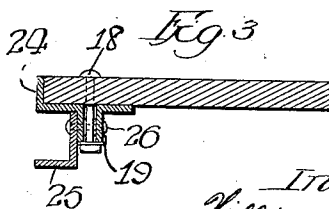
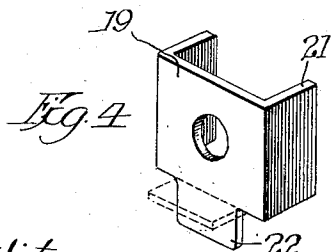
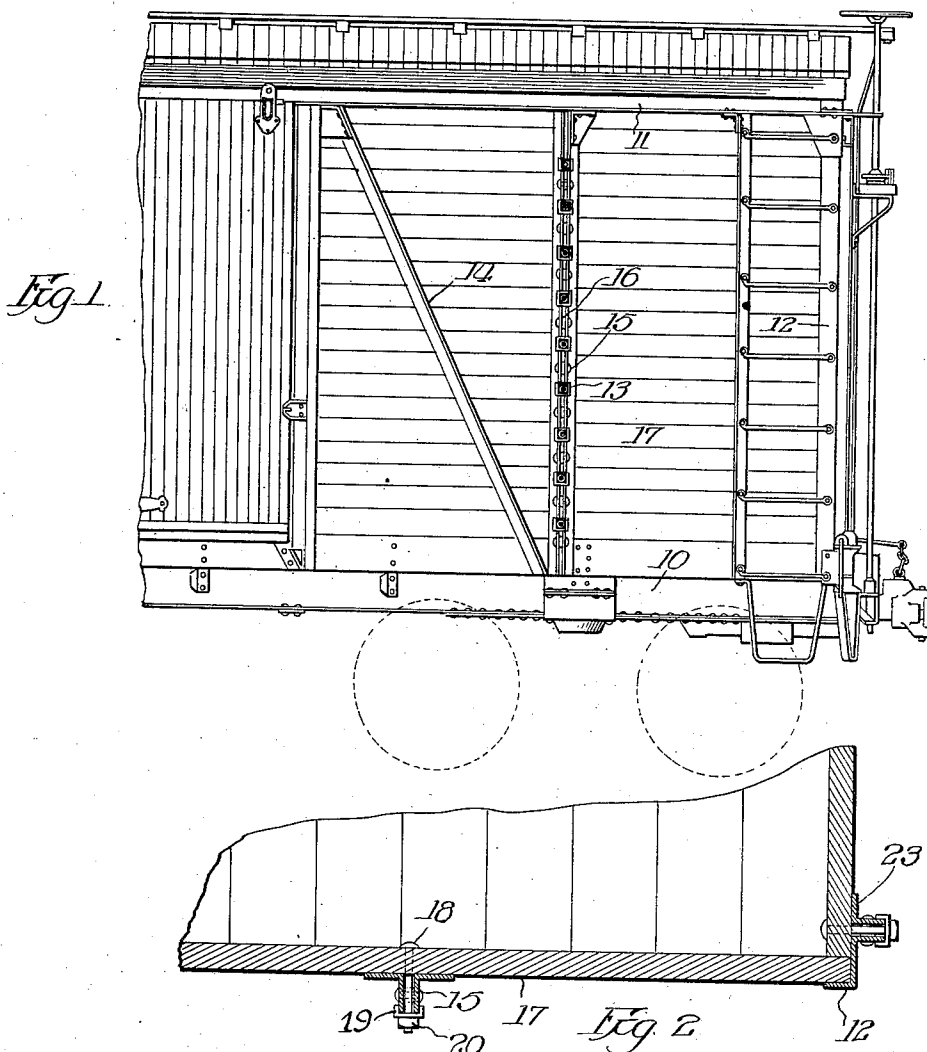


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CAR SIDE CONSTRUCTION.
APPLICATION FILED OCT 31, 1912.

1,065,931.

Patented July 1, 1913.



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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 SIDE CONSTRUCTION.

1,065,931.

Specification of Letters Patent.

Patented July 1, 1913.

Application filed October 31, 1912. Serial No. 728,783.

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 Side Construction, of which the following is a specification.

My invention relates to railway cars and has particular reference to a novel car side construction.

The invention is particularly applicable to steel frame single sheath cars such as shown and described in my prior Patent No. 962,425. It will be understood that in such cars the boards forming the sheath are placed horizontally instead of vertically as has been commonly the custom. It also follows that in the use of such cars for the transportation of grain and similar finely divided materials the car floor and sides must be kept tight in order to overcome leakage. In single sheath cars this is accomplished by placing the boards into closer engagement by means of screw or wedge power. It follows, however, that the side boards must be attached to the metallic frame of the car in such manner as to permit limited vertical movement in order to secure the tightening effect. This has heretofore been accomplished by slotting the metallic members at the points where the fastening bolts engage the frame. This method is objectionable in many ways; first, because of the cost of slotting and a consequent weakening of the metallic frame, and, second, because of the limited movement permitted in any slots which may be formed.

A further objection to the slotting of the metallic members of the frame is found in the fact that to secure a proper tightening effect the slots in the metallic frame should be of different lengths from top to bottom of the members, this for the reason that assuming a uniform shrinkage of the side boards from top to bottom, it will be seen that to secure tightening of the bottom members there must be an extended movement of the top members assuming the tightening force is exerted from the top. It is, of course, not practicable to form slots of different lengths in the height of the posts. Therefore I have devised means whereby the expense of slotting is avoided, the holding power of the side bolts is not

decreased, the movement of the boards in tightening is unlimited and the general upkeep expense of the car is lowered.

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

Figure 1 is a side elevation of a portion of a car equipped with fastening means in accordance with my invention; Fig. 2 is a fragmentary section of a typical construction; Fig. 3 is an enlarged fragmentary section showing the door post construction, and, Fig. 4 is an enlarged perspective view of a combined washer and nut lock which may be employed with my construction.

Referring more particularly to the drawings it will be seen that the frame of the car is composed of the usual side sill 10, top sill 11, corner post 12, verticals 13 and diagonals 14. My improvement is shown in Fig. 1 as applied to the verticals only. These vertical posts are preferably composed of two angles placed back to back, rivets 15 being placed through the projecting legs of the angles, thimbles 16 serving to space the angles apart as required. The side boards 17 are apertured at intervals to accommodate a fastening bolt 18, the shank of the bolt passing between the legs of the angles and through a washer 19, which provides a seat for a nut 20. The washer, as best shown in Fig. 4, has its ends 21 bent at right angles to the face of these nuts extending over the legs of the angles and securely holding the end of the bolt against any transverse movement. A lip 22 is provided as a part of the washer 19, which lip as shown in dotted lines in Fig. 4, will be bent up after the nut is tightened forming a nut lock.

The corner construction, as shown in Fig. 2, utilizes a Z-bar 12 and an angle 23. Excepting the use of a Z and an angle instead of two angles, the construction is similar to that heretofore described. The door post construction shown in Fig. 3 also utilizes a Z-bar 24, one leg of which lines the door opening, the projecting leg serving as a bearing for the nut. As a door stop, I provide the angle 25, held by the same rivets 26, which secure the separated legs of the Z and angle bars.

The constructions herein shown are typical and may be changed in many ways. The prime object sought and result secured is in that the side boards may be moved transversely any required distance in order to se-

cure proper tightening, and further, this result is attained without the consequent expense of slotting the metallic frame and the weakening thereof.

5 I claim:

1. A wall construction composed of a plurality of side planks placed edge on edge, a metallic frame, said frame being composed of pairs of angular members having a space therebetween, and fastening means passed 10 transversely through said planks and between said angular members for securing the parts in position, substantially as described.

15 2. A wall composed of a plurality of boards placed edge on edge, a frame composed of metallic members, and fastening means passing through said boards and to one side but not through the body of said 20 frame members, said fastening means having a bearing on said frame members, whereby said boards are rigidly secured to said frame but permitted considerable movement relative to said frame transversely of 25 said boards, substantially as described.

3. A wall composed of a plurality of boards placed horizontally with their edges in substantial engagement, a frame composed of angular metallic members, and fastening means passing through said boards 30 and to one side but not through the body of said frame members, said fastening means engaging and having a bearing on said frame members, whereby said boards are

rigidly secured to said frame but permitted 35 considerable movement relative to said frame transversely of said boards, substantially as described.

4. A car side composed of a plurality of horizontally located boards placed edge on 40 edge, a frame composed of metallic members, certain of the members of the frame being composed of pairs of angular members secured together in such manner as to provide an extended slot therebetween, and 45 fastening means passing through said boards and between said angular members and having a bearing on said members whereby said boards are rigidly secured to said frame but 50 permitted considerable movement relative to said frame transversely of said boards, substantially as described.

5. In a car side, the combination of metallic, vertical posts composed of angular members, the projecting legs of said members 55 being secured together in spaced relation, boards lying against said frame members and forming a vertical wall, and fastening bolts passing through said boards and between the legs of said angular members, a 60 bearing being provided for the nuts of said bolts on the edges of said members, substantially as described.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."