Sept. 5, 1933. C. E. EKLIND ET AL 1,925,375

DOOR FOR STOCK CARS

Filed April 22, 1929 2 Sheets-Sheet 1

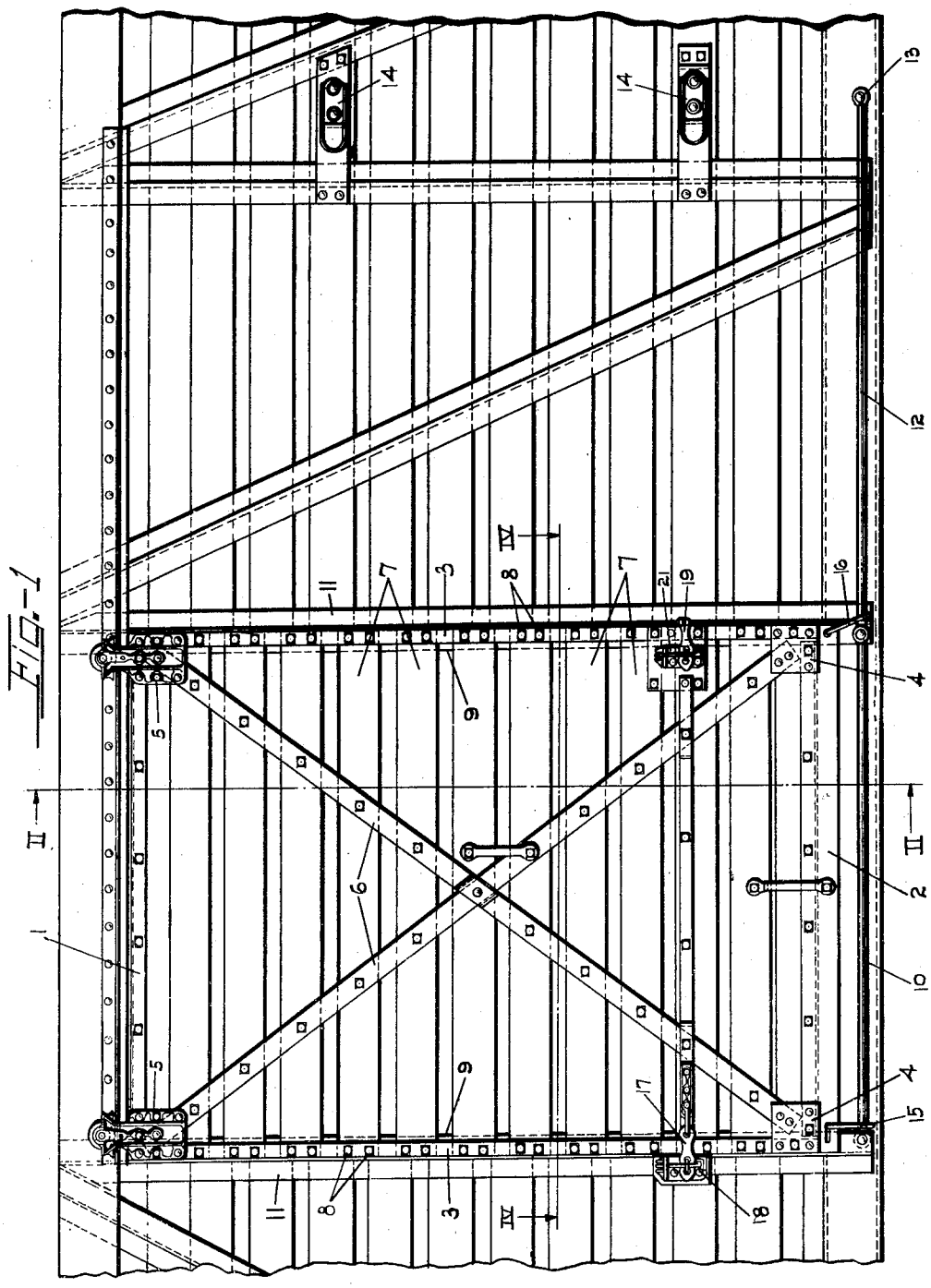

FIG. 1

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Fig.-2

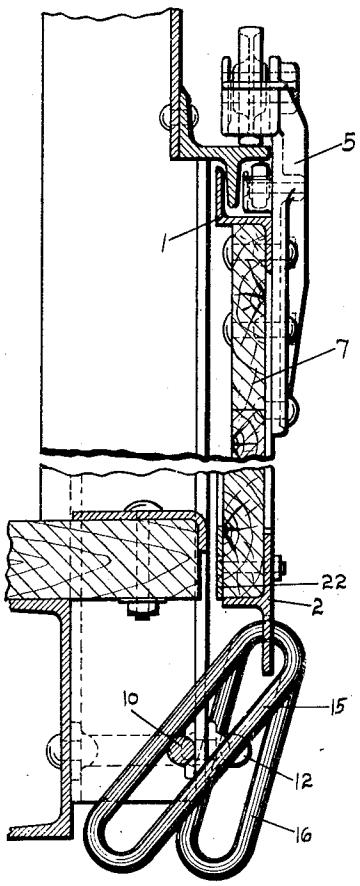


Fig.-3

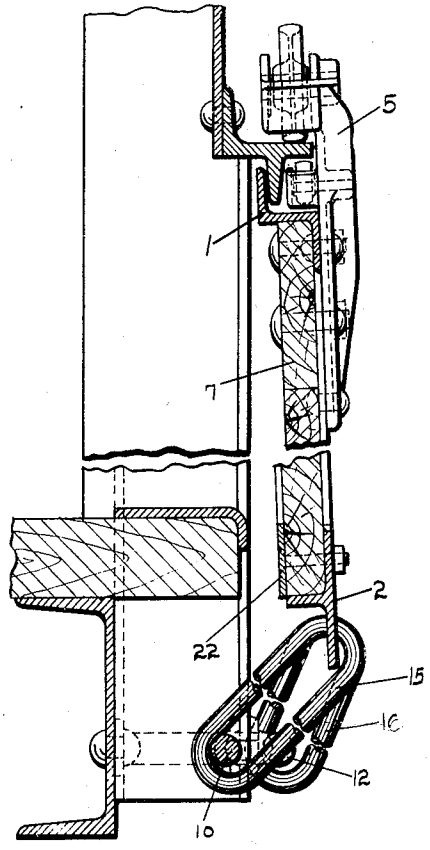
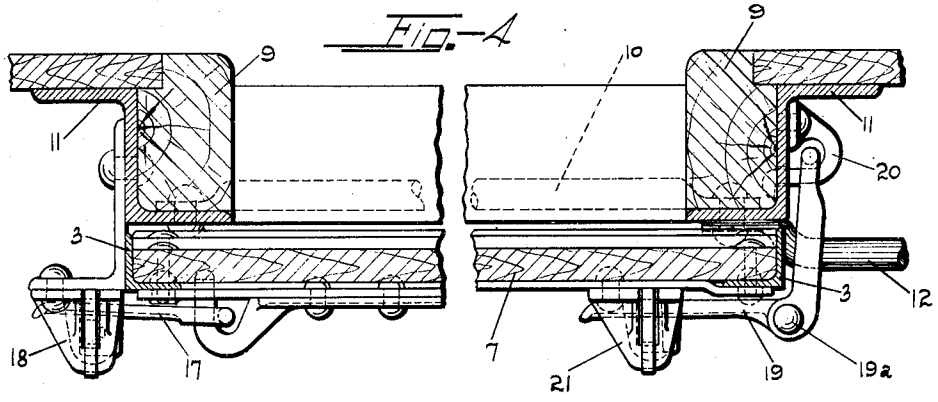


Fig.-4



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DOOR FOR STOCK CARS

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6 Claims. (Cl. 20—37)

This invention relates to doors for stock cars.

It is common practice at the present time to make such doors of wood. They usually consist of wooden stiles and rails with spaced transverse slats connecting the stiles. These slats are frequently broken by the animals within the car and to renew the same, it is necessary to remove the doors. One feature of this invention seeks to eliminate the necessity for removing the door when it is desired to replace a broken slat.

Some doors of this character use metal binding strips over the outside of the door and these binding strips must be removed before a broken slat can be replaced. This invention also overcomes this objection.

A further objection to present doors for stock cars lies in the locking arrangement which generally consists of staples upon the door posts and hasps upon the door for engaging staples. It will readily be appreciated that the bottom of the door must be pulled outwardly to pass the staples and as the doors are moved past the staples during their opening and closing movements, they become chafed by such staples with the result that it becomes necessary to renew parts of the door in a very short time. Another feature of this invention resides in means for eliminating such chafing of the inside of the door.

The lower margin of doors for stock cars are usually secured by chains that allow the doors to be pulled outwardly a limited extent. These chains usually become tangled and retard the movement of the door. This objection is eliminated in the use of single links or the like.

It also frequently happens that the bedding and refuse in the stock cars becomes frozen to the floor and door, making it impossible to operate the door. To overcome this objection a metal chafing strip is attached to the lower margin of the door.

The invention comprises the novel structure and combination of parts hereinafter described and more particularly pointed out and defined in the appended claims.

In the accompanying drawings which illustrate a preferred form of this invention and in which similar reference numerals refer to similar features in the different views:

Figure 1 is a fragmentary side elevational view of a stock car embodying a door involving this invention.

Figure 2 is an enlarged and broken sectional view taken upon the line II—II of Figure 1.

Figure 3 is a view similar to Figure 2 showing the door in its pulled out position.

Figure 4 is an enlarged fragmentary sectional view taken upon the line IV—IV of Figure 1.

The door involving this invention comprises a frame consisting of an upper metal rail 1, which is shown in the form of a Z bar, a lower metal rail 2, which is in the form of a T bar and metal side stiles 3 which are in the form of angle bars. These frame members are suitably secured together. To the lower corners of the frame are secured gusset plates 4. To the upper corners of the frame are secured roller hangers 5. Diagonally arranged metal braces 6, which cross each other at aproximately their central points, connect the gussets 4 with the hangers 5. Transverse wooden slats 7 in spaced relation are removably bolted to the stiles 3 and braces 6 by removable bolts 8. It will be noted that the slats are seated in the angles of the stiles and are protected thereby. Consequently if a slat becomes broken, it is only necessary to remove the bolts 8 and take off the old slat and replace the same without removing the door from the car.

The doorway in the car is bounded by door posts comprising Z bars 11 with wooden fillers 9. A rod 10 is attached to the posts 11. A second rod 12 is attached at its forward end to the rear Z bar 11 and extends rearwardly a distance substantially equal to the width of the door where it is attached to the side sill of the car as indicated at 13. In alinement with the attaching means 13, are stops 14 for arresting the door in its open position.

The front end of the lower rail 2 carries a link 15 that encircles the rod 10 and the rear end of said rail carries a second link 16 that encircles the rod 12. This second link 16 is somewhat shorter than the first link since it will be noted that rod 12 is positioned outwardly from the rod 10.

The door is latched at its front end by a hasp 17, which is secured to the door and which engages a staple 18 on the front door post. The rear end of the door is latched by a jointed hasp 19, one section of which is anchored upon a staple 20 upon the rear side of the rear post 11 (Figure 4). The other section of the hasp 19 engages a staple 21 upon the door. It will be noted that the joint 19a of the sections is approximately opposite the rear corner of the door. This jointed latch tends to hold the door inwardly. When it is desired to open the door the hasp 19 is unlatched and swung rearwardly behind the rear

post 11, where it will be out of the path of the door in its opening movement.

The lower slat 7 of the door carries a chafing plate 22 upon its inner side and directly opposite the edge of the floor. This plate 22 will tend to prevent the door from becoming frozen to the bedding and refuse that is apt to be trodden out between the door and floor.

From the foregoing, it will be apparent that the door involving this invention eliminates many of the objectionable features of stock car doors heretofore used, and at the same time facilitates the repair of such doors.

We claim as our invention:

1. In a stock car door, a metal frame including horizontal rails and vertical stiles, gusset plates at the lower corners of said frame, hangers secured to the upper corners of said frame, diagonal braces connecting said gusseet plates and hangers, spaced transverse wooden strips and bolts for removably securing said strips to said stiles and diagonal braces.

2. In a stock car door, a metal frame consisting of an upper rail, a lower rail, stiles connecting said rails and diagonal metal braces, connecting said rails and stiles, spaced transverse wooden slats and bolts removably securing said slats to said stiles and braces.

3. In a stock car door, a metal frame consisting of an upper rail, a lower rail and stiles connecting said rails, gusset plates at the corners of said frame, diagonal braces attached to said gusset plates, and spaced transverse slats removably bolted to said stiles and diagonal braces.

4. In a door for a stock car, a metal frame consisting of an upper rail, a lower rail having a depending flange and transverse wooden slats removably secured to said frame, said depending flange having spaced apertures adapted for receiving guide links.

5. In a stock car door, a metal frame including horizontal rails and vertical stiles, gusset plates connecting the lower ends of said rails and stiles, hangers connecting the upper ends thereof, diagonal braces connecting said gusset plates and hangers, and spaced transverse wooden strips bolted to said stiles and braces, and being removable and replaceable while the door is in position on the car.

6. In a stock car, a metal frame consisting of an upper rail, a lower rail stiles connecting said rails, diagonal braces connected to said stiles, and spaced transverse wooden slats removably bolted to said stiles and braces and being removable and replaceable while the door is on the car.

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