

W. H. MYERS.

Car Roof.

No. 57,173.

Patented Aug. 14, 1866.

Fig. 1.

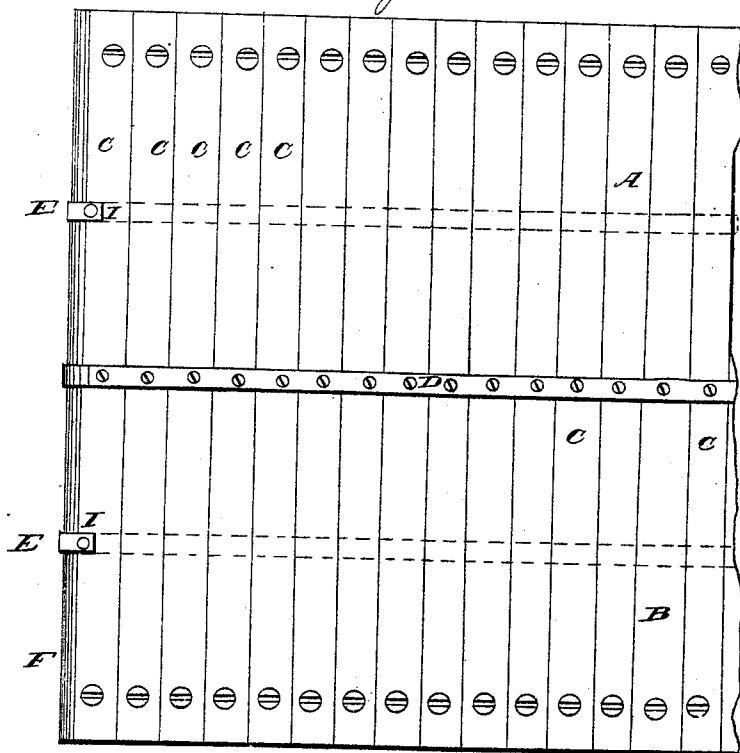
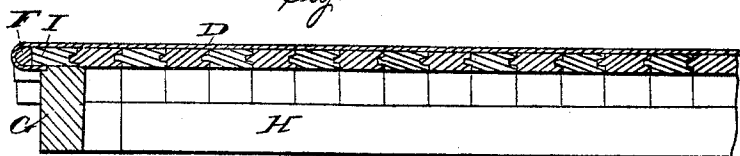


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM H. MYERS, OF NORWICH, CONNECTICUT.

IMPROVED RAILROAD-CAR ROOF.

Specification forming part of Letters Patent No. **57,173**, dated August 14, 1866; antedated July 9, 1866.

To all whom it may concern:

Be it known that I, WILLIAM H. MYERS, of Norwich, in the county of New London and State of Connecticut, have invented a new and useful Improvement in Roofs for Cars, Bridges, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan or top view of a car-roof made according to my invention. Fig. 2 is a longitudinal section thereof.

Similar letters of reference indicate like parts.

The object of this invention is the improvement of roofs for cars, bridges, stages, and other structures whose tops or roofs are exposed to the air and weather.

It consists in constructing them of wooden lags or strips, kiln-dried and otherwise prepared, laid side by side, with a plain, doweled, or a tongue-and-groove joint, as may be preferred, the several strips being made to lie compactly by means of one or more keys composed of tapering strips. Each end of the roof has a metallic nose or bar, which is attached to or placed against the outside of those strips which occur at the ends of the roof, and the whole roof is bound together by three or more metallic or other bands extending from end to end of the car, one of which is on the outside of the roof, along the middle of its length, and two or more are on the under side, each band being turned over the metallic nosings or bars and firmly secured to the side of the roof opposite to that which it is placed.

Roofs of railroad-cars as now commonly made have, in the first place, a series of rafters whose upper surfaces or outlines are of that shape which it is desired to give to the roof. These extend from one plate to the other across the width of the car. A wooden covering of boards is then placed on the rafters longitudinally of the car. Over this wooden covering is placed an outer covering of duck, or other suitable cloth, which is painted to preserve it and shut out the rain. Sheet-iron and also tin have been used as substitutes for duck; but these materials are each easily punctured, and when so punctured it is difficult to repair

and make tight again. Sometimes, also, on account of the great cost of these materials, manufacturers of cars have used, instead of either of them, several thicknesses of boards placed across the roof on the top of a longitudinal wooden beam or ridge-piece and of the plates, the boards being brought to a ridge and joint along the middle line of the roof, like the roof of an ordinary house.

My invention provides a different mode of constructing roofs of railroad-cars from those above referred to, and one which secures tightness, strength, and durability along with economy and simplicity in construction.

My invention is applicable to roofs of omnibuses, stages, bridges, buildings, and generally to all kinds of structures whose roofs are exposed to the weather.

H designates one of the plates, placed between the upright side and the roof of a car, upon which plates, in ordinary methods of constructing roofs of cars, the ends of the rafters rest. G shows the usual beam, which extends from one plate H to the opposite plate at both ends of a car. Upon the upper edges of the plates H and beams G of a car, I place lags or strips C, of wood, in a transverse direction, the length of the strips being such as to have their ends extend a sufficient distance beyond the outside faces of the plates H to form eaves. The said strips can be made to all forms or shapes, but sufficiently convex to produce a water-shed on one or either side of the summit of the roof, and their ends are fastened securely to the plates H, as seen in the drawings, screws being represented in this example as such fastenings. One or more of the strips which occur at about the center of the roof are made tapering, and are driven in between adjacent strips C, for the purpose of closing their joints and making tight, snug work, after a method of closing up joints well known in carpentry.

The strips or keys A and B are here represented of tapering form, and are driven into their places from opposite sides of the roof. After the roof is inclosed it is thoroughly painted. D is a metallic or other band, which is extended lengthwise of the roof from end to end along its summit, being suitably fastened to the strips, or to several of them, so as to keep it in place. Its ends I are turned

down over the ends of the roof, which are provided with metallic nose-pieces F, to protect the outermost strips C, and are then brought up against the under side of the roof and properly secured between the roof and the beam G, as seen in Fig. 2, where one end of the roof is shown in section.

The letters E E designate two other metallic or other bands, which, like the band D, are extended lengthwise of the roof; but these are placed along its under surface, on either side of its middle line, and its ends I are turned over the nose-pieces F, and fastened on the top of the roof, as shown in Fig. 1.

The positions of the bands E are shown in dotted outlines in Fig. 1. The metallic band or bands which are placed on the upper surface of the roof should be along its summit, so as not to obstruct its water-shed.

The strips C, as well as the key-pieces A B, are made of kiln-dried and otherwise prepared material, or they may be kiln-dried after they are gotten out. They may also be saturated, if desired, with any suitable preparation of a nature to exclude water and air from the pores of the wood. The strips C and their key-pieces are applied to the car when they are yet in their most shrunken state, and the bands D E are secured in place immediately before the stuff can expand, which it will do upon exposure in the common atmosphere after having been put through the operation of kiln-drying, &c.

The expansion of the strips in the weather

will cause their joints to be made more and more tight, whether their edges are tongued and grooved or not, and consequently the roof will be tight and will exclude rain and moisture.

The fastenings that connect the strips to the plates and beams H and G should be of a substantial character, and the bands D and E should be able to resist a great strain and should be well secured.

It will be observed that a roof made in this way is not liable to become leaky from punctures and indentations, like those made of metal or cloth. The strips of which the roof is made are sawed out or formed to whatever shape it is desired to give to the roof, and, therefore, any fashion of roof or covering can be made according to the principle of this invention, and three inches or more in height, which are taken up by common rafters, will consequently be saved; also, the expense of a plank walk on the top of all freight-cars with metal roofs.

What I claim as new, and desire to secure by Letters Patent, is—

In roofs for railroad-cars and other structures, combining the strips C, which form the bodies of such roofs, with metallic bands and nosings, substantially as above set forth.

WILLIAM H. MYERS.

Witnesses:

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