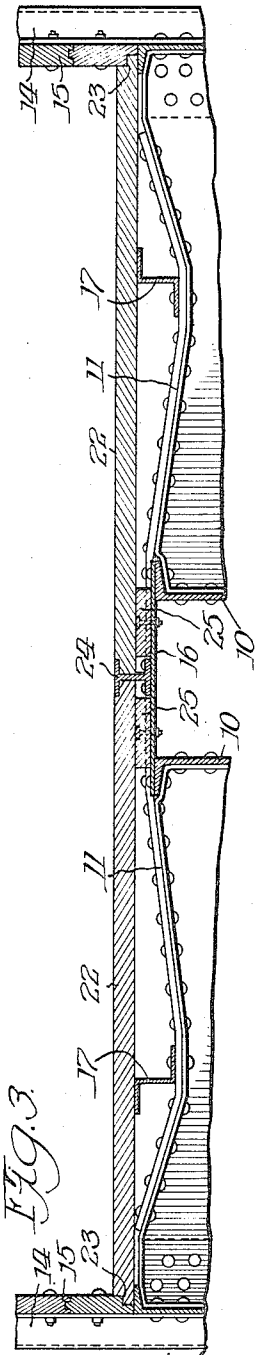


FIG. 3.

Witnesses:

Geo. C. Davison

C. J. Murray

Inventor

William E. Fowler Sr.

By C. C. Linthicum

Atty.

W. E. FOWLER, Sr.

CAR FLOOR.

APPLICATION FILED DEC. 16, 1914.

1,146,859.

Patented July 20, 1915.

2 SHEETS—SHEET 2.

Fig. 4.

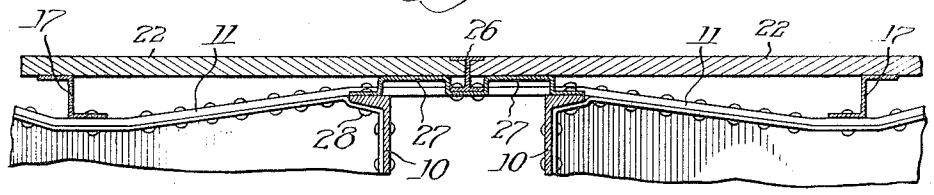


Fig. 5.

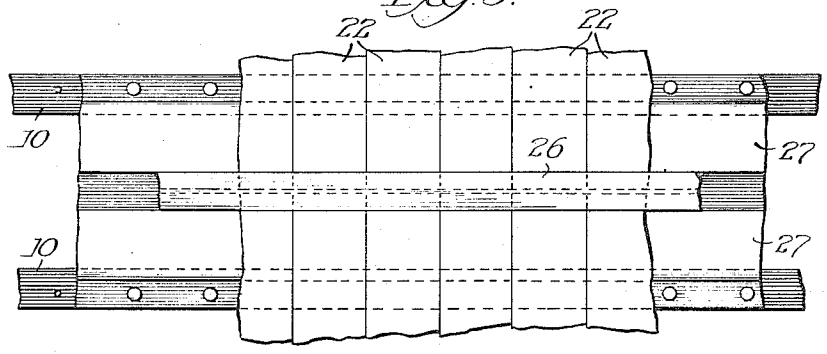


Fig. 6.

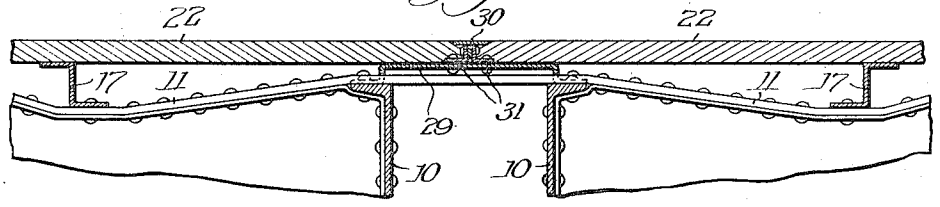
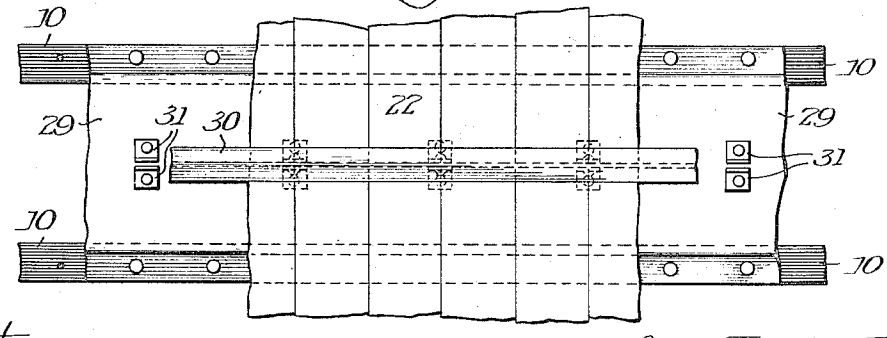


Fig. 7.



Witnesses:

Geo. C. Dennison

C. F. Murray

Inventor

William E. Fowler Sr.

By C. C. Linthicum

Atty.

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.

1,146,859. Specification of Letters Patent. Patented July 20, 1915.

Application filed December 16, 1914. Serial No. 877,516.

To all whom it may concern:

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

My invention relates to railway cars and has particular reference to a novel floor construction for use in connection therewith.

Car floors are a source of considerable worry and annoyance to the railroads for the reason that such floors frequently leak causing loss of grain and similar material, the leak in the floor being repaired with difficulty usually for the reason that the boards composing the floor extend from side to side of the car and underlie the side walls. Furthermore, the floors as usually constructed, consist of boards extending as stated from side to side of the car and must therefore be of considerable length, no means being provided for utilizing short sections. Furthermore the fastening means for such floors as usually constructed consists in bolts or nails, all of which add considerably to the cost of the car. If bolts are used the bolt holes must be bored in the field, this requiring considerable additional labor.

My invention contemplates a floor so constructed as to utilize short lengths of boards, so arranged as to obviate the necessity for fastening means and constructed to be readily repaired as required.

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

Figure 1 is a fragmentary vertical section through a railway car of the Fowler type, the section being taken at a point contiguous to one of the cross bearers; Fig. 2 is a plan view of a section of such a car floor at a point between the cross bearers; Fig. 3 is a view similar to Fig. 1, showing a slight modification; Fig. 4 illustrates a further modification; Fig. 5 is a plan view of the construction shown in Fig. 4; Fig. 6 is a view similar to Figs. 1, 3 and 4, with a modified form of holding member, and, Fig. 7 is a plan view of the construction shown in Fig. 6.

Referring more particularly to Figs. 1 and 2, it will be seen that I provide a center sill composed of channels 10, a cross bearer including top cover plate 11, and bottom cover plate 12, side sills 13, and a side wall composed of posts 14, and a single interior sheathing 15. The center sill is provided with the usual cover plate 16, interrupted at the cover plate 11. At points intermediate the center sill and the side sills, the transverse members are depressed to provide seats for the longitudinal Z-bars 17, upon which the floor may rest.

Extending longitudinally of the center sill are metallic plates angularly bent to provide the seat portions 18, and the overhung portion 19. Two of these plates are placed back to back and rivets 20, serve to unite them; similarly rivets 21, are used to secure the plates to the cover plate 16. Floor boards 22, are laid upon the seat portions 18, and the Z-bars 17, the outer ends of the boards being notched or stepped, as at 23, and fit beneath the lower boards of the car wall 15. The inner ends of the boards rest beneath the overhung portion 19. The boards are thus securely held against displacement.

In the construction shown in Fig. 3, I have substituted for the bolting members 18, 19, a commercial I-beam 24, which is suitably riveted to the top plate 16, of the center sill, the beam being notched out at the point of engagement with the top cover plate 11 of the cross bearer. As means for supporting the floor boards I provide wood strips 25, suitably bolted to the cover plate 16. This provides a simple and cheap construction. In Fig. 4 a similar I-beam 26, is employed, a bearing member for the boards, however, consisting in the cover plate bent to provide seats 27, and grooved to accommodate the beam 26. The side flanges of the plate are riveted as at 28, to the flanges of the center sill. In Fig. 6 I have shown a bearing plate 29, to the face of which is secured a T-beam 30, extending from end to end of the car, this beam being supported by short angular brackets or feet 31, located at intervals in the length of the T-beam, as best shown in Fig. 7.

In all the modified forms the same general construction is contemplated; that is, short boards one end of which may project beneath the car wall and the other end be held beneath a flange of the longitudinal holding member. This provides a secure

support for the floor at required points and permits of the use of short lengths of boards which might not otherwise be used. Furthermore, such construction permits of the ready repair of the floor and avoids the necessity for fastening means to the floor. If a builder prefers to nail the floor boards, the construction in Fig. 3 may be employed and parts 25 utilized as nailing strips.

Various other modifications will readily suggest themselves to those skilled in the art and such modifications as are within the scope of my claims I consider within the spirit of my invention.

I claim:

1. In a railway car, the combination of a central longitudinal frame member, an angular member supported thereby, and floor boards the inner ends of which are held beneath said angular member.

2. In a railway car, the combination of a center sill, a pair of side walls, an angular member supported by said center sill, and floor boards, the inner ends of which are held beneath said angular members, and the outer ends of which engage said side walls.

3. In a railway car, the combination of a center sill, side walls, an angular member supported on said center sill, a floor composed of two sections having a longitudinal division, the inner ends of the members of each section being held beneath said angular member.

4. In a railway car, the combination of a center sill having a cover plate, a metallic shape supported on said cover plate and providing lateral flanges, and floor boards supported on said shape with their ends beneath said flanges.

5. In a railway car, the combination of a center sill, an angular member supported on said center sill, a side wall and floor boards provided with notched outer ends, the inner ends of said boards being adapted to be held against vertical displacement by said angular member.

6. In a railway car, the combination of center sills, a cover plate for the sills said plate being bent to form depressions for riveting at the center and edges and raised portions to form a bearing for the floor boards, an angular member in the center recess and riveted to the plate, the depressed edges riveted to the flanges of the center sill, and floor boards notched to receive and covered by flanges of said angular member.

Signed at Chicago, Illinois, this 14th day of December, 1914.

WILLIAM E. FOWLER, Sr.

Witnesses:

C. F. Murray,

T. D. Butler.