W. P. MURPHY.

CAR DOOR.

APPLICATION FILED DEC. 27, 1913.

1,168,539.

Patented Jan. 18, 1916.

2 SHEETS—SHEET 1.

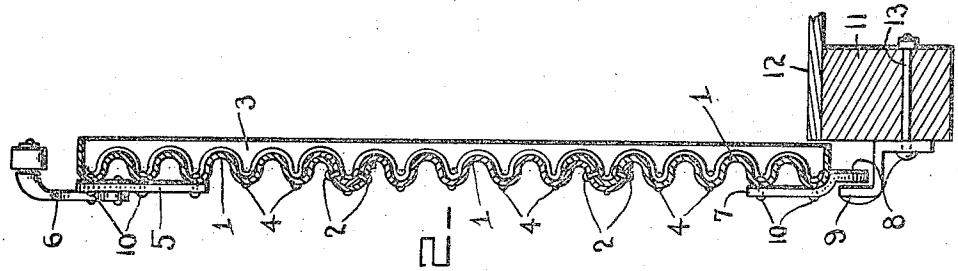


FIG. 2.

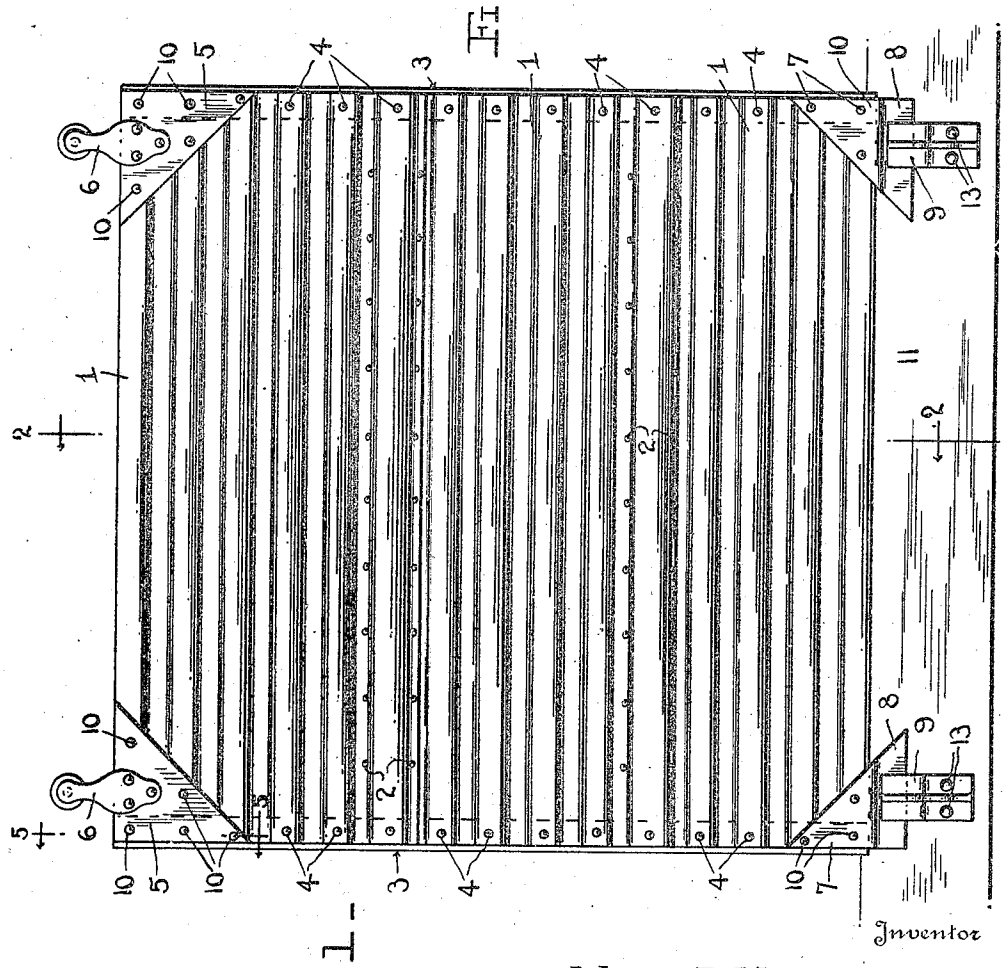


FIG. 1.

Witnesses

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2 SHEETS—SHEET 2.

FIG. 4.

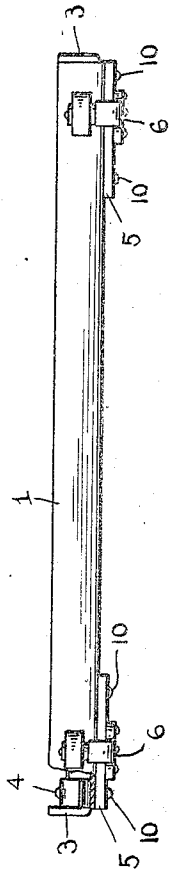


FIG. 6.

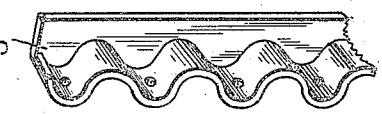


FIG. 7.

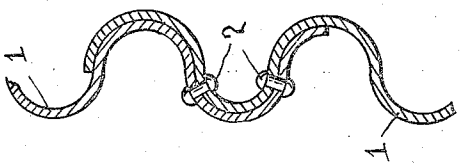


FIG. 5.

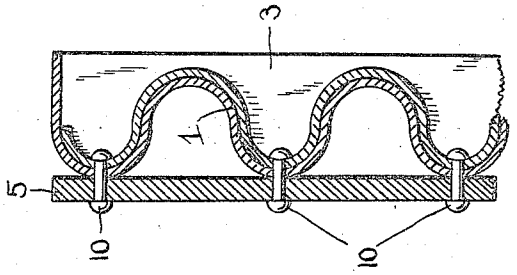
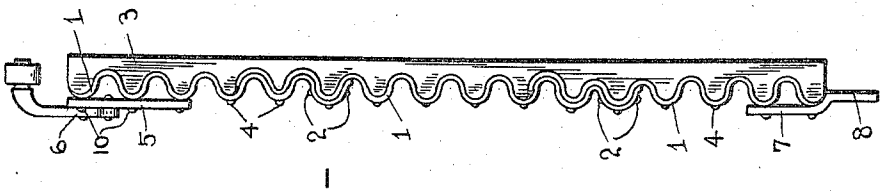


FIG. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

WALTER P. MURPHY, OF CHICAGO, ILLINOIS.

CAR-DOOR.

1,168,539. Specification of Letters Patent. Patented Jan. 18, 1916.

Application filed December 27, 1913. Serial No. 809,031.

To all whom it may concern:

Be it known that I, WALTER P. MURPHY, 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 Car-Doors, of which the following is a specification.

In the drawings: Figure 1 is a front elevation of a car door embodying my invention applied to a car, the car being broken away. Fig. 2 is a vertical sectional view on the line 2—2, Fig. 1. Fig. 3 is an end view of the door detached. Fig. 4 is a top plan view of the door, partly broken away. Fig. 5 is an enlarged detail sectional view on the line 5—5, Fig. 1, looking in the direction of the arrow. Fig. 6 is an enlarged detail perspective view of one of the side marginal binding members. Fig. 7 is an enlarged detail sectional view of the joint between the corrugated sheets.

The object of my invention is to provide a simple, cheap, but substantial car door of such construction that it can be easily and quickly repaired; and with this and other objects in view my invention consists of the parts and combination of parts as will be hereinafter pointed out.

The car door is made up of a plurality of corrugated sheets, 1, the adjacent marginal edges of which overlap and are interlocked as more clearly shown in Fig. 7 and are secured together on each side of a full corrugation by means of the rivets 2. By riveting the sheets on both sides of the corrugation the joints between the sheets serve to reinforce the structure. It is of course obvious that I may spot weld the sheets instead of riveting.

3 are side marginal binders for the door which is made of angle iron, one leg of which is straight against which the side marginal edges of the sheets 1 abut, whereby the ends of the corrugations are closed, the edge of this leg fitting snugly against the side of the car when in the closed position thus making a weather-proof joint therebetween. The other leg of the binder bars 3 is corrugated over which the corrugations of the door sheets fit and to which said sheets are riveted by means of the rivets 4. The rivets are passed through the crown of the corrugation.

5 are gusset plates riveted to the door sheets at the top corners of the door to which suitable door hangers 6 are riveted so as to distribute the weight of the door over a larger area of the sheet than would be possible if the hanger was fastened to the sheet direct. The gusset plates also serve to stiffen the door.

At the bottom of the door I secure gusset plates 7, the lower portion of each of which depends below the lower edge of the door proper as at 8 and engages the door guides 9 and serves to hold the door against the side of the car so as to form a weatherproof joint therebetween when the door is in its closed position. The rivets 10 securing the gusset plates to the door sheets pass through the crown of a corrugation.

11 is the car sill, 12 the car floor, and 13 is a bolt securing the door guide to the car.

What I claim is:—

1. A metal car door comprising a plurality of corrugated sheets the adjacent marginal edges of which overlap whereby a corrugation of one sheet interlocks with a corrugation of the next adjacent sheet, means securing the adjacent sheets together through the sides of the overlapped corrugations.

2. A metal car door comprising a plurality of corrugated sheets, the adjacent marginal edges of which overlap, whereby a full corrugation of one sheet interlocks with a full corrugation of an adjacent sheet, and rivets passing through each side wall of the interlocked corrugation to secure the sheets firmly together so that the heads of the rivets are within the outline of the door as a whole.

3. A metal car door comprising a plurality of corrugated sheets overlapping at their adjacent edges, pressed steel angle bars secured to the sides of the doors, each angle bar having one leg corrugated to fit the corrugations of the sheets of the door.

4. In a sheet metal car door, a marginal member for said door comprising an angle iron one leg of which is corrugated.

5. A car door comprising a plurality of corrugated sheet metal sections overlapping at their adjacent marginal edges, marginal binders comprising an angle iron, one leg of each of which is corrugated, the ends of said sections being secured to said corrugated leg, the other leg of the binders abutting against the extreme edges of the said sections.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER P. MURPHY.

Witnesses:
P. F. McSHANE,
JOSEPHINE HARTNETT.