(No Model.)

M. A. GARRETT.

RAILWAY CAR.

No. 408,611. Patented Aug. 6, 1889.

Fig. 1.

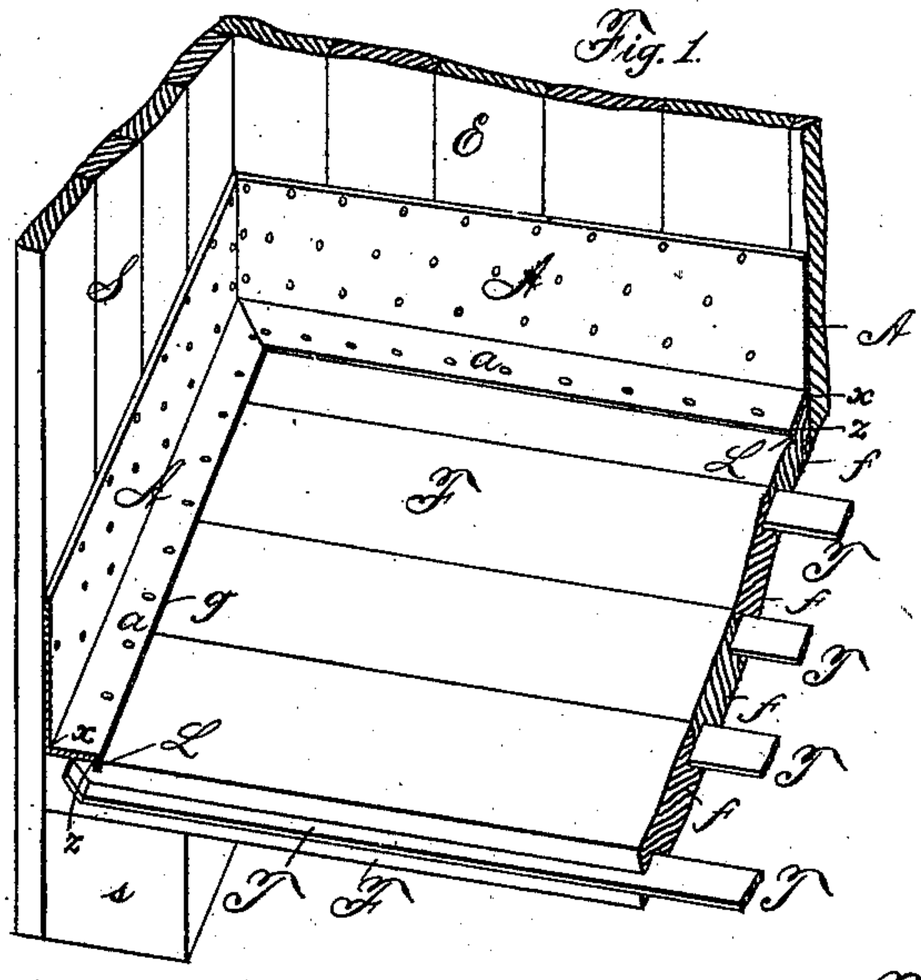


Fig. 3.

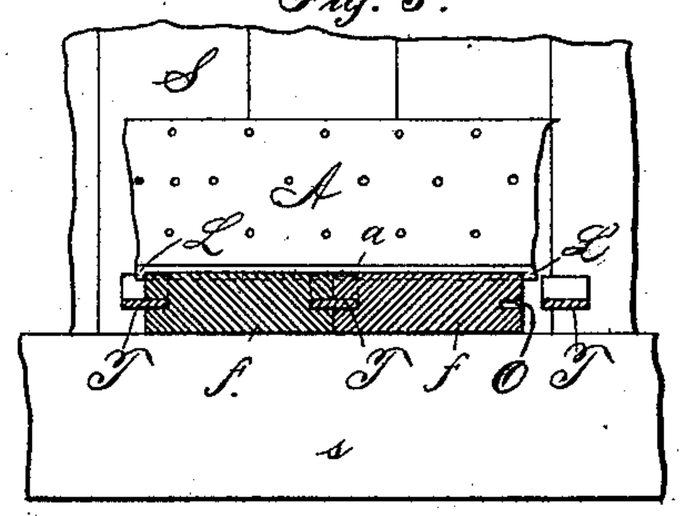


Fig. 4.

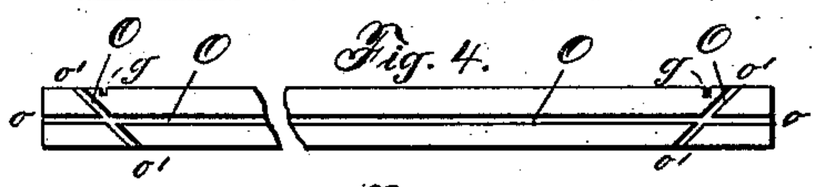


Fig. 5.

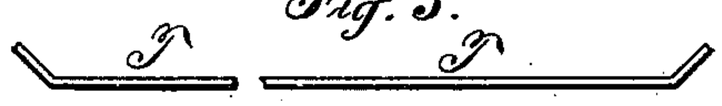


Fig. 2.

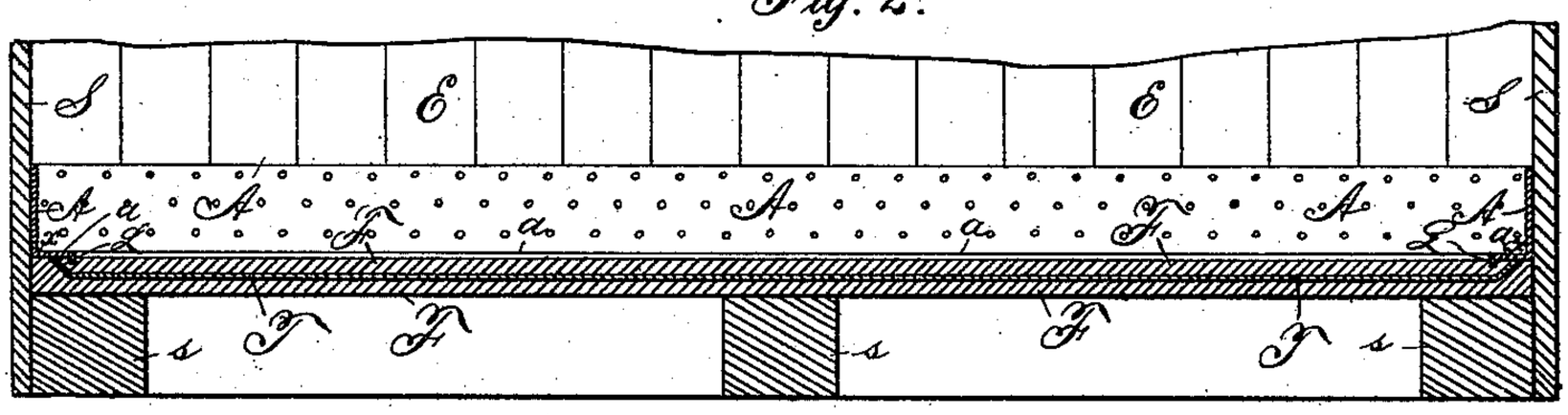


Fig. 6.

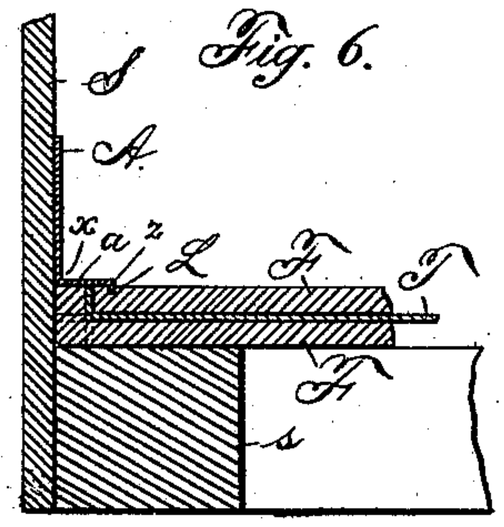


Fig. 7.

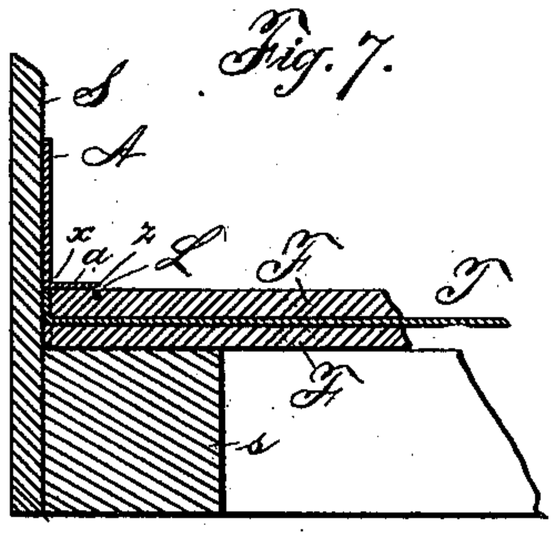


Fig. 8.

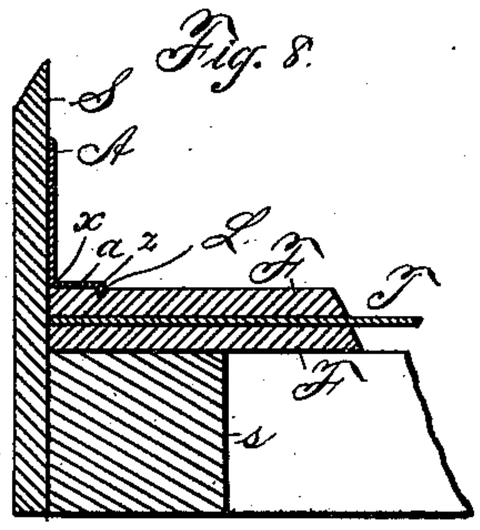
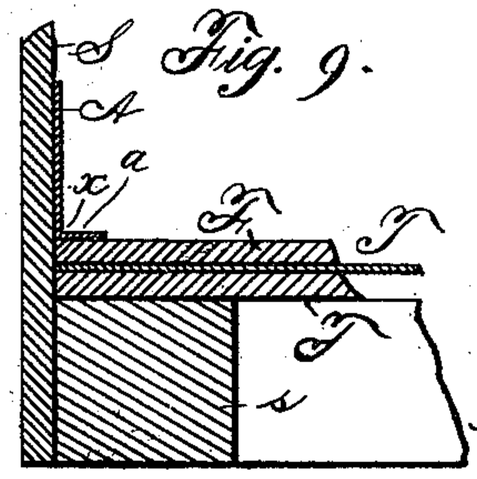


Fig. 9.



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UNITED STATES PATENT OFFICE.

MYERS A. GARRETT, OF ENGLEWOOD, ILLINOIS.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 408,611, dated August 6, 1889.

Application filed May 6, 1889. Serial No. 309,809. (No model.)

To all whom it may concern:

Be it known that I, MYERS A. GARRETT, a citizen of the United States, residing at Englewood, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railway-Cars, of which the following is a specification.

In all railway-cars more or less water finds its way onto the floors and (when they are constructed in the usual way) leaks through the cracks thereof, reaching the car's sills and causing them to rot. In box cars it also leaks down beneath the siding, reaching the nails by which it is secured, causing them to rust and break off. In short, there is nothing to prevent its entering every crack and crevice in the lower part of the car and thoroughly saturating it above and below, inside and outside. All of this materially shortens the life of the car, and to avoid it is the object of the present invention.

The said invention relates to railway-cars in general; but it is intended to apply it more especially to the construction of refrigerator-cars, as these suffer more than any others from the destructive influences mentioned, because of the almost constant presence of water on their floors.

The said invention consists in certain features of novelty, which are particularly pointed out in the claims hereinafter, said invention being first fully described with reference to the accompanying drawings, in which—

Figure 1 is a perspective view of a fragment of a car constructed in accordance with my invention. The said fragment comprises one of the lower corners of the car and is viewed from the inside. Fig. 2 is a vertical transverse section of the sills, floor, and lower portions of the side walls of a box car constructed in accordance with my invention. Fig. 3 is a vertical longitudinal section thereof on the line 3 3, Fig. 2. Fig. 4 is an edge view of one of the strips of flooring used in carrying out my invention. Fig. 5 is an edge view of one of the tongues or sealing-strips hereinafter described. Figs. 6 to 9 are sections of modifications.

E represents the end, S the side, and F the floor, of the car, which are built upon the sills or timbers *t*, arranged in any desired manner.

A is a strip of sheet-zinc or other metal, which is bent at *x* in the direction of its length, so that it will fit snugly the angle formed by the floor and side of the car, where it is tightly secured by numerous screws or small nails. It is bent also at *z* in the direction of its length, so as to form a lip or flange L, which, when the strip is in place, projects downward from the inner edge of that portion *a* which is secured to the floor, so as to form a water-tight joint. For the reception of this lip the upper surface of the floor is provided with a groove *g*, which is coterminous with the strip A, and the latter extends completely around the interior of the car save at the doorways. Where it is formed of several pieces of metal, their meeting edges are secured together water-tight. Preferably such a joint occurs at each corner of the car.

In the meeting edges of adjacent strips of flooring *f* are formed grooves O, which, according to the prepared form of the invention, are of the shape shown more clearly in Fig. 4—that is to say, the groove for the greater part of its length is straight and parallel with the upper and under surfaces of the flooring, while its ends take an inclined upward course, coming out between the groove *g* and the end of the strip *f*. In practice this groove is formed by three saw-cuts, one *o o* extending from one end of the strip to the other parallel with its upper and under surfaces, and two *o' o'* inclined in opposite directions and intersecting the first near the ends of the strip.

T represents a tongue, (consisting, preferably, of a strip of metal,) which is straight for the greater part of its length and has its ends bent upward, so that it will fit snugly in the groove O. One of these tongues is placed between each two adjacent strips *f*, and its opposite edges inserted in the grooves O in the meeting edges of said strips, respectively, so that when said strips are forced together the tongues will enter equally the grooves in the opposing edges of the strips, as shown in Fig. 3.

It will be seen that the tongues T extend outward beyond the downturned lips L of strip A, and that the extremities of said tongues extend upward above the lower edges of said lips, thereby forming traps for preventing any water which may enter the cracks between the strips *f* from running out at the

end of said cracks and down between the sill *t* and side-boards of the car.

The grooves O should be a trifle less in width than the thickness of tongues T, so that the joint between them will be perfectly water-tight.

Figs. 6 to 8 show slight modifications in the shape of the tongues T, and consequently of the grooves O, designed for their reception. The form shown in Fig. 6 differs from that shown in the preceding figures only in that in the preceding figures the ends of the tongue project upward at an obtuse angle, while in Fig. 6 they project upward at a right angle. In Fig. 7 the shape of the tongue is the same as in Fig. 6; but it is made a little longer, the uptakes of the groove O being formed at the very extremity of the strip *f*. In Fig. 8 the tongue has no upwardly-bent portion, but is perfectly straight, terminating at the extremities of the strip *f*.

Fig. 9 shows a slight modification in the shape of the strip A. Here the bend *z* and lip L are omitted, and the water-tight joint between the floor and the portion *a* of the strip is produced by the use of numerous nails.

In stock-cars and other cars where the side does not extend down to the floor, or where there is no side, the strip A is omitted entirely.

I am aware that it is not new to cut corresponding grooves in the meeting surfaces of two pieces of wood and insert therein the opposite edges of a metallic tongue.

I am also aware that it is not new to secure an iron truss of L shape in cross-section in the angle formed by the side and floor of the car for the purpose of bracing the car.

I am furthermore aware that it has been proposed to construct the floors of freight-cars of flooring-strips having grooves in their opposing faces and separate tongues occupying said grooves.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a railway-car, the combination, with a water-tight floor, of a water-tight strip extending around the outer edge of said floor, one edge of said strip being secured water-tight to the top surface of said floor and the other edge carried upward therefrom and secured to the car, substantially as set forth.

2. In a car, the combination, with a water-tight floor having a groove extending around the outer edge thereof, of a water-tight strip secured water-tight around the outer edge of said floor, said strip having a lip projecting into said groove, substantially as set forth.

3. In a car, the combination, with the water-tight floor having the groove *g* extending around the outer edge thereof, of the strip A, having the lip L projecting downward into said groove, so as to form a water-tight joint, said strip being extended up and secured to the sides of the car, substantially as set forth.

4. In a car, the combination, with a water-tight floor having a groove around the outer edge thereof, of the continuous water-tight strip A, extending completely around the interior of the car save at the doorways, said strip being bent to fit the angle formed by the sides and floor and secured therein and provided with a lip projecting into said groove, substantially as set forth.

5. In a car, the combination, with the floor F and the strip A, secured water-tight around the outer edge thereof, of the tongues T, interposed between the strips of flooring, forming water-tight joints and extending outward beyond the inner edges of strip A, substantially as set forth.

6. In a car, the combination, with the floor having the groove *g* around its outer edge, and the strip A, secured water-tight around the outer edge of the floor and having the lip L projecting downward into said groove, of the separate tongues T, fitted water-tight between the strips *f* and extending outward beyond the lips L, substantially as set forth.

7. In a car, the combination, with the floor having the groove *g* extending around its outer edge, and the strip A, secured water-tight around the outer edge thereof and having the lip L projecting down into said groove, of the tongues T, fixed water-tight between the strips of flooring, extending outward beyond the lips L and having their ends bent upward, terminating above the lower edges of said lips, substantially as set forth.

8. In a car, the combination of the floor F, having the groove *g* extending around its outer edge, the strip A, extending around the interior of the car save at the doorways, bent to fit the angle formed by the floor and sides of the car and there secured water-tight, said strip having the lip L extending down into said groove, and the separate tongues T, fixed water-tight between the strips of flooring, extending outward beyond the lips L and bent upward, terminating above the lower edges of said lips, substantially as set forth.

9. In a car, the combination of the floor F, formed of strips *f*, having grooves O in their meeting edges, said floor having the groove *g* extending around the outer edge thereof, the strip A, bent to fit the angle formed by the floor and sides of the car, secured therein water-tight, and having the lip L extending down into said grooves *g*, and the separate tongues T of slightly greater thickness than the width of grooves O, having their opposite edges forced into said grooves, so as to form water-tight joints, said tongues extending outward beyond the lips L and having their ends bent upward, terminating above the lower edges of said lips, substantially as set forth.

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