(No Model.)

J. F. VERONEE & G. McINERNEY.

CAR ROOF.

No. 491,909. Patented Feb. 14, 1893.

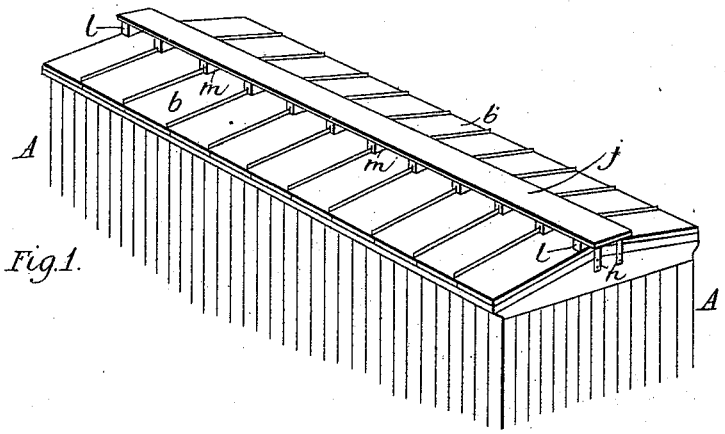

Fig. 1.

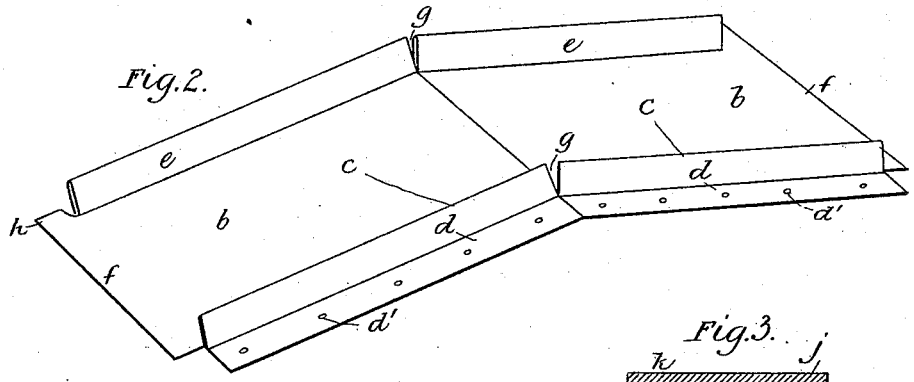

Fig. 2.

Fig. 3.

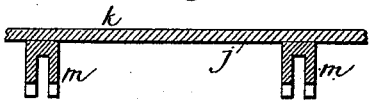

Fig. 4.

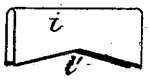

Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

JAMES F. VERONEE AND GEORGE McINERNEY, OF CHARLESTON, SOUTH CAROLINA.

CAR-ROOF.

SPECIFICATION forming part of Letters Patent No. 491,909, dated February 14, 1893.

Application filed July 22, 1892. Serial No. 440,922. (No model.)

To all whom it may concern:

Be it known that we, JAMES F. VERONEE and GEORGE MCINERNEY, citizens of the United States, residing at Charleston, in the county of Charleston and State of South Carolina, have invented certain new and useful Improvements in Car-Roofs; and we do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention has reference to improvements in roofing for railway cars and other structures, and has for its object to provide a roof which may be easily laid and repaired, and which shall be inexpensive in its manufacture, thoroughly waterproof and durable.

Our invention consists in the construction and relative arrangements of the several parts constituting our improved roof all of which will hereinafter be fully and clearly described and specifically claimed.

In the accompanying drawings which form a part of this specification, Figure 1, illustrates in perspective view the upper portion of a freight car having our improved roof thereon; Fig. 2, a detail of one of the roof sections; Fig. 3 a cross sectional view of the running board; Fig. 4, a longitudinal sectional view of a portion thereof; and Fig. 5, a detail view of one of the caps employed.

Like letters of reference denote like parts in the several figures of the drawings.

The letter A denotes the upper portion of a car of ordinary construction to which our improved roofing is applied. The roofing is composed of sections *b* formed from sheet metal, preferably galvanized iron, and is laid transversely to the length of the car. These sections are each provided with the ridge *c* arranged at right angles to the main portion, and extending outward therefrom is a flange *d* which is provided with nail holes *d'*. On the side opposite to the ridge *c* is a hollow ridge *e* which is adapted to fit over the ridge *c* on the adjacent section. These ridges terminate a short distance from the ends of the sections thereby forming flanges *f* which are in practice bent over and secured to the upper edge of the car roof. Vertical cuts *g* are made centrally in the ridges and the sections are bent at this point to conform to the shape of the roof. *h* is a continuation of the flange *f* to form a lap-joint with the adjacent flange. *i i* represent caps which are formed from sheet metal with the lower edges *i'* cut to conform to the shape of the sections. These caps are applied to the ridges after the sections are laid, and serve to bind the joint and prevent leakage through the cuts *g*.

The running or tread board *j* comprises a platform *k* having blocks *l l* at each end thereof which rest on the ends of the roof where the sections are formed without ridges as shown. Between these blocks are disposed a series of grooved blocks *m* equal in number to the joints in the roof, and which fit over the ridges and interposed caps and rigidly hold the structure in place. The running board is secured to the roof by means of metallic strips *n* which are secured at one end to the underside of the platform and at the other end to the upper portion of the end of the car.

In operation, the sections are laid transversely, with the ridges interengaging and the flanges securely nailed to the roof of the car which is not in any manner prepared therefor; the caps are placed over the joints and the running board applied and secured in position.

The usual practice in roofing cars is to form a notch or groove in the apex of the car roof and to employ rivets, cleats, solder, bolts and the like to apply the sections; but by reason of our construction all this labor and accessories are dispensed with, and the cost materially reduced. The roofing may be easily and quickly removed for repairs if necessary, and the liability of leakage is reduced to the minimum.

We claim:

In a car roof, the combination with a series

of roof sections each of which is formed with a closed ridge and a hollow ridge, and with side and end flanges, of a series of caps which span the engaged ridges, a series of transversely laid blocks having grooves which span the caps, a running board secured to the top of the blocks, and metallic strips connecting the ends of the board to the car.

In testimony whereof we affix our signatures in presence of two witnesses.

J. F. VERONEE.
GEORGE McINERNEY.

Witnesses:
W. T. FITZ GERALD,
J. L. DAWSON.