Nov. 26, 1929. W. D. THOMPSON 1,737,527

CAR BODY CONSTRUCTION

Filed May 7, 1923

Fig. 1.

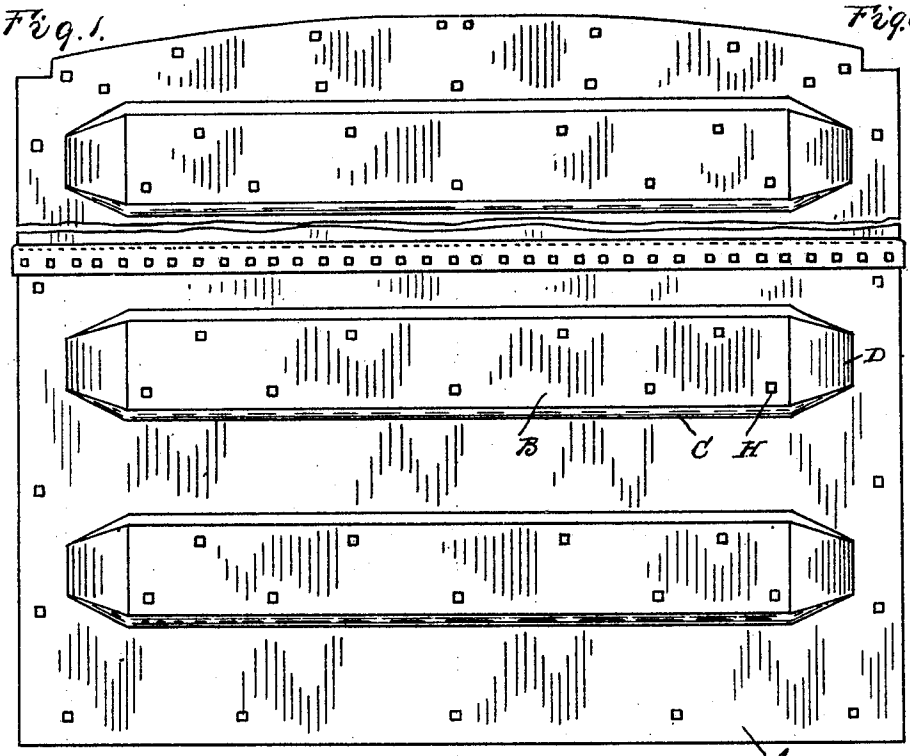


Fig. 3.

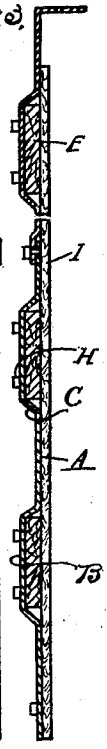


Fig. 2.

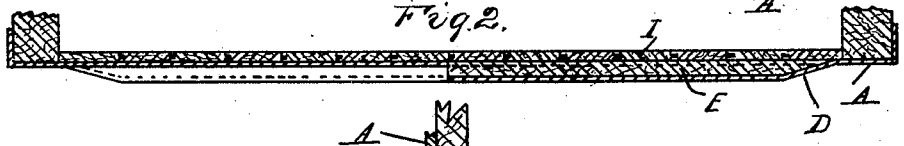
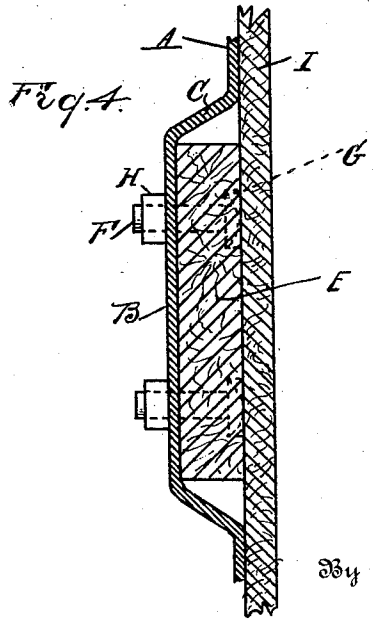


Fig. 4.



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Patented Nov. 26, 1929 1,737,527

UNITED STATES PATENT OFFICE

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CAR-BODY CONSTRUCTION

Application filed May 7, 1923. Serial No. 637,349.

The invention relates to car body constructions of that type in which a ribbed or paneled metallic sheet forms the outer wall, which is protected on the interior by a wooden lining. Such constructions are particularly applicable to car ends, but might also be applied to the side walls of the car. It is the object of the present invention to lighten and cheapen the construction by the novel construction of lining and means for securing the same, and to this end the invention consists in certain features of construction as hereinafter set forth.

In the drawings:

Figure 1 is an elevation of the car end with my improvements applied thereto;

Figure 2 is a horizontal section therethrough;

Figure 3 is a vertical section;

Figure 4 is an enlarged portion of Fig. 3.

In the construction of car ends or side walls of the type above referred to, a metallic plate A is pressed to form a series of panels B arranged in a spaced parallel plane and connected to the plane of the remainder of the sheet by oblique portions C and D respectively at the sides of the ends.

As heretofore constructed, it is usual to place in some of the recesses formed by these panels comparatively narrow wooden strips bolted or otherwise secured to the panel and to which the wooden lining for the end is nailed. Inasmuch, however, as the lining must stand the stress and impact of the material within the car, it is usual to form this lining of comparatively thick lumber, such for instance as an inch and three-fourths matched boards. This not only adds to the expense of the structure, but also a considerable amount of the dead weight thereof, which is objectionable as every additional pound of dead weight cuts down on the carrying capacity.

With my improved construction I substitute for the heavy lining one form of relatively thin stock, such for instance as thirteen-sixteenths of an inch in thickness. This alone, however, would not have the required strength to withstand impact of the load and I therefore have provided fillers for the recesses formed by the panels which substantially cover the entire area thereof. These filler strips may also be used for nailing the lining, but their main function is to reinforce the lining and to prevent injury thereof by internal pressure or impact.

In detail, the filler strips E are of a thickness corresponding to the depth of the recesses and are of a width equal to that of the bottom of the recess, leaving but a slight space at each edge adjacent to the oblique portions C. At the ends of the panel the longer oblique portions are filled by tapering portions of the filler, so that the inner face of this filler is flush and substantially continuous with the inner face of the metal plate. The strips E are secured in position by suitable means, such as bolts F, having their heads in recesses G in the fillers and have shanks passing out through apertures in the metallic plate and engaging nuts H. The lining I of reduced thickness is then secured to these filler blocks and, on account of the reinforcement of said blocks and of the metallic plate, the lining will be strong enough to withstand the load.

The construction as described is just as durable as one having a lining of thick stock, while the reduction in the weight and cost of the material used is considerable.

What I claim as my invention is:

1. In a car body construction, the combination with a metallic plate provided with depressed portions forming panels in a parallel plane connected with the main plane by obliquely extending portions at both sides and ends, the portions at the ends being of a more oblique angle, filler strips within said depressions being of a gauge equal to the depth of the depression and of a width equal to the width of the panel, the ends of said filler strips being tapered to fill the oblique ends of the depression, and a lining of relatively thin stock secured to said filler strips and bearing thereagainst and the flush face of the metallic plate.

2. In a car body construction, the combination with a metallic plate provided with depressed portions forming strengthening ribs tapered at their ends, of fillers having ta-

pered end portions arranged within said recesses, and a lining formed of relatively thin stock secured to said filler strips, said ribs having crests parallel to said lining, said panel having a reinforcing engagement with said lining at the areas between said filler strips and with said filler strips.

3. In a car body construction, a lining formed of relatively thin stock, a metallic plate provided with depressed portions forming straightening ribs or corrugations with the crests thereof parallel to said lining and with obliquely extending portions connecting the said crests with the main plane of the plate, and fillers arranged within said corrugations of such size as to substantially fill the same, the said fillers having portions shaped to conform to certain of the obliquely extending portions of the plate and to engage the same, said lining being secured to said filler strips, and said plate having a reinforcing engagement with said lining at the areas between said filler strips.

4. In a car body construction, the combination with a relatively thin lining, of means for reinforcing the same, said means including a metallic plate provided with longitudinally extending depressed portions connected to the main plane of said plate by obliquely extending portions at both sides and ends, and filler blocks within the said depressed portions, the said metallic plate and filler blocks cooperating to provide a continuous reinforcement for the lining through the longitudinal plane of the said depressions.

In testimony whereof I affix my signature.

WILLIAM D. THOMPSON.