

(No Model.)

J. L. HONHORST.  
CAR ROOF.

No. 582,160.

Patented May 4, 1897.

Fig. 1.

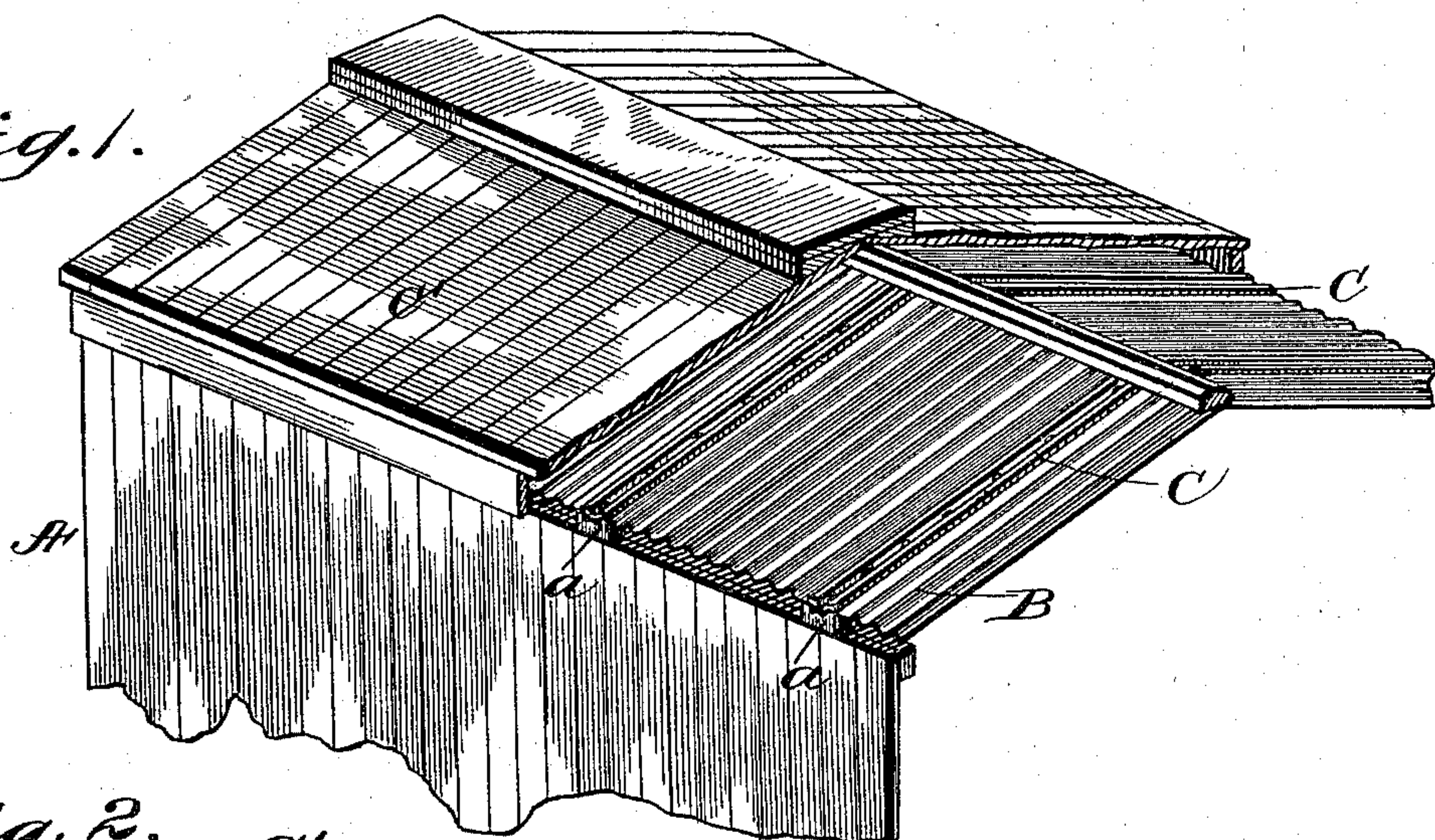


Fig. 2.

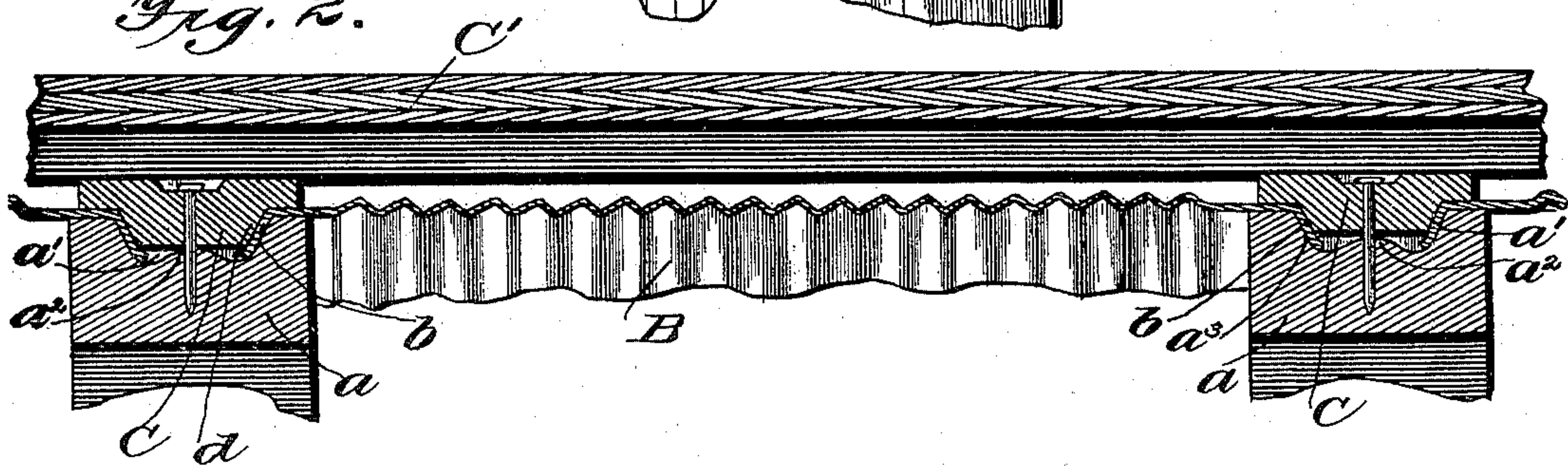


Fig. 4.

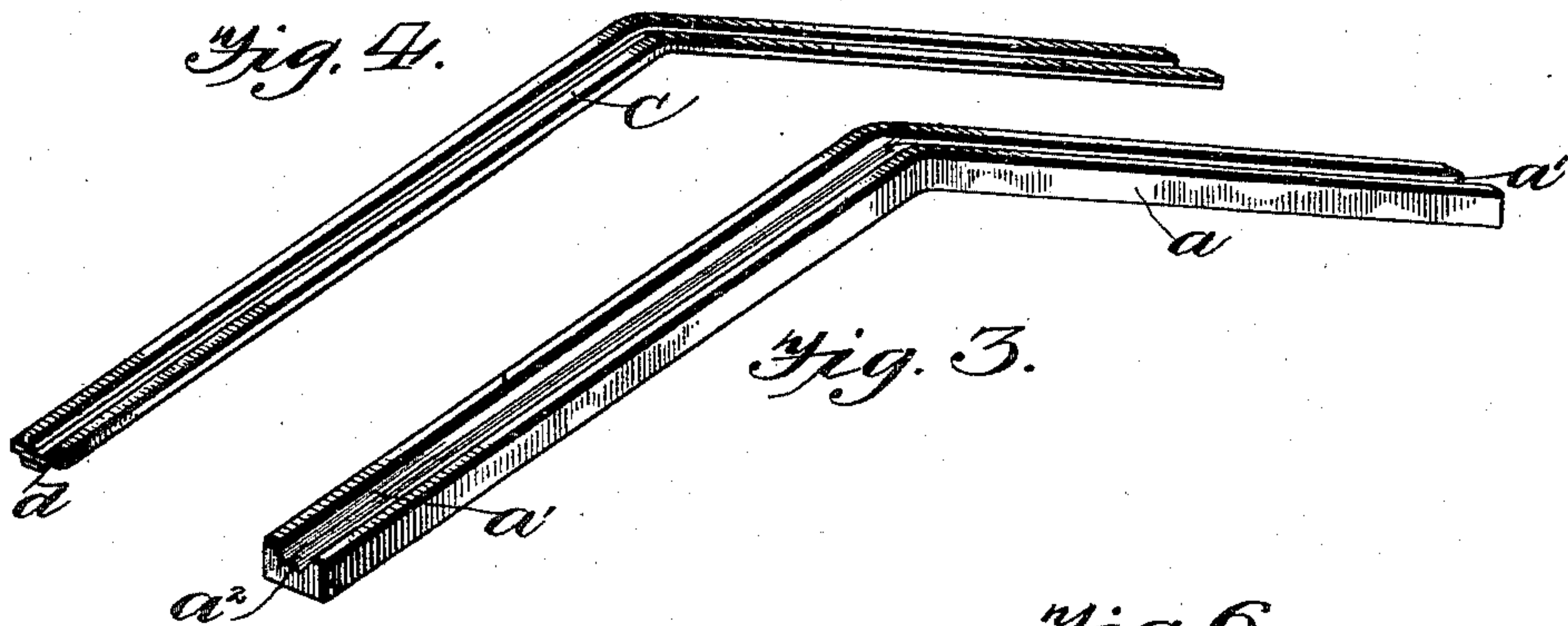


Fig. 3.

Fig. 5.

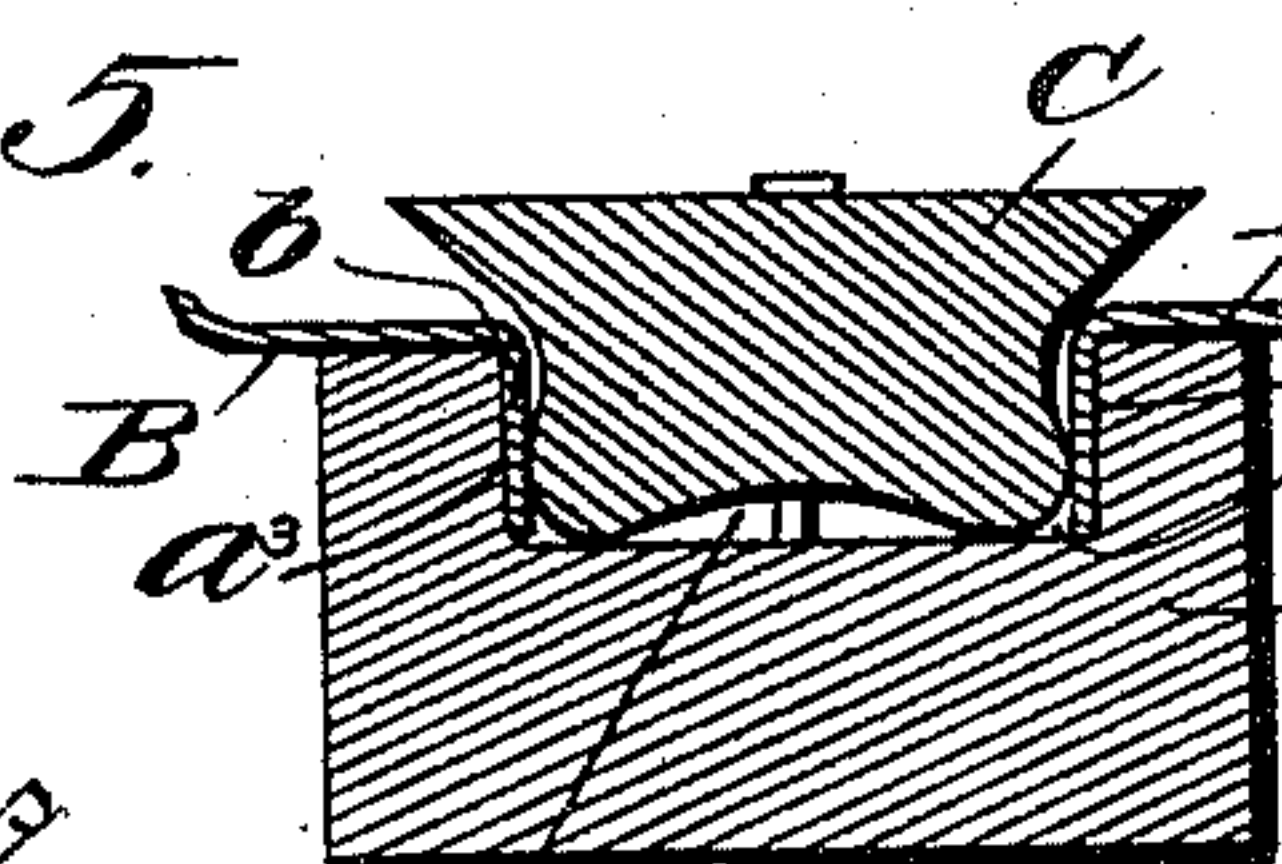
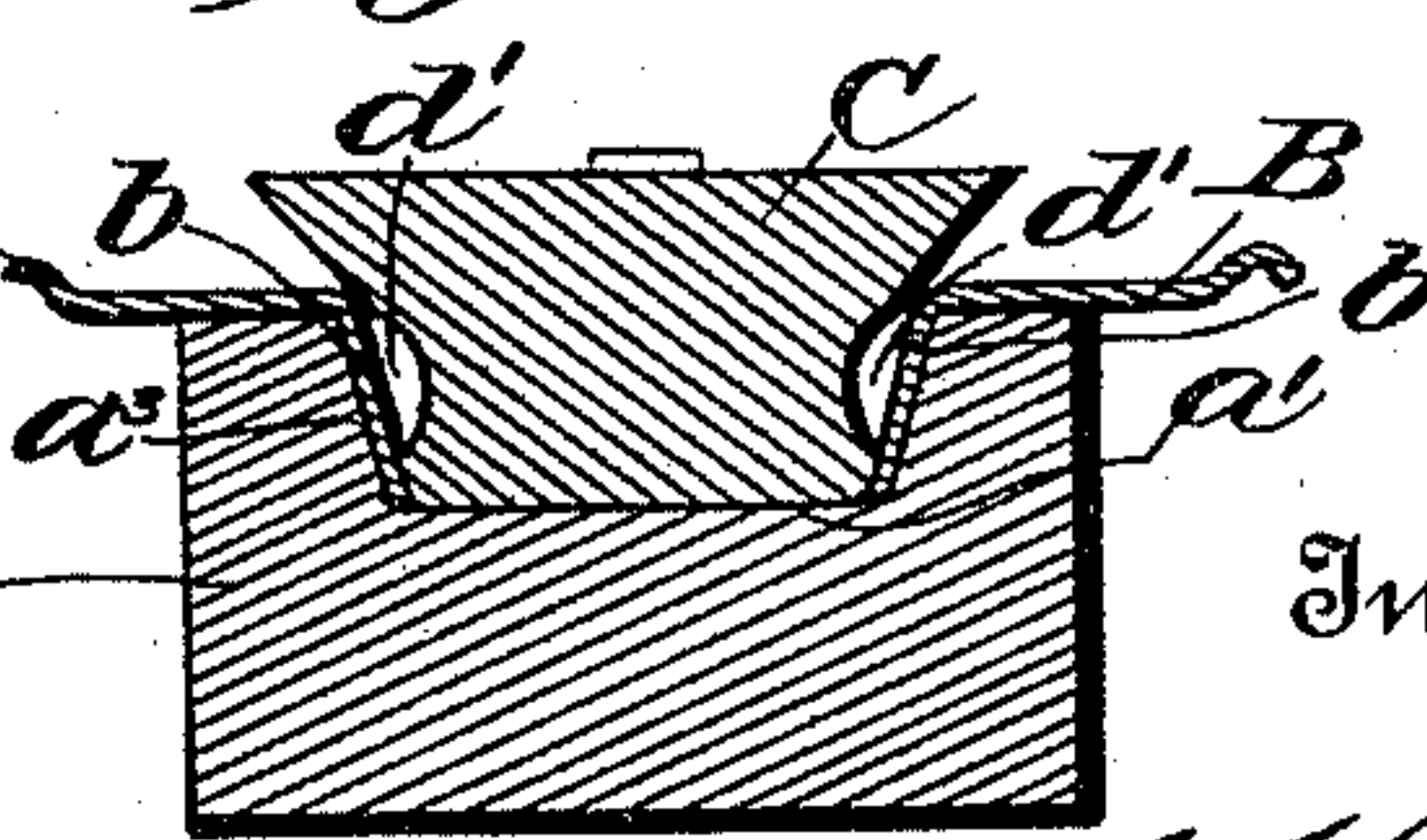


Fig. 6.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOSEPH L. HONHORST, OF NILES, OHIO, ASSIGNOR OF ONE-HALF TO  
RECHAB JOHN LLOYD, OF SAME PLACE.

## CAR-ROOF.

SPECIFICATION forming part of Letters Patent No. 582,160, dated May 4, 1897.

Application filed August 26, 1896. Serial No. 603,977. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH L. HONHORST, of Niles, in the county of Trumbull and State of Ohio, have invented certain new and useful  
5 Improvements in Car-Roofs; 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 ap-  
10 pertains to make and use the same.

This invention relates to certain new and useful improvements in car-roofs, and is de-  
15 signed more particularly for use in connection with freight-cars.

The object of my invention is to so con-  
15 struct the roof of a freight-car that all danger of leaking will be entirely overcome and simple and improved means provided for readily and quickly conducting off any and all mois-  
20 ture that may percolate through the wooden protecting-roof and accumulate around the joints of the interior roofing-plates.

In carrying out my invention I provide the joists of the car-roof with grooves or gutters in their top surfaces. The metallic roofing-  
25 plates are designed to be supported by said joists and have their edges turned down into said grooves or gutters, where they are se-  
30 cured in position by suitable strips fitting in said grooves or gutters, a space being formed between the top surfaces of the latter and the bottom faces of said strips, whereby conduits  
35 are formed for conducting away any moisture that may percolate through the usual wooden roofing, which is supported by said strips.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective illustrating a portion  
40 of a car-roof constructed in accordance with my invention. Fig. 2 is a sectional view thereof. Fig. 3 is a detail perspective view of one of the joists. Fig. 4 is a similar view of one of the securing-strips. Figs. 5 and 6 are  
45 views of slightly-modified forms of the latter.

Referring to the drawings, A designates a freight-car, and  $a$  the transversely-arranged joists for supporting the roof thereof. Said joists are secured to the car-body in the usual  
50 or any preferred manner, and are provided with central longitudinal grooves  $a'$ , having

a central raised portion or ridge  $a^2$ , the sides of said grooves being preferably flared, as shown. The roofing-plates B are formed of sheet metal and have their edges  $b$  bent down-  
55 ward, so as to rest against the sides  $a^3$  of groove  $a'$ .

C designates the securing-strips, which are each preferably formed with tapering sides  $d$ , designed to fit in the grooves  $a'$  and against  
60 the edges  $b$  of the roofing-plates. Said strips are secured in position by any suitable means and their lower faces rest on the central ridges  $a^2$ , forming conduits or passage-ways for con-  
65 ducting off rain or any moisture which may happen to leak through the joints of the ordinary wooden roofing C', which is supported by said strips C. In this way moisture is prevented from penetrating to the interior of  
70 the car.

In lieu of forming the central ridges  $a^2$  in grooves or gutters  $a'$  grooves or cut-outs D may be formed in the under faces of securing-  
75 strips C, as shown in Fig. 5, or the beveled faces of said strips may be provided with grooves or cut-outs  $d'$ , as shown in Fig. 6.

The advantages of my invention are apparent from what has been said. It will be specially observed that all leakage to the interior of the car is entirely prevented thereby, and  
80 that the plates serve to rigidly unite the joists together, and all strain lengthwise of the car is obviated, as well as danger of the parts pulling loose.

I claim as my invention—

1. The combination with a car-body having roof-joists provided with longitudinal grooves or cut-outs, of strips secured in said grooves or cut-outs, spaces being formed between said joists and said strips and serving as conduits  
90 or passage-ways for moisture, as set forth.

2. The combination with a car-body having roof-joists provided with grooves in their top surfaces, of roofing-plates having their side edges resting on said joists, and securing-  
95 strips secured to said joists and overlapping the edges of said roofing-plates, spaces being formed between said joists and said strips and serving as conduits or passage-ways for moisture, as set forth.

3. The combination with a car-body having roof-joists provided with longitudinal grooves

or cut-outs having a central ridge, of roofing-plates having their side edges resting in said grooves or cut-outs, and securing-strips fitting in said grooves or cut-outs, as set forth.

- 5 4. The combination with a car-body having roof-joists, said joists being provided with grooves or cut-outs the sides of which are beveled or flared, a central ridge being formed between said grooves or cut-outs, roofing-plates having their side edges turned down  
10 in said grooves or cut-outs and resting against

the sides thereof, and securing-strips of tapering form fitted in said grooves or cut-outs, as and for the purpose set forth.

In testimony whereof I have signed this 15 specification in the presence of two subscribing witnesses.

JOSEPH L. HONHORST.

Witnesses:

W. H. SMILEY,  
GEO. W. UPTON.