

(No Model.)

G. B. SIMONDS.

CAR ROOF.

No. 252,532.

Patented Jan. 17, 1882.

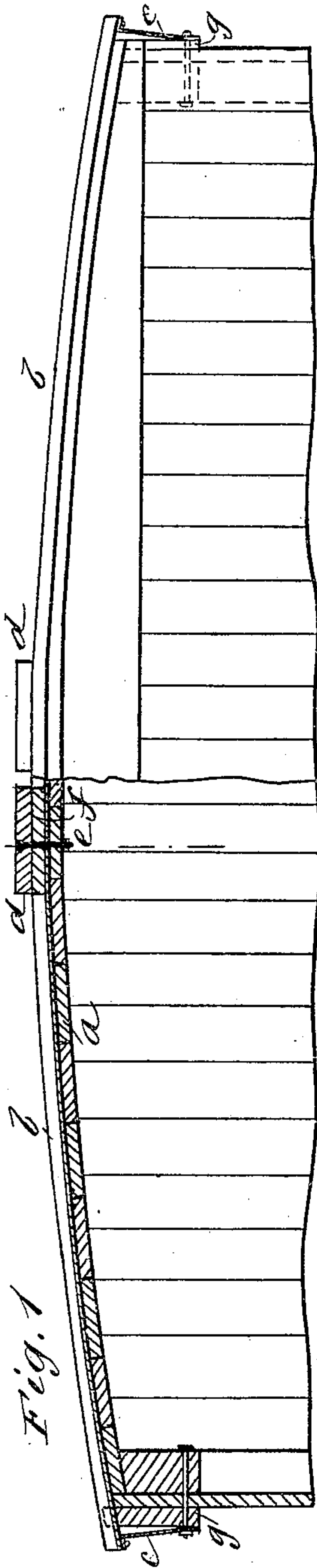


Fig. 1

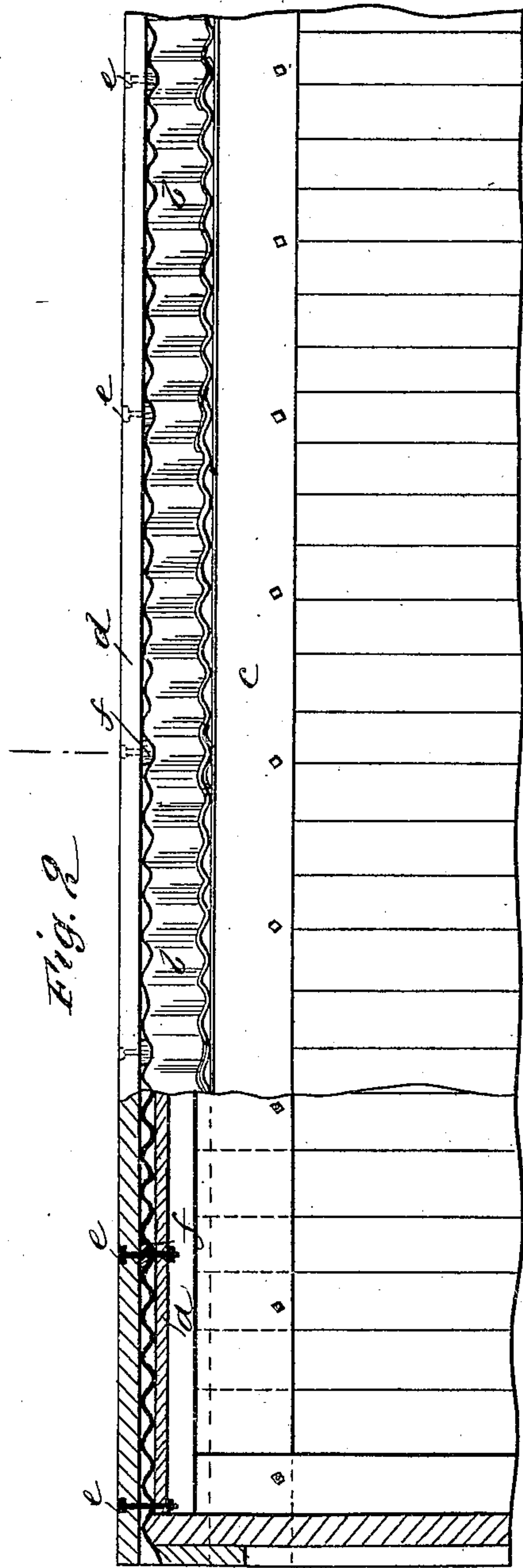


Fig. 2

Fig. 3



WITNESSES:

C. A. Neveu
C. Sedgwick

INVENTOR:

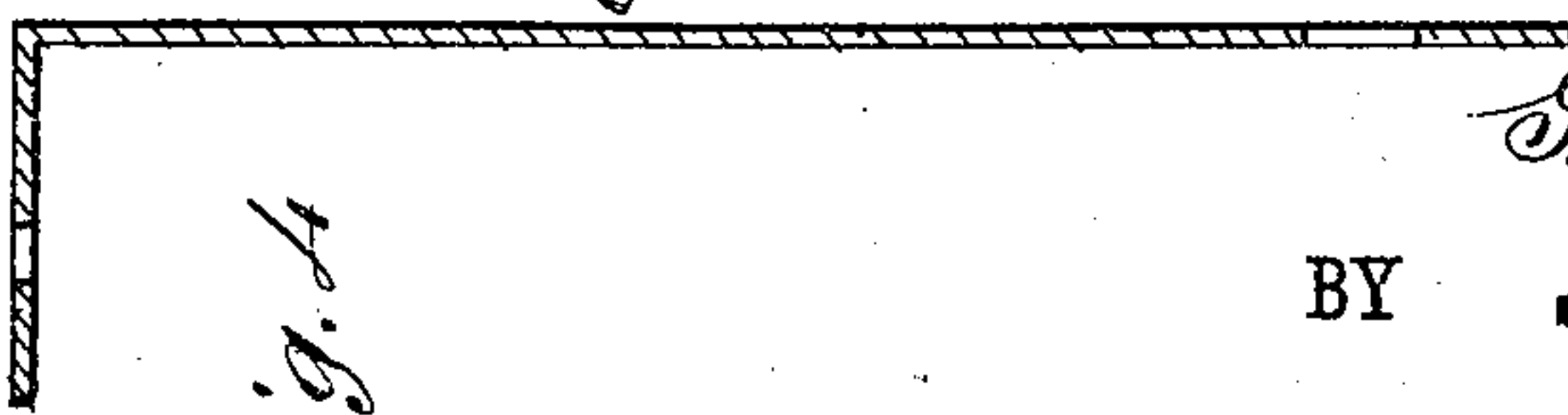
G. B. Simonds

BY

Mum Co

ATTORNEYS.

Fig. 4



UNITED STATES PATENT OFFICE.

GUSTAVUS B. SIMONDS, OF ALBUQUERQUE, TERRITORY OF NEW MEXICO.

CAR-ROOF.

SPECIFICATION forming part of Letters Patent No. 252,532, dated January 17, 1882.

Application filed October 21, 1881. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVUS B. SIMONDS, of Albuquerque, in the county of Bernalillo and Territory of New Mexico, have invented certain useful Improvements in Metallic Roofing for Cars, of which the following is a full, clear, and exact description.

My invention consists in the use of corrugated sheet metal for covering the roofs of railroad-cars, attached substantially as herein-after described, so that the contraction and expansion of the metal will not exert injurious strain upon any part of the roof.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is an end elevation, partly in section, of a car having my improved metallic roof. Fig. 2 is a side elevation of the same, partly in section. Fig. 3 is an end view of two of the plates, showing the manner of lapping them together at the edges; and Fig. 4 is a sectional view of the spring plate or flange.

The roof-boards *a* of the car are by preference placed lengthwise of the car, and upon the roof-boards are placed the corrugated sheet-metal plates *b* in such manner that the corrugations run from the eaves to the center or ridge of the car. The edges of the sheets are lapped one upon the other, as shown in Fig. 3, to form a water-tight joint, and to permit free lateral expansion and contraction of the plates independent of each other.

To the outer ends or eave-edges of the plates are secured, by rivets or otherwise, the spring plates or flanges *c c*, the lower edges of which are adapted to be secured by screws, nails, bolts, or other means, to the sides of the car, as shown clearly in Fig. 1.

The corrugated plates are secured in the center to the ridge of the roof by the ridge-boards *d d*, which are held in place by bolts *e e*, which pass through to the inside of the car, or they may be held by any other suitable means.

In order that the corrugations of the plates will not be crushed down when the ridge-boards *d d* are drawn tight by the bolts *e e*, I

place between the boards and the plates, where the bolts or other fastenings go through, the blocks *f f*, which fill the gutters and support the boards and protect the plates; and back of the plates *c c* are placed the eave-boards *g g*, the upper edges of which are scalloped to fit the corrugations of the roof-plates and close the openings which would otherwise be left between the roof-plates and the roof-boards of the car.

The spring plates or flanges *c c*, it will be observed, stand out from the eave-boards *g g* at their upper edges, and thus permit the roof-plates to expand and contract without any strain upon the roof or body of the car, and yet hold the plates firmly and securely across the top of the car.

Thus constructed, the roof will stand any climate, and should any part of the roof get damaged, the damaged sheets may be removed and replaced with new sheets without removing the whole roof, and the roof will be more durable than any now in use.

Semi-cylindrical strips of wood may be placed under the corrugations of the sheets to support them against danger of being crushed in should any weight come upon the roof of the car.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The corrugated plates *b b*, secured to the car at the eaves by the spring plates or flanges *c c*, substantially as and for the purposes set forth.

2. The corrugated plates *b b*, overlapping each other at the side edges, and secured at the ends to the car by means of the spring plates or flanges *c c*, substantially as and for the purposes set forth.

3. The scalloped eave-boards *g g*, in combination with the corrugated plates *b b* and the spring plates or flanges *c c*, substantially as and for the purposes described.

GUSTAVUS B. SIMONDS.

Witnesses:

HENRY G. FABER,
LEO. J. BARR.