

L. G. FOWLER & H. V. THOMAS.
METAL DOOR.

APPLICATION FILED SEPT. 29, 1911.

Patented Oct. 29, 1912.

1,042,903.

2 SHEETS—SHEET 1.

Fig. 2.

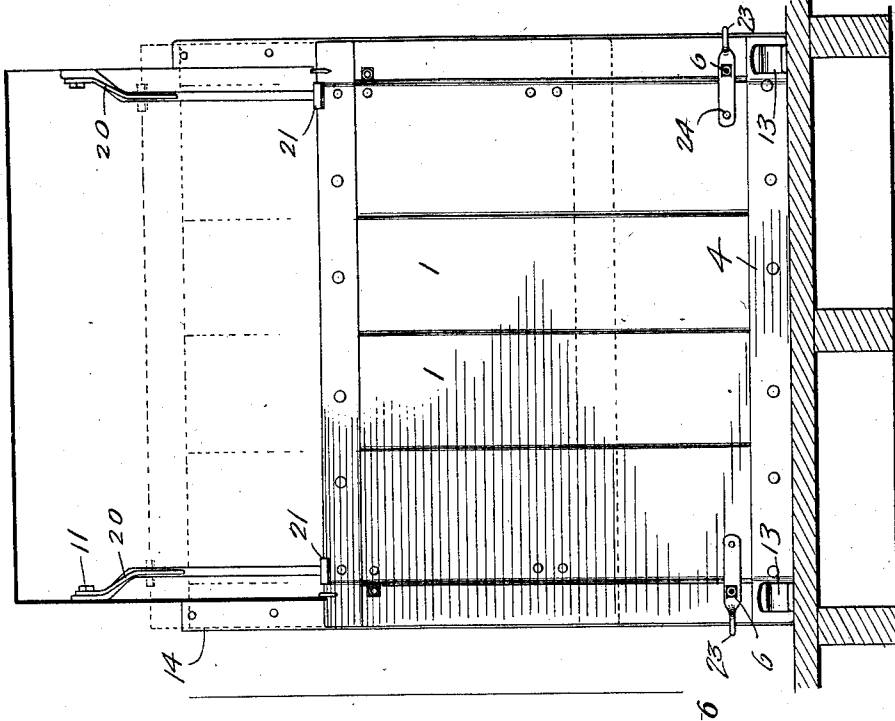
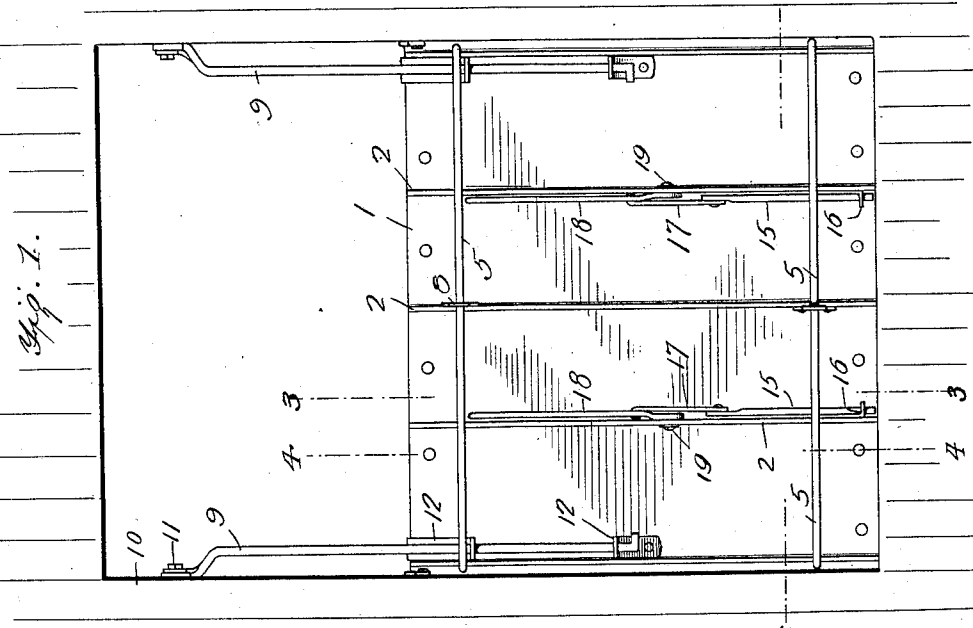


Fig. 1.



WITNESSES

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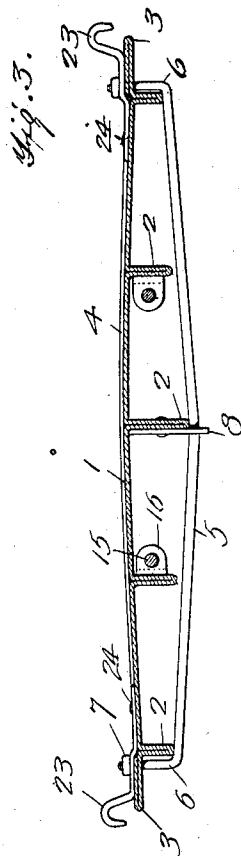
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UNITED STATES PATENT OFFICE.

LEWIS G. FOWLER AND HARRY V. THOMAS, OF BLAIRSTOWN, MISSOURI.

METAL DOOR.

1,042,903.

Specification of Letters Patent.

Patented Oct. 29, 1912.

Application filed September 29, 1911. Serial No. 652,023.

To all whom it may concern:

Be it known that we, LEWIS G. FOWLER and HARRY V. THOMAS, citizens of the United States, and residents of Blairstown, in the county of Henry and State of Missouri, have invented a new and Improved Metal Door, of which the following is a full, clear, and exact description.

Our invention is an improvement in metal doors, especially adapted for railroad cars, wherein the door is provided with reinforcing ribs formed by bending the material of the door upon itself, together with the particular form of truss rod.

In the drawings:—Figure 1 is a face view of the door; Fig. 2 is a rear view, and Fig. 3 is a section on the line 3—3 of Fig. 1.

In the present embodiment of the invention, the door 1 is formed from a sheet of suitable metal, (Fig. 3) folded at spaced intervals to form a plurality of vertical reinforcing ribs 2 on its outer face. The side edges of the sheet are folded inwardly onto the rear face of the sheet as shown at 3, and at the top and bottom of the door reinforcing plates 4 are secured on the front of the sheet.

The ribs 2 gradually decrease in length from the central rib to the side ribs, and a truss rod 5 is arranged transversely near the top and bottom of the door, each rod touching the center rib and the side ribs. The ends of the rods are bent laterally along the ribs and passed through the doubled side edges as indicated at 6, and are engaged by nuts 7, on the opposite side of the door.

A plate 8 is secured to the central rib 2, at each truss rod, and each plate is provided with an opening through which the rod passes. A slide rod 9 is pivoted at one end to the inner face of the side 10 of the door opening, as indicated at 11. The door is provided with hangers 12, at each side of its top, and at approximately the center of each side, which slide on the rods 9.

Stops 13 are secured to the floor at each end of the door at the inner side of the door, against which the door rests when in lowered position. A reinforcing plate 14 is arranged on the inner face of the car at each side of the door opening, and a slide bolt

15 is movable on the outer face of the door in a guide 16 on the adjacent rib near each end of the door. Each bolt has a link 17 connected to its top, and a lever 18 is pivoted at one end to the rib on which the bolt slides, as indicated at 19.

The door is slidable on the rods 9 from the position shown in full lines in Fig. 2 to the dotted line position of the said figure. When the door reaches the dotted line position of Fig. 2 a hook 20 is provided at each side of the door opening for engaging lugs 21 on the door to hold the door in such position. The lugs 21 are formed by the upper end of the upper hangers 12.

When the door has been moved into the dotted line position of Fig. 2, it may be swung inwardly and be suspended at its free edge from the roof of the car, by any suitable means engaging the hooks 23, near the bottom of the door, the said hooks being held in place by the ends 6 of the truss rods 5 and by rivets 24.

We claim:—

1. A grain door for cars composed of a sheet of metal folded upon itself at spaced intervals to form a plurality of vertical reinforcing ribs on one face thereof, a truss-rod arranged transversely of the ribs near the top and near the bottom of the door, the ends of the rod being bent laterally, and the door having openings through which the said ends extend, nuts engaging said ends on the opposite side of the door from the rod, said ribs gradually decreasing in height from the center toward the sides thereof, and plates secured to sundry of the ribs, each plate having an opening for the truss rod.

2. A grain door for cars composed of sheet metal provided on one face with a plurality of integral laterally extending reinforcing ribs, the ribs at the center of the door being of greater width than those at the sides, and a truss rod supported by the ribs and engaging the ends of the door.

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Witnesses:

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