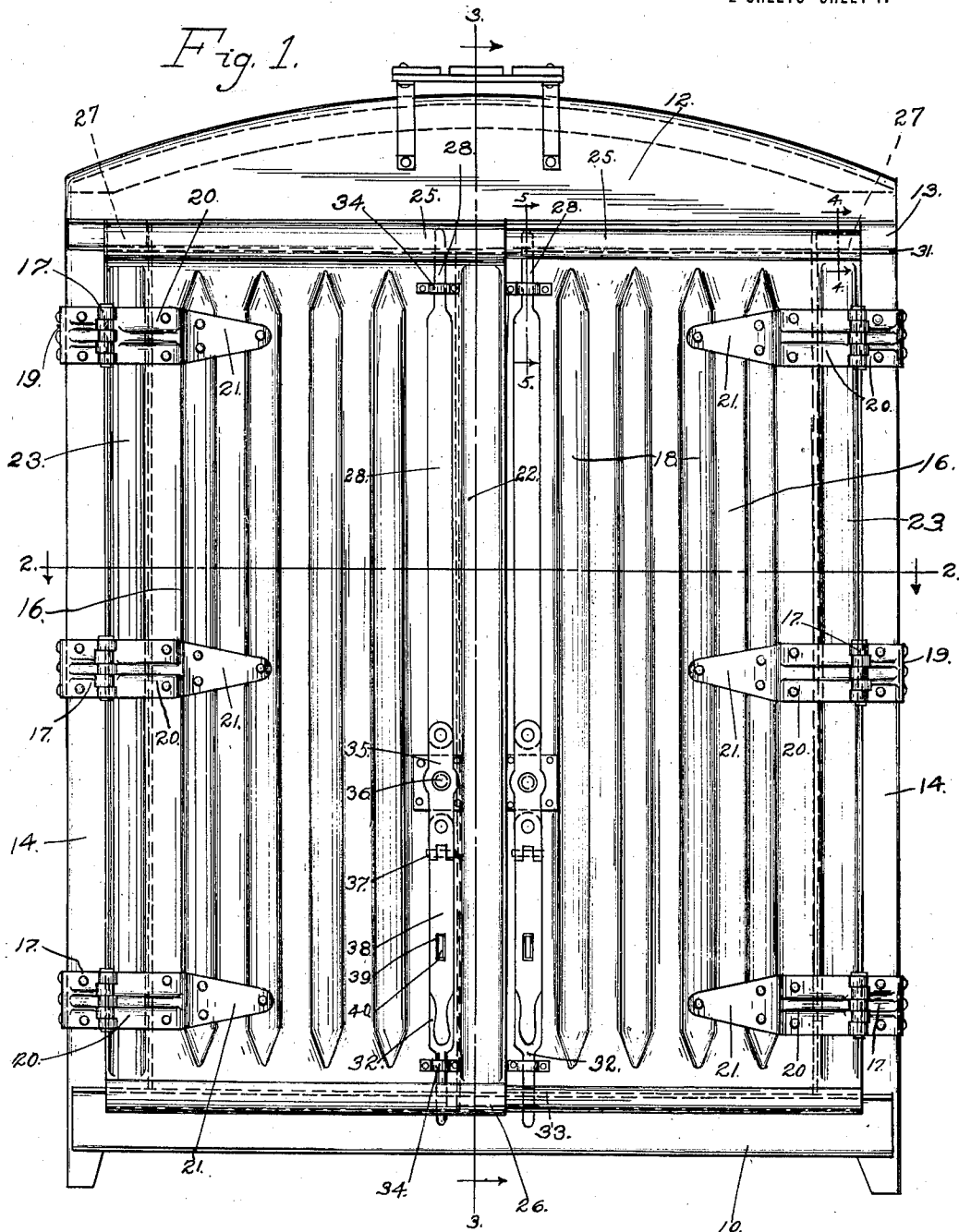


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SHEET METAL END WALL CONSTRUCTION FOR RAILWAY CARS
APPLICATION FILED MAY 11, 1914.

1,299,251.

Patented Apr. 1, 1919.

2 SHEETS—SHEET 1.



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Fig. 2.

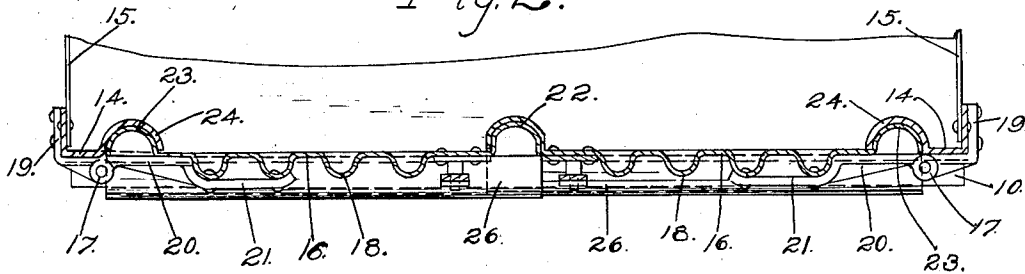


Fig. 3.

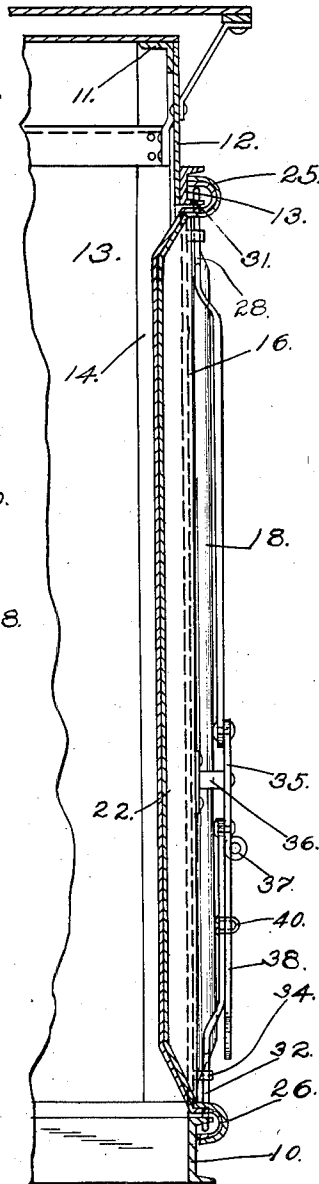


Fig. 4.

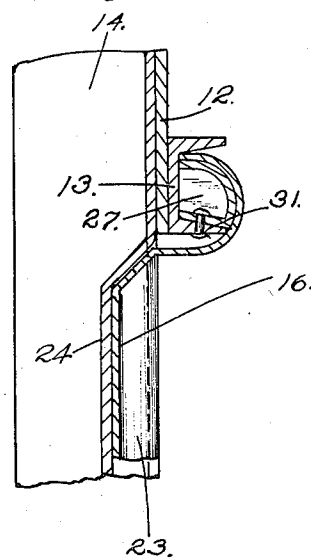
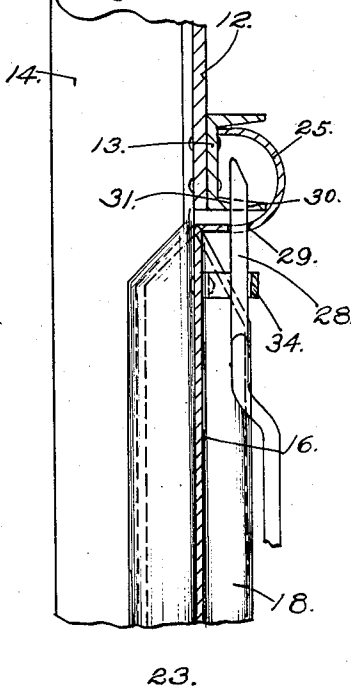


Fig. 5.



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UNITED STATES PATENT OFFICE.

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SHEET-METAL END-WALL CONSTRUCTION FOR RAILWAY-CARS.

1,299,251.

Specification of Letters Patent.

Patented Apr. 1, 1919.

Application filed May 11, 1914. Serial No. 837,744.

To all whom it may concern:

Be it known that I, VINTON E. SISSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Sheet-Metal End-Wall Constructions for Railway-Cars, of which the following is a specification.

My invention relates to railway box or house cars, and has for its object to provide a sheet metal end wall construction for box or house cars (suitable particularly for cars used for transporting automobiles or other bulky freight) which will be made up of leaves or sections hinged to the end frame of the car so as to swing away from the same to give access to the interior of the car and adapted, when in closed position, to interlock with each other and with the end frame of the car so as to provide a strong and rigid end wall structure that will be waterproof, capable of withstanding externally and internally applied stresses and pressures, particularly the thrusts from the inside due to shifting of the cargo and which at the same time will be comparatively light in weight; the matter of weight being an important consideration in the construction of freight cars secondary only to the essential requirements of strength and rigidity.

The invention has for further objects such other new and improved arrangements, devices and constructions relating to freight cars as will be hereinafter described and claimed.

The invention is illustrated, in a preferred embodiment, in the accompanying drawings, wherein—

Figure 1 is an end elevation of the superstructure of a railway box car constructed in accordance with the invention;

Fig. 2, a sectional plan taken on line 2—2 of Fig. 1;

Fig. 3, a longitudinal sectional view on line 3—3 of Fig. 1; and

Figs. 4 and 5, detail sectional views, on an enlarged scale, taken on lines 4—4 and 5—5, respectively, of Fig. 1.

Like characters of reference designate like parts in the several figures of the drawings.

Referring to the drawings which show a railway car of all steel construction (although obviously my invention might be applied to cars of wood construction if desired), 10 designates one of the end sills of

the car which is in the form of a channel iron, 11 the corresponding end plate which is most conveniently an angle iron, 12 an end fascia plate secured to the end plate 11 and having riveted thereto a channel iron 13, 14 the corner posts, and 15 the side sheathing of the car. The end wall of the car is made of two sections or panels 16 of sheet metal hinged to the corner posts 14 by hinges 17. For the purpose of strength and rigidity the panels 16 are formed with corrugations or pressed out ribs 18 which preferably extend vertically of the panels from top to bottom thereof, terminating within the upper and lower margins of the panels. One leaf 19 of each of the hinges 17 is angular so as to overlap the side face of the corner post to which it is attached, the other leaf 20 being formed with an extension 21 riveted, in each case, to two of the corrugations of the panel.

The panels 16 preferably overlap at their inner edges, being preferably formed at this place with interlocking vertical ribs or corrugations 22, one of which fits within the other. The outer edges of the panels are preferably formed with vertical ribs or corrugations 23 which fit into correspondingly formed portions 24 of the corner posts 14. The upper edge of each panel is formed with an end corrugation 25, which end corrugations enter the channel of the channel bar 13, preferably close under the upper leg thereof. Similarly the lower edges of the panels are formed with end corrugations 26 which extend under the upper leg of the channel bar end sill 10. The upper channel 13 is preferably closed at opposite ends with castings 27 (Fig. 4).

By the arrangements above described the panels, when closed, constitute an end wall structure for the car which is very strong and rigid and also waterproof. The upper and lower end corrugations 25, 26 stand at right angles to the corrugations 18 so that the panels are reinforced and stiffened both vertically and horizontally. The interlocking of the inner edges of the panel with each other and the seating of the ribs 23 at the outer edges of the panels in the correspondingly formed portions of the corner posts besides insuring a waterproof construction at these places contribute considerably to the strength and rigidity thereof.

The corrugations 18 preferably extend

vertically of the panels and there is a particular reason for this arrangement although it is perhaps not absolutely essential. The panels, which are, in effect, doors, are closed
5 by pushing against the inner lower corners. The trainmen cannot ordinarily reach up very far on the door. Hence the panels must be stiff enough so that they can be completely closed by a push on the lower
10 corners. By making the corrugations run vertically there is no appreciable transverse deflection so that it is quite possible to completely close the panels at the top corners of the door so that they can be locked at
15 this point by pushing against the lower corners.

The panels are furnished with any suitable locking means. I have shown each panel provided near its inner edge with an
20 upper bolt 28 which extends through an opening 29 in the under side of the end corrugation 25 and into a locking perforation 30 in the lower leg 31 of the channel bar 13; and with a lower bolt 32 having a similar
25 engagement with the upper leg 33 of the channel bar end sill 10. The bolts are guided in keepers 34 and pivoted to the opposite ends of a link 35 mounted on a pivot pin 36 secured to the panel and having
30 hinged thereto at 37 an operating lever 38

formed with a perforation 39 for the seal pin hasp 40.

While I have described my invention in a certain preferred embodiment, modifications in the forms, constructions and ar- 35 rangements of the parts constituting the end structure might be devised without departing from the principles of the invention. Therefore I do not wish to be understood as limiting the invention to the particulars 40 shown and described except so far as the claim is limited thereto by its express terms. While the constructions shown are particularly suitable for the end wall of a freight car they might be employed for providing a 45 side door.

I claim:

In a railway box car, the combination with an end frame having therein a longitudinal groove adjacent the frame opening, 50 of a sheet metal panel hinged to said frame beyond said longitudinal groove and having a longitudinal rib along its vertical edge adapted to seat into said groove when said panel is in closed position.

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Witnesses:

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