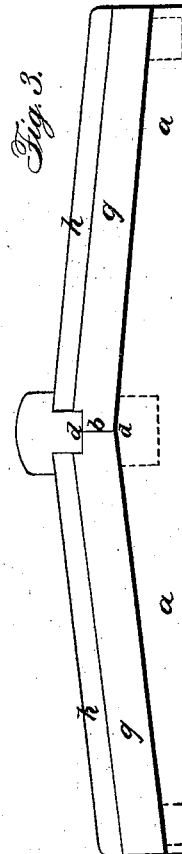
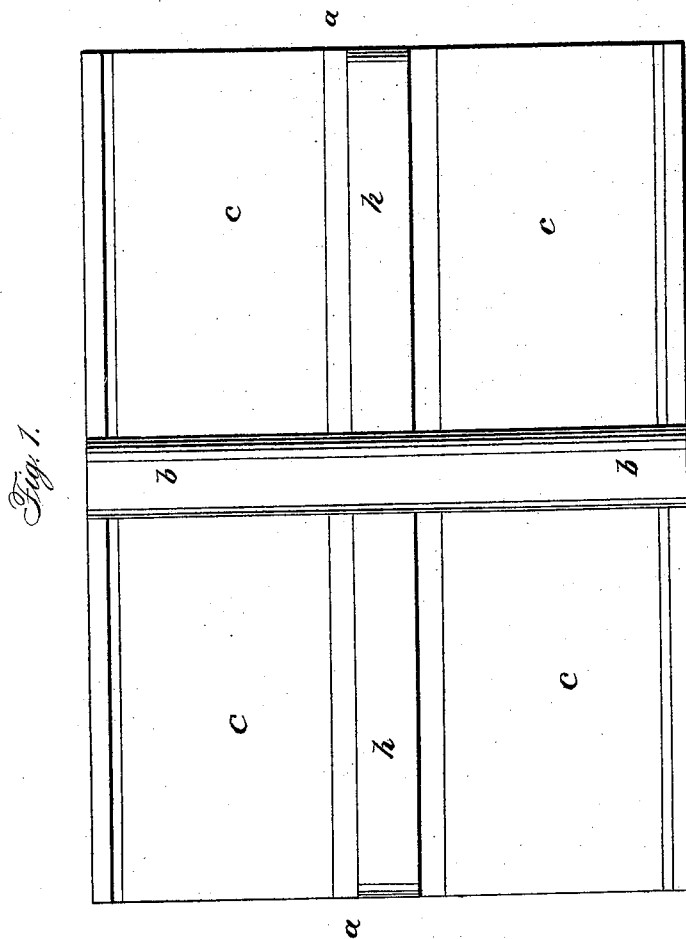
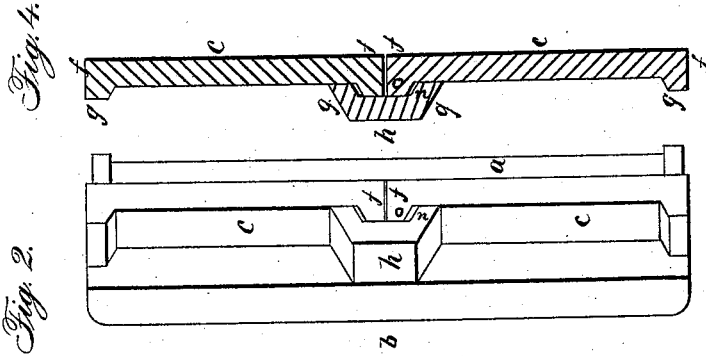


O. EATON.
Car Roof.

No. 52,549.

Patented Feb. 13, 1866.



Witnesses:

M. A. Cramer
Thos. Lusk

Inventor:

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Att'y

UNITED STATES PATENT OFFICE.

O. EATON, OF TROY, NEW YORK.

IMPROVEMENT IN ROOFING.

Specification forming part of Letters Patent No. 52,549, dated February 13, 1866.

To all whom it may concern:

Be it known that I, O. EATON, of Troy, in the county of Rensselaer and State of New York, have invented a new and useful Improvement in Car-Roofing, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

The present invention relates to a certain new and useful improvement in roofs for buildings, &c., but which are particularly applicable and more especially intended to be adapted to railroad-cars, and to all other purposes where the surface covered therewith is subjected to violent vibrations at times, the principal object of which is to obtain a roof which shall be perfectly tight and closed to the penetration of rain or moisture to the interior of the cars, and so constructed and arranged as not to be affected in the least by the vibrating and jarring motions of the cars.

I accomplish the above result by forming at and along the contiguous edges of the separate boards of which the roof is composed raised ribs of any suitable size and shape, over the joints of which ribs strips of wood are placed and fastened, having their inner surface in contact therewith made of a corresponding shape, so as to fit closely around and over the entire surface and breadth of the same.

In accompanying plate of drawings my improvement is represented.

Figure 1 is a plan or top view of a portion of a roof with my improvement applied; Fig. 2, a side view of the same; Fig. 3, an end view, and Fig. 4 a cross-section through two contiguous boards, showing mode of forming joints and one shape of ribs, together with covering-strip.

a a in accompanying drawings represent a portion of a roof slightly inclined each way from its center *b*, and consisting of wooden boards *c c c c*, &c., of any desired thickness and width, with their inner ends, *d d*, &c., in contact with each other.

At and along the contiguous edges *f f* of two boards, *c c*, and in the direction and for the whole of their length, raised ribs *g g* are made, of the form represented in the draw-

ings, (see Fig. 4,) by cutting away the surface of the boards in the central portion thereof. Over the two contiguous ribs, on the sides of two boards in contact with each other, is placed a covering strip or strips of wood, *h h*, &c., having their inner surface, or that which comes in direct contact with the ribs and bears upon the same, made of a similar shape in its cross-section to that of the contiguous ribs, (see Fig. 4,) and securely fastened thereon by means of nails, screws, or any other proper holding devices. These covering-strips *h h*, &c., are placed over and fastened upon the two contiguous ribs of any boards composing the roof, and extending along the same meet at the center or apex of the roof, where their joints are covered with tin, strips of wood, or in any other proper manner that will prevent leakage at the same.

To allow for the expansion and swelling of the boards, small spaces *n n*, &c., are left between the inclined edge *o* of rib and that of covering-strip *n*.

By forming the separate and contiguous edges of the boards composing a roof with raised ribs or projecting pieces having suitable and corresponding-shaped covering-strips, as described, it is evident that the joints formed by two boards lying side by side are rendered perfectly water-tight and impervious to moisture and rain, and that the jarring and vibrating movements of the car can in no manner affect the same or loosen them.

The roof, formed as described, can be painted, sanded, or in any other proper manner have its boards protected from the deteriorating effects of moisture and rain, &c.

I am aware that roofs have been made consisting of terra-cotta tiles formed with raised ribs upon the edges or sides contiguous with each other, and their joints then protected by caps of the desired form; but these could not possibly be applied to railway-cars, or to any purposes where they would be subjected to violent and quick vibrations or to jarring motions, as is evident to all persons conversant with the roofing of railway-cars, and who have knowledge of the disadvantages and impracticability of many of the various kinds of roofing heretofore tried to be used for that purpose, although many of which were, as is well known, very advantageous when applied to

buildings or other similar purpose where no jarring of the roof occurred.

Along and longitudinally with the center of the car-roof boards may be laid to be walked upon, as is quite important in freight-cars, without in the least impairing the tightness of the roof, which, if the roof were made of tiles, could not be done.

The space between the two parallel covering-strips of the various boards composing the roof may be made of a concave or any other desired shape.

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

The combination, with the wooden boards *c c* and raised ribs *g g*, of the wooden cap *h* and spaces *n*, when the parts are constructed and arranged in the manner and for the purpose herein described and represented.

O. EATON.

Witnesses:

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