

No. 763,438.

PATENTED JUNE 28, 1904.

J. J. SOUDER.

METALLIC ROOF FOR RAILWAY CARS.

APPLICATION FILED MAR. 26, 1903. RENEWED NOV. 6, 1903.

NO MODEL.

4 SHEETS—SHEET 1.

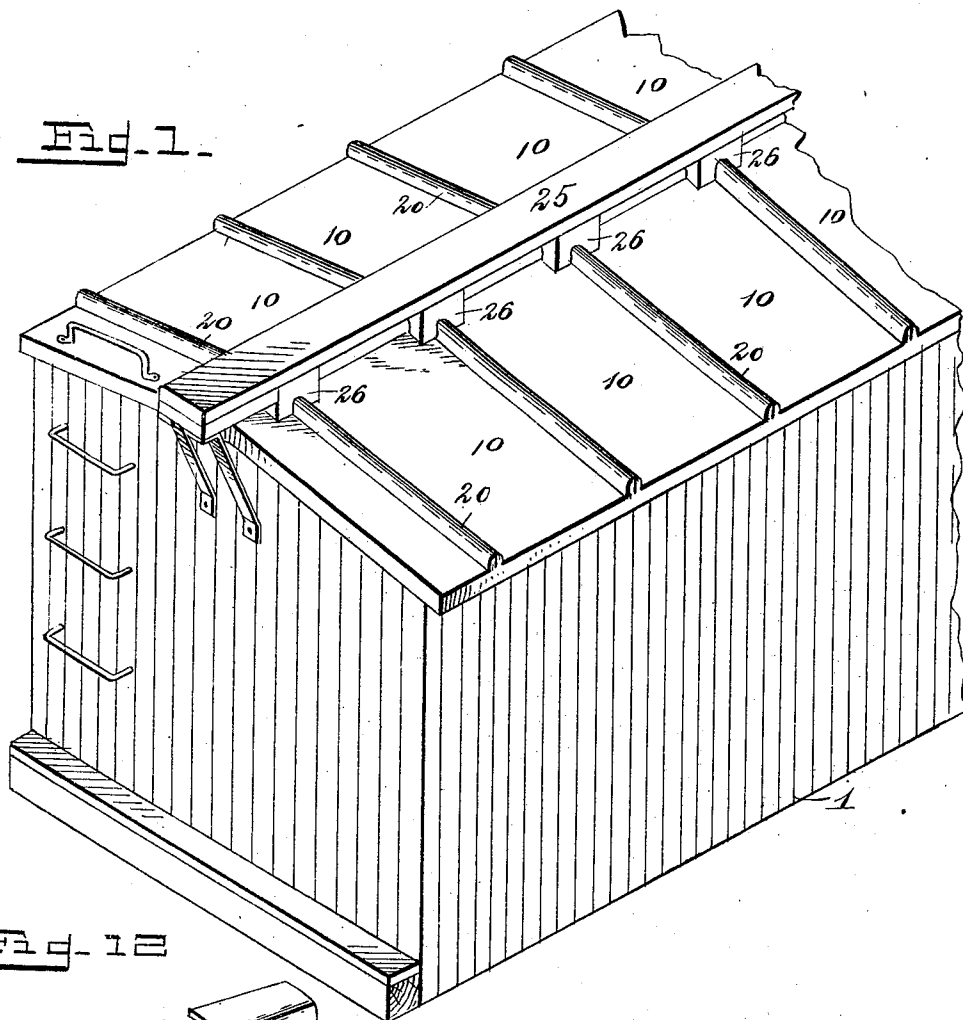


Fig. 12

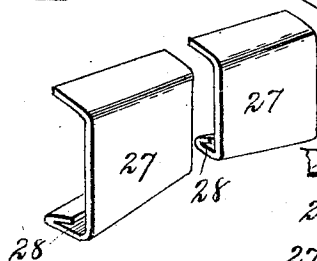


Fig. 11

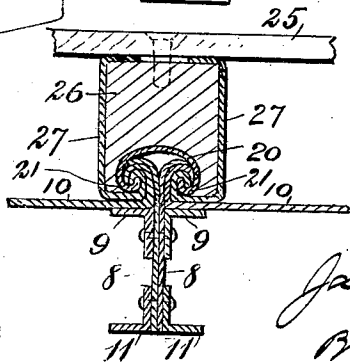
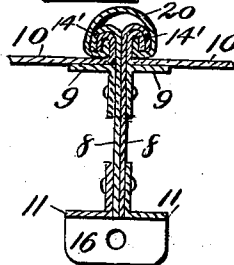


Fig. 2a



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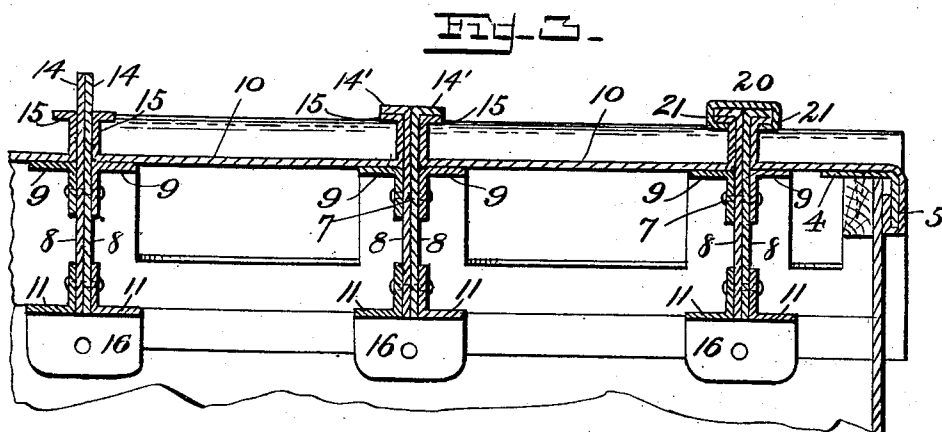
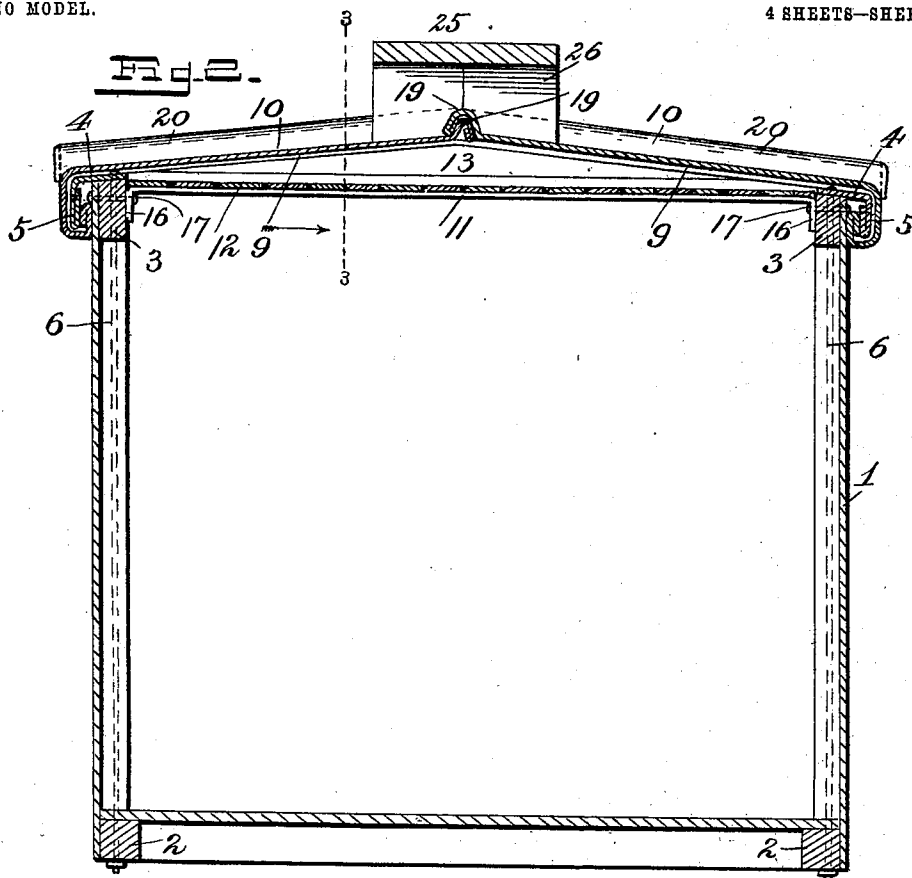
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4 SHEETS—SHEET 2.



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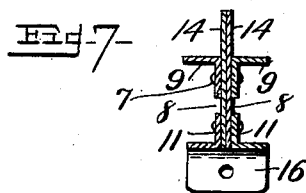
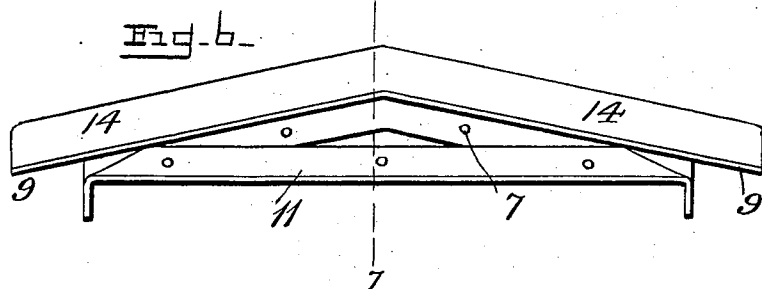
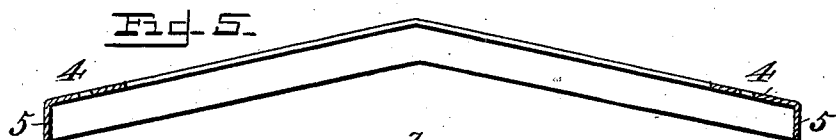
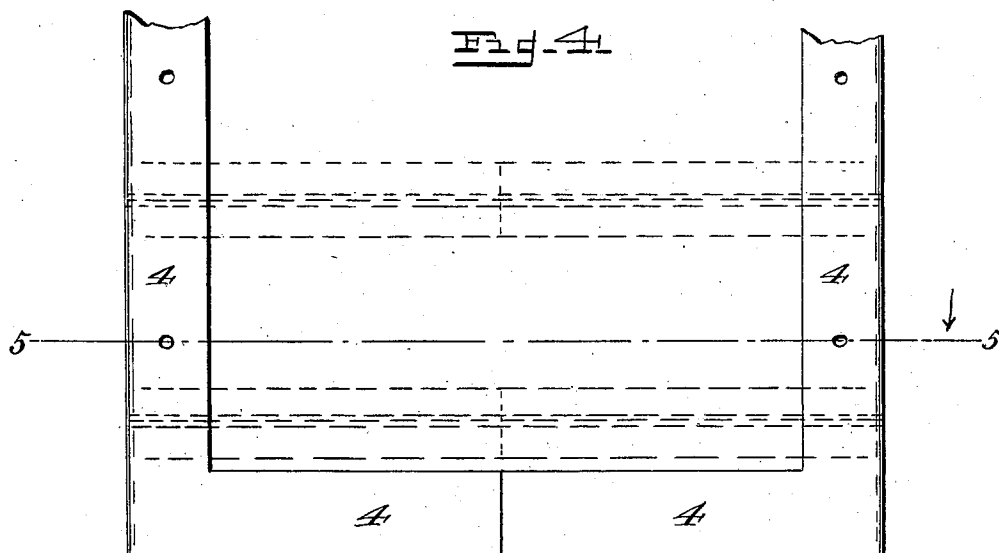
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4 SHEETS—SHEET 3.



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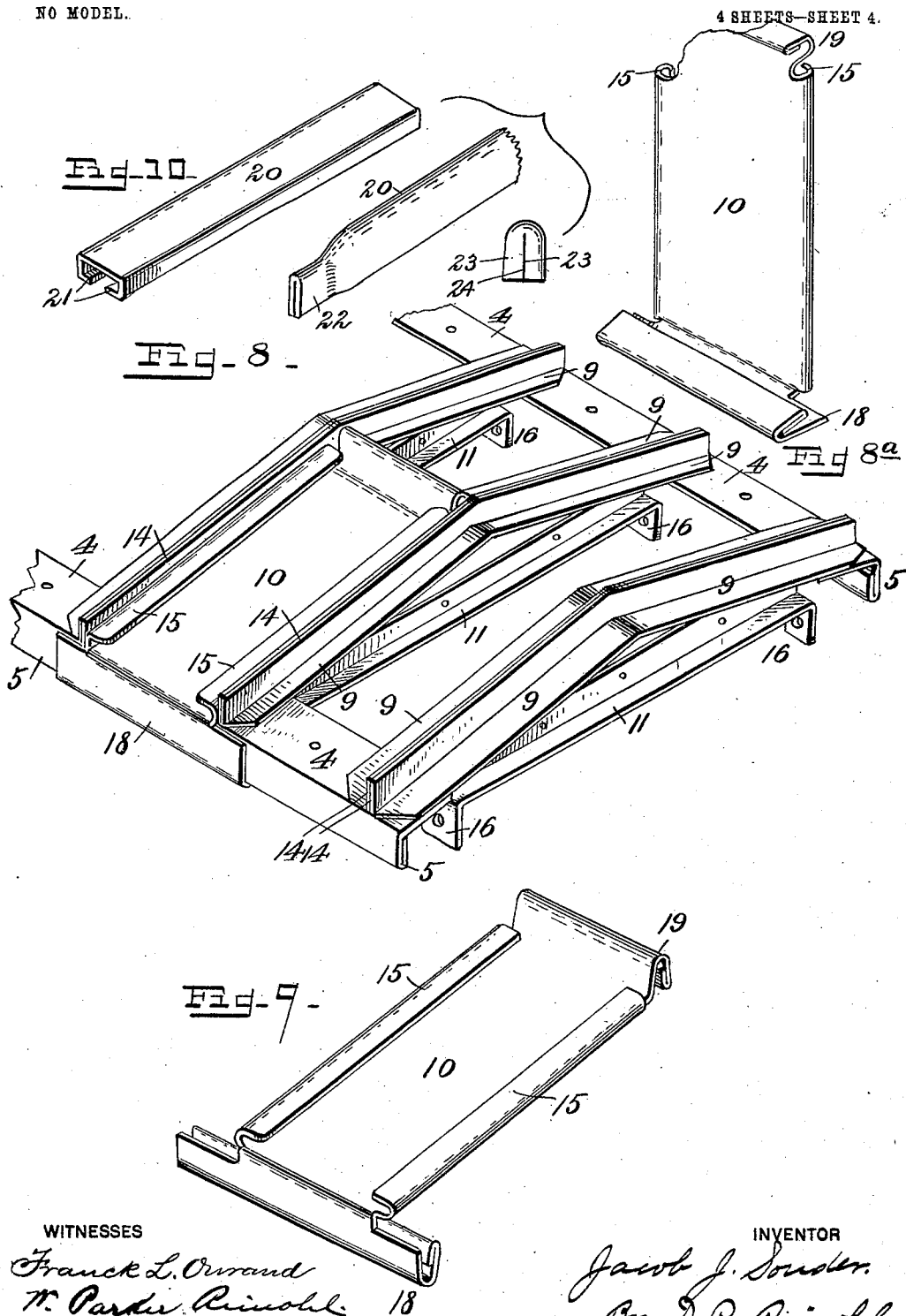
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4 SHEETS—SHEET 4.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JACOB J. SOUDER, OF WASHINGTON, DISTRICT OF COLUMBIA.

## METALLIC ROOF FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 763,438, dated June 28, 1904.

Application filed March 26, 1903. Renewed November 6, 1903. Serial No. 180,129. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB J. SOUDER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Metallic Roofs for Railway-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to fireproof or metallic roofs for railway-cars or other structures, has for its object a roof applied without the use of nails or screws, and the several parts put together and secured without solder; and the invention consists in certain improvements in construction, which will be fully disclosed in the following specification and claims.

In the accompanying drawings, which form part of this specification, Figure 1 is a perspective of the body of a car provided with my improved roof; Fig. 2, a vertical transverse section of the same; Fig. 3, a vertical longitudinal section on line 3 3, Fig. 2, showing the seams between the sections of the roof in their different stages of construction; Fig. 3<sup>a</sup>, a vertical transverse section, showing a completed seam; Fig. 4, a top plan view of the base-plate of the roof; Fig. 5, a transverse section of the same on line 5 5, Fig. 4; Fig. 6, a side elevation of one of the roof-trusses detached; Fig. 7, a vertical transverse section of the same on line 7 7, Fig. 6; Fig. 8, a perspective of the base-plate, showing roof-trusses and one roof-section in position; Fig. 8<sup>a</sup>, a perspective of the opposite roof-section before it is placed in position on the base-plate; Fig. 9, a perspective of the roof-section shown in position on the base-plate in Fig. 8; Fig. 10, a detail perspective of the seam-clip, showing its several stages of construction; Fig. 11, a vertical section taken through the running-board, one of its supports, and a seam of the roof; and Fig. 12, a perspective of the clip for securing the running-board supports to the seams of the roof.

Reference being had to the drawings and the designating characters thereon, 1 indicates

a car-body; but the application of my invention is not limited to cars, as it may be applied to structures of other kinds, such as buildings.

2 indicates the sills of the car-body or framing, and 3 the upper timbers.

4 indicates the metallic base-plate of my roof structure, is of a length and width slightly in excess of the length and width of the car-body, is inclined on both sides from the transverse center, as shown in Fig. 5, to provide the requisite pitch for the roof, and is provided with flanges 5, preferably vertical, on its sides and ends, which project down over the sides and ends of the car-body and set off a distance from the body to receive flanges on the ends and sides of the roof-sections. The base-plate rests on the timbers 3 and is secured to the frame of the car by vertical bolts 6, which extend through the base-plate, the timbers 3, and the sills 2, as shown in Fig. 2.

7 indicates the roof-truss, which is composed of two plain flat pieces 8 8 of sheet metal, to which are riveted angle-irons forming opposite lateral flanges 9 9 for supporting roof-sections 10, and at the lower edge of the truss or pieces 8 are riveted to the sides thereof angle-irons forming opposite lateral flanges 11 11 for supporting a tongue-and-grooved ceiling 12 and forming a dead-air chamber 13 between the roof-sections and the ceiling, adapted especially for refrigerator-cars. That part of the pieces 8 above the flanges 9 9 constitute members 14 14, which are subsequently cut vertically in the center and bent laterally in opposite directions to form flanges 14' 14', which engage the flanges 15 15, respectively, on the sides of the roof-sections 10, as shown in Fig. 3. The roof-truss is provided with downwardly-extending lugs 16, by which the truss is secured to the timber 3 by bolts 17 or by other preferred means.

In assembling the roof the roof-trusses extend over and by their flanges 9 9 rest upon the sides of the base-plate 4, as shown in Figs. 2 and 8, and are secured against lateral or longitudinal displacement by the bolts 17, engaging the lugs 16.

The roof-sections 10 are made right and left



ning-board, supports for the running-board, and clips engaging flanges in the seams and the running-board supports.

17. A metallic roof comprising a base-plate, 5 transverse roof-trusses resting on the base-plate and provided with lateral flanges for supporting roof-sections, and lateral flanges for supporting a ceiling, and roof-sections; in combination with a ceiling a dead-air cham- 10 ber between said roof-sections and said ceiling.

18. A metallic roof comprising a base-plate

continuous about the car, transverse roof-trusses resting on the base-plate, roof-sections engaging said trusses, and a ceiling; in com- 15 bination with a dead-air chamber between said roof and said ceiling.

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

JACOB J. SOUDER.

Witnesses:

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