Jan. 21, 1969 J. S. LUNDVALL ETAL 3,422,773

FLOOR LATCH STRIP FOR RAILWAY CARS

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FIG. 1

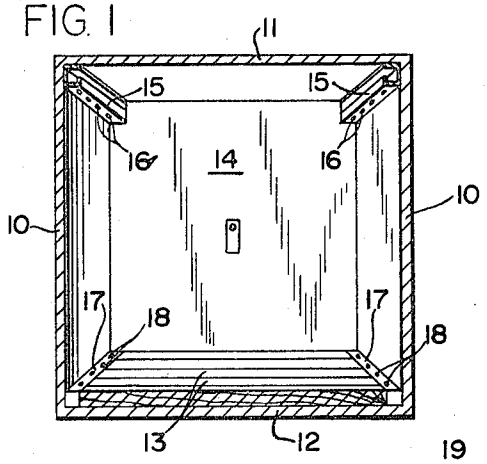
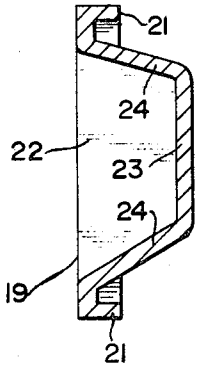


FIG. 4



4 FIG. 2 3

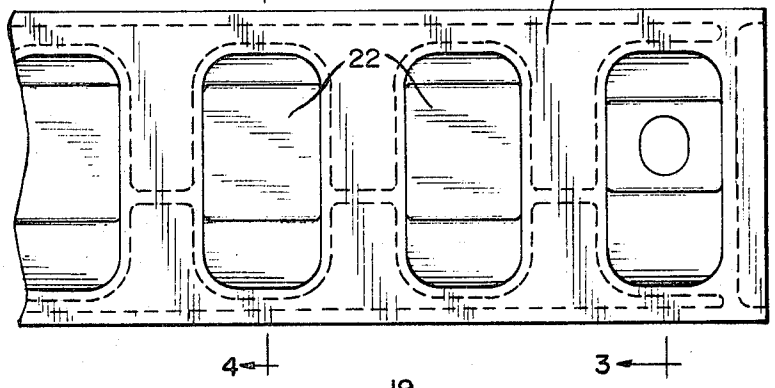


FIG. 3

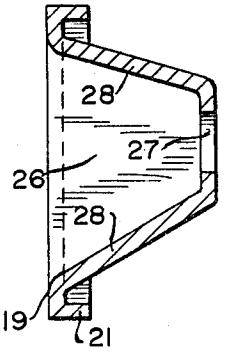


FIG. 5

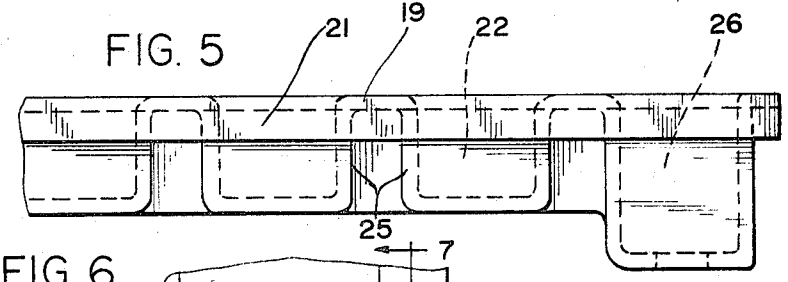
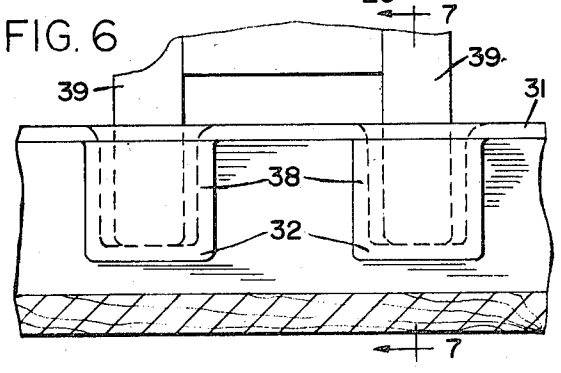


FIG. 6



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FIG. 7

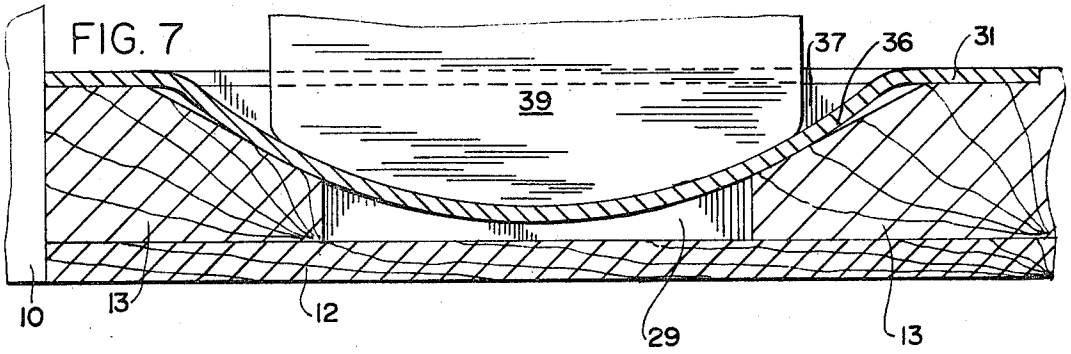


FIG. 8

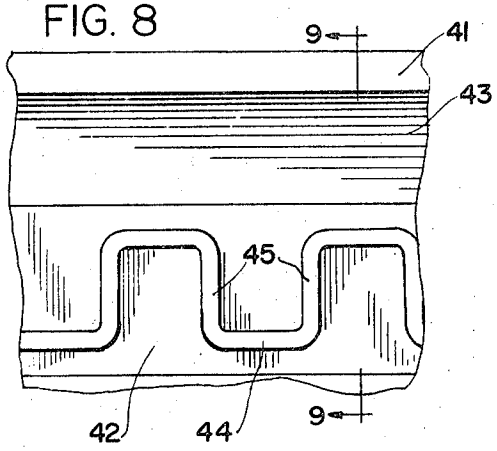


FIG. 9

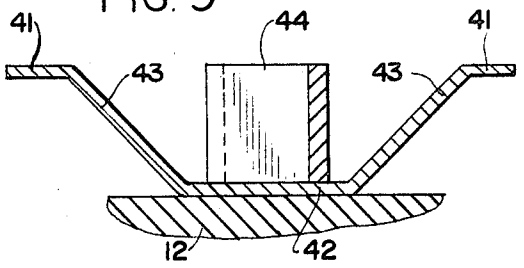


FIG. 10

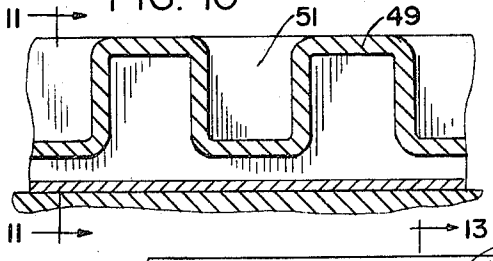


FIG. 11

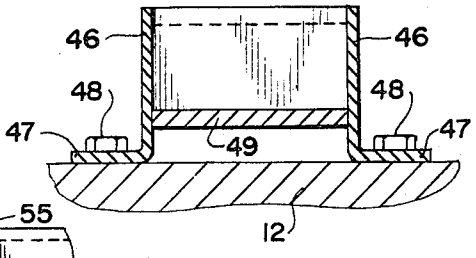


FIG. 12

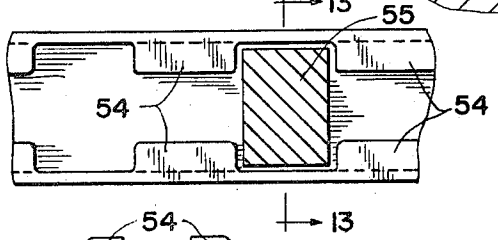
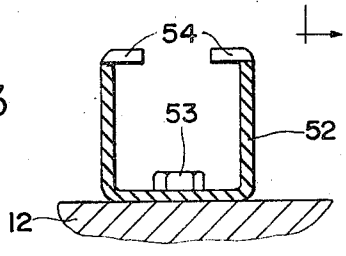


FIG. 13



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FLOOR LATCH STRIP FOR RAILWAY CARS

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U.S. Cl. 105—376 7 Claims
Int. Cl. B61d 17/00, 45/00

ABSTRACT OF THE DISCLOSURE

In a freight-carrying body having latch strip means in the floor for positioning cooperation with latch pins of a lading separator movable within the body, an improved latch strip structure, that is more readily cleaned of dirt that enters thereinto, is provided by an elongated structure which provides a plurality of open-topped pockets longitudinally arranged and adapted to receive the latch pins of the lading separator and having upwardly and outwardly inclined walls extending from the lowermost portions of the pockets to the uppermost portions of the latch strip, the inclined walls providing assistance for sweeping dirt out of the latch strip structure.

This invention relates to a floor latch strip for railway cars, and more particularly to a sanitary floor latch strip which can easily be cleaned.

In railway cars equipped with lading separators it is customary to secure the lading separators or door in place by latching pins extending from the upper and lower edges thereof and engaging openings in latching strips or tracks in the car. The floor latch strips tend to collect dirt and become unsanitary so that the strips conventional construction cannot properly be used in cars used for transporting food of various types and similar materials.

It is accordingly one of the objects of the present invention to provide a floor latch strip which can easily be cleaned to maintain it in sanitary condition.

Another object is to provide a floor latch strip formed with locking recesses which are open at all times so that they can easily be cleaned.

The above and other objects and advantages of the invention will be more readily apparent from the following description when read in connection with the accompanying drawing, in which:

FIG. 1 is a transverse perspective view of a railway car embodying the invention;

FIG. 2 is a top plan view of one form of floor latch strip;

FIGS. 3 and 4 are sections on lines 3—3 and 4—4 respectively of FIG. 2;

FIG. 5 is a side elevation of the track of FIG. 2;

FIG. 6 is a partial view similar to FIG. 5 of an alternative construction;

FIG. 7 is a longitudinal section of the track of FIG. 6;

FIG. 8 is a partial plan view of an alternative floor latch strip;

FIG. 9 is a transverse section on the line 9—9 of FIG. 8;

FIG. 10 is a longitudinal section of still another form of floor latch strip embodying the invention;

FIG. 11 is a section on the line 11—11 of FIG. 10;

FIG. 12 is a top plan view of still another form of floor latch strip embodying the invention; and

FIG. 13 is a section on the line 13—13 of FIG. 12.

As shown in FIG. 1, the invention may be incorporated in a conventional railway car having spaced sides 10, a ceiling 11 and a subfloor 12. The subfloor may be covered by flooring material such as the planks shown

at 13, although any other desired type of flooring may be employed.

The car is separated longitudinally into compartments by a separator or door 14 of a size substantially to span the width and height of the car. The door 14 is supported for movement in the car on tracks 15 mounted adjacent to the junctures of the side walls and ceiling of the car and which are formed in lower horizontal flanges thereof with latching openings 16. The separator 14 is similarly latched adjacent to the floor of the car in floor latch strips 17 formed in their upper surfaces with spaced latching openings 18. The parts as so far described, with the exception of the floor latch strips, are conventional.

The floor latch strips as shown particularly in FIGS. 2–5 are in the form of integral castings with upper flat strips 19 which are reinforced at their edges by downwardly turned flanges 21. At spaced points in their length, the upper strips 19 are depressed downwardly to define recesses as shown at 22 which have flat bottoms 23 and side walls 24 sloping upwardly at an acute angle to horizontal. The sides of the recesses are closed by flat vertical walls 25 against which the latch members carried by the separator may abut to hold the separator securely in selected position.

Adjacent to their ends, the strips are formed with deeper recesses 26 whose flat bottoms are formed with openings 27 to receive screws or similar securing means to secure the strips to the subfloor of the car. These flat bottoms are joined by sloping side walls 28 with the upper flat strip 19.

With the strips secured in the floor of the car, the upper flat strip 19 is substantially flush with the top of the flooring 13 therein. In use the latching pins or similar members carried by the separators may enter any of the recesses 22 or 26 in the usual manner to latch the separator securely in place. When it is desired to clean the floor latch strips, it will be noted that the tops of the recesses are always open and that the sides thereof are sloping so that any dirt collecting in the recesses can be swept out or can otherwise be easily removed therefrom.

The construction shown in FIGS. 6 and 7 is generally similar to that of FIGS. 2–5 except that the strip is formed of sheet metal rather than being cast. In this construction the flooring members 13 are cut away adjacent to the side walls of the car as seen in FIG. 7 to leave an open top recess 29. A strip 31 of sheet material is secured over the recess and is formed at spaced points in its length with depressed portions 36 defining spaced recesses 37. These recesses as seen in FIG. 6 are formed with straight vertical side walls 38 securely to engage the latch pins on the separator.

As shown, latch members 39 carried by the separator may extend downwardly into the recesses 37 and are preferably shaped as seen in FIG. 7 to occupy substantially a full recess for maximum strength. With this construction as with that of FIGS. 2–5, the recesses can easily be swept or cleaned out to maintain sanitary conditions at all times.

The floor latch strip as shown in FIGS. 8 and 9 comprises a channel shaped strip of sheet material having flat horizontal side flanges 41 to lie substantially flush with the flooring in the car and which may be secured thereto. The flat bottom is connected by sides 43 sloping at an acute angle to horizontal to the upper flanges 41.

Transverse latch pin engaging members are formed by a corrugated strip 44 extending vertically from the flat bottom 42 of the channel strip and secured thereto by welding or in any other desired manner. This corrugated strip comprises transversely extending side members 45 between which the latch pins carried by the separator may

fit and which they may engage to secure the separator against longitudinal movement in the car. With this construction as with those of FIGS. 1–7, it will be noted that the recesses in the top of the floor latch strip are open at all times, including the side openings in the channel shaped strip, and that the sides of the channel are sloping at an acute angle to the horizontal so that the entire strip may be easily swept out or otherwise cleaned.

In the construction of FIGS. 10 and 11, the channel shaped strip is defined by two angle plates having vertical flanges **46** and horizontal flanges **47** which may be secured to the subfloor **12** of the car by fastenings such as screws **48**. A corrugated strip **49** which extends horizontally may extend between the vertical flanges **46** and be secured thereto by welding or in any other desired manner. The channel shaped strip **49** provides a series of spaced recesses **51** in which the latching pins of the separator may be received to latch the separator securely in position longitudinally of the car.

As with the previously described embodiments, the recesses **51** are always open at the top and are otherwise closed so that any dirt falling into them will be retained and can easily be cleaned therefrom.

In the embodiment shown in FIGS. 12 and 13, the floor latch strip is formed by a channel strip **52** having vertical parallel sides and a horizontal bottom which may rest against and be secured to the subfloor **12** by fastenings such as screws **53**. At the upper edges of the side flanges the channel is turned in at spaced points to define inwardly projecting lugs **54** which are spaced longitudinally of the channel. These inward projections **54** are of such a length as to leave a substantial space between them through which the channel may be swept out or otherwise cleaned.

For use with a floor latch strip of this type, the separator would employ generally rectangular latch pins as shown in section at **55** in FIG. 12. It will be noted that these pins may fit into the spaces between the inwardly projecting lugs **54** and will engage the edges of these lugs to latch the separator securely against longitudinal movement in the car.

What is claimed is:

1. In a freight-carrying body having in the floor thereof latch strip means adapted for positioning cooperation with latch pins carried by a lading separator movably disposed in said body, the improvement of a latch strip means that permits more readily cleaning thereof of dirt that enters thereinto comprising, in combination: an elongated latch strip structure providing longitudinally extending uppermost portions located in an uppermost horizontal plane adapted to be positioned substantially flush with the floor of the body, a plurality of open-topped pockets in said elongated structure located below said uppermost horizontal plane and adapted to receive a latch pin of the lading separator therein for selectively positioning the separator longitudinally of the body, the pockets being spaced longitudinally thereof with each pocket separated from the immediate adjacent pocket by upright walls on said elongated structure extending downwardly relative to said uppermost horizontal plane and

lying transversely of the longitudinal axis of the elongated structure, and upwardly and outwardly inclined walls on the elongated structure extending in directions transverse to the longitudinal axis of the elongated structure from the lowermost portions of each pocket to said longitudinally extending uppermost portions of the elongated structure, to provide assistance in forcing dirt from within the deepest portions of said pockets outwardly of the elongated structure.

2. A construction as in claim **1** wherein the uppermost portions of the latch strip structure include horizontally elongated portions extending outwardly of and along the entire length of both longitudinal edges of the latch strip structure.

3. A construction as in claim **1** wherein the open-topped pockets each has a pair of spaced parallel sides lying in vertical planes transverse to the longitudinal axis of the latch strip structure and a bottom wall that is of lesser width than the width of the pocket at any point spaced above the bottom wall.

4. A construction as in claim **1** wherein each pocket is wholly isolated from the adjacent pocket.

5. A construction as in claim **1** wherein the upright walls which separate adjacent pocekts are provided by an elongated strip uniformly corrugated to provide a plurality of upwardly-opening sockets.

6. In a railway car having a lading separator movable therein formed with latch pins to project from its bottom edge, a floor latch strip adapted to be mounted in the floor of a car for cooperation with the latch pins comprising an elongated strip extending horizontally and depressed downwardly between its edges to define an open topped channel section, and means on the strip defining transversely extending latch pin engaging parts substantially at the level of the top of the strip, said parts being positioned to leave the top of the depressed channel section open whereby material collecting therein can be cleaned therefrom, the strip being depressed at longitudinally spaced points to form a series of spaced channel section recesses and said means comprises inverted channel section portions separating the recess and closing the sides thereof.

7. The construction of claim **6** in which the bottoms of the recesses slope at an acute angle to horizontal from points adjacent to the sides of the strip to a portion of maximum depth centrally of the width of the strip.

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U.S. Cl. X.R.

105—369