METAL COVERED WALLS

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5 Claims. (Cl. 20—15)

1 The invention relates to means to cover and protect walls which comprise wooden boards provided with tongues on certain boards registering with grooves in adjacent boards, commonly called tongue and groove sheathing or flooring.

The invention is especially adaptable to floors for railway cars, and as far as this disclosure is concerned, a floor is included in the term "wall."

The object of the invention is to provide a metallic covering for the aforesaid type of wall to strengthen it and protect it against abrasion by covering a group of boards forming a unit with a metallic sheet and likewise cover another group of such boards forming another unit with another metallic sheet and to form the adjacent margins of adjacent sheets with means to interlock said sheets together. A further object is to provide means on said metallic sheets to engage certain portions of adjacent boards to retain said sheets in engagement with said wall and with each other without the necessity of any additional securing means and preferably independently of means, if any, to secure such wall to associated elements.

As stated before, my improved wall cover is especially adaptable to protect and strengthen the floors of railway cars wherein a plurality of tongued and grooved, or otherwise rabbed boards, extend crosswise of the car and are supported by the side sills and center sills of the car. My improved cover strengthens the floor to support the lading and loading trucks between such sills, and furthermore, the margins of the metallic covering sheets are formed to engage portions of the boards, as well as each other, to prevent the margins of the sheets from rising upwardly when the lading trucks roll over such margins.

The margins of floor protecting sheets have been known to rise up and form projections, making an uneven floor and causing damage to the lading. Such projections may also trip a workman.

In the drawings:

Figure 1 shows fragmentary parts of a wooden wall of tongue and groove structure with my improved protecting sheets applied thereon.

Figures 2 and 3 show the interlocking flanges of adjacent wall protecting sheets separated to more clearly disclose their respective formations.

Figure 4 shows a plurality of boards assembled as a unit and covered with my metallic protecting sheet.

Figure 5 shows a modified structure wherein the adjacent boards are each rabbed instead of tongued and grooved.

2 Figure 6 is a modification of Figure 5 wherein only one of the adjacent boards is rabbed.

Figure 7 is a further modification wherein the apertures are positioned at the juncture of the flange and refange.

In the drawings, wall board 1 is provided along one longitudinal edge with a groove 2, and wall board 3 is provided along one longitudinal edge with a tongue 4, said tongue and groove being normally intended for interengaging relationship.

The wall protecting sheet 6 comprises a body portion which rests flatwise over a plurality of boards and is formed along one side margin with a normal flange 7 which overlaps the grooved edge of the board 1 and is provided with a plurality of apertures 8 which register with the groove 2. The flange 7 is also preferably formed with an outwardly and upwardly projecting, preferably continuous refange, portion 10 which, when assembled with a tongued board, extends upwardly and outwardly under the tongue 4 of the adjacent board 3 and preferably engages the lower surface of such tongue.

The other wall protecting sheet 12 comprises a body portion which rests flatwise over a plurality of boards and is formed along one side margin with a normal flange 13 which is narrower in width than flange 7 and partially overlaps the tongued edge of board 3. The free edge of said flange 13 is formed with a plurality of outwardly and upwardly projecting parts 14 spaced apart correspondingly to the spacing of openings 8, and which, when assembled with a grooved board having a sheet 6 thereupon, extend through the apertures 8 and into the groove 2 of the adjacent board 1. These parts 14 also preferably extend upwardly so as to engage the upper surface of the groove 2.

In the modifications shown in Figures 5 and 6 the adjacent edges of the boards are provided with rabbits instead of tongues and grooves.

In Figures 5 and 6 the wall protecting sheets 20-21 have substantially the same relationship to each other as heretofore described regarding Figures 1, 2 and 3. In Figure 5 the board 22 is provided with a relatively deep rabbit 23, while the board 24 is provided with a relatively shallow rabbit 25. In Figure 6 the board 26 is not rabbed at all and the board 29 is provided with a very shallow rabbit 30. The construction of Figure 5 is used where the surface 13 is required to be flush, while Figure 6 may be used when a flush surface is not necessary.

Figure 7 shows how my invention may be applied to adjacent boards 35 and 36 without rab-
bets, tongues or grooves by positioning the apertures 37 in the wall protecting sheet 38 at the juncture of the flange 39 and refinance 40 of wall protecting sheet 41. The depths of the several rabbets vary to suit conditions.

In the above described association of wall boards and metallic protecting sheets it will be noted that neither protecting sheets can rise upwardly independently of the other sheet, nor can the two protective sheets (15—24) rise up together. One or both sheets are prevented from rising upwardly by the engagement of the flanges with each other and with the tongues and grooves, or rabbets, respectively.

It is contemplated that a single metallic sheet may be formed with a flange 13 on one side thereof and a flange 13 on the other side thereof to cover a plurality of boards assembled as a unit (as shown in Figure 4), and still come within the scope of the invention.

This application is a continuation-in-part of my co-pending application Serial No. 620,937, filed October 8, 1945, now abandoned.

The accompanying drawings illustrate the preferred form of the invention, though it is to be understood that the invention is not limited to the exact details of construction shown and described, as it is obvious that various modifications thereof, within the scope of the claims, will occur to persons skilled in the art.

I claim:

1. In a wall comprising boards having substantially abutting edges, the edge of one or of said boards being rabbed providing a surface extending substantially normal to the edge thereof; a cover therefor comprising a metallic sheet overlying one of said boards; said sheet having a flange extending substantially normal thereto and overlapping the edge of said one board and having spaced apertures therein below said surface, and another metallic sheet overlying an adjacent board and having a flange extending substantially normal thereto and overlapping the edge of said adjacent board, said latter flange having spaced outwardly projecting parts passing through said apertures and extending under and engaging the said surface of said first mentioned board.

2. In a wall comprising boards having substantially abutting edges, each of said edges being rabbed providing a surface extending substantially normal to said edge; a cover therefor comprising a metallic sheet overlying one of said boards; said sheet having a flange extending substantially normal thereto and overlapping the edge of said one board and having spaced apertures therein below said surface of said one board, and said flange having an outwardly extending portion engaging said surface of an adjacent board, and another metallic sheet overlying said adjacent board and having a flange extending substantially normal thereto and overlapping the edge of said adjacent board, said latter flange having spaced outwardly projecting parts passing through said apertures and extending under and engaging the said surface of said mentioned board.

3. In a wall comprising boards with registering tongue and grooves, a metallic cover therefor comprising a metallic sheet overlying a board having a groove and provided with a flange extending substantially normal thereto and having apertures therein registering with said groove, and another metallic sheet overlying a board having a tongue and provided with a flange extending substantially normal thereto and formed with outwardly projecting parts which pass through said apertures into said groove, said first mentioned flange formed with an outwardly projecting portion extending under the tongue of an adjacent board.

4. In a wall comprising boards with registering tongues and grooves, a metallic cover therefor comprising a metallic sheet overlying a board having a groove and provided with a flange extending substantially normal thereto and having apertures therein registering with said groove, and another metallic sheet overlying a board having a tongue and provided with a flange extending substantially normal thereto and formed with outwardly projecting parts which pass through said apertures into said groove, said first mentioned flange formed with an outwardly projecting portion extending under the tongue of an adjacent board and said part engaging the upper surface of said groove and said portion engages the lower surface of said tongue.

5. In a wall comprising boards with registering tongued and grooved edges, a metallic cover therefor comprising a metallic sheet overlying a board having a grooved edge and provided with a flange, extending substantially normal thereto, overlapping said grooved edge, and having apertures therein registering with said groove, and another metallic sheet overlying a board having a tongue edge, and provided with a flange extending substantially normal thereto, overlapping said tongue edge, and formed with outwardly and upwardly projecting parts which pass through said apertures into said groove and engage the upper surface thereof, said first mentioned flange having an outwardly and upwardly extending flange engaging the under surface of said tongue.

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