W. C. ALLISON.

CAR-ROOF.

No. 185,715. Patented Dec. 26, 1876.

Fig. 1

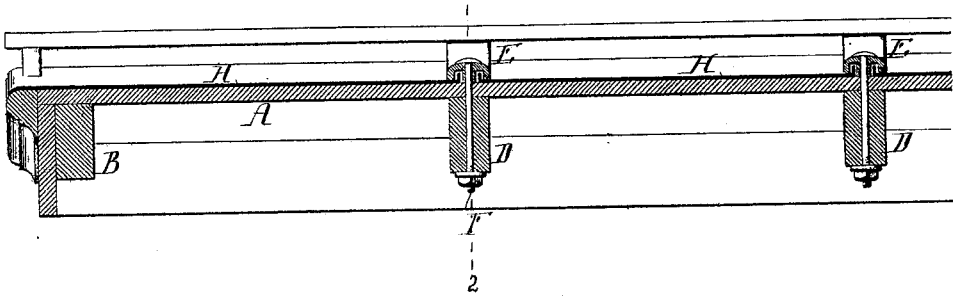


Fig. 2

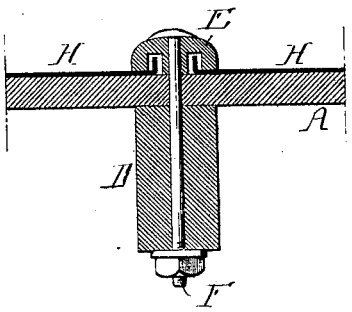
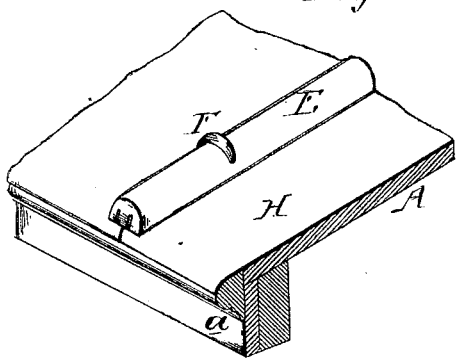


Fig. 3.



Witnesses
Hermann Moessner
Harry Smith.

William C. Allison
by his Attorneys.
Howson and Sons

UNITED STATES PATENT OFFICE.

WILLIAM C. ALLISON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CAR-ROOFS.

Specification forming part of Letters Patent No. **185,715**, dated December 26, 1876; application filed November 6, 1876.

To all whom it may concern:

Be it known that I, WILLIAM C. ALLISON, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Roofs for Railroad-Cars, of which the following is a specification:

The object of my invention is to construct an economical, durable, and water-tight roof for railway-cars.

In the accompanying drawing, Figure 1 is a vertical section of my improved roof for railroad-cars; Fig. 2, a transverse section on the line 1 2; and Fig. 3, a perspective view of part of the roof.

In making my improved roof, I secure the usual longitudinally-arranged boards A to the end beams B and intermediate beams D. On the top of the boarding I place a series of plates, H H, by preference of thin galvanized iron, each plate extending entirely across the roof, and being bent over the usual beading *a* at the opposite edges of the roof, as shown in Fig. 3. Each plate has turned-up edges, the edge of one plate being arranged at a short distance from that of the adjoining plate, as shown in Fig. 2, and these edges projecting upward into grooves formed in the under side of a strip, E, of wood, which also extends across the roof, one strip being situated directly above each beam D, to which it is secured by bolts F, the latter passing through the central portion of the strip which intervenes between the two grooves, and also passing through the boarding A and beams D. This central portion of the strip bears directly on the boarding, while the outer portions bear on the plates, so that on tightening the bolts both the strip and plates will be firmly bound to the boards. The grooves in the strips are somewhat wider than the turned-up flanges of the plates are thick, so that the said plates can expand and contract without disturbing the strips. The flanged plates, combined with the strips, boards, bolts, and beams, form a perfectly secure, water-tight, and durable covering for the roof of a car.

I do not desire to claim, broadly, the combination, in a roof, of plates having turned-up edges adapted to a groove in a confining-strip; but

I claim as my invention—

A car-roof in which plates H, having turned-up edges, are combined with boards A, bolts F, beams D, and strips E, the latter having two grooves for receiving the flanges of separate plates, and being constructed to bear on both plates and boards, all substantially as set forth.

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

WILLIAM C. ALLISON.

Witnesses:

HERMANN MOESSNER,

HARRY SMITH.