H. ALDRIDGE.

CAR ROOF.

No. 186,189. Patented Jan. 16, 1877.

Fig. 1

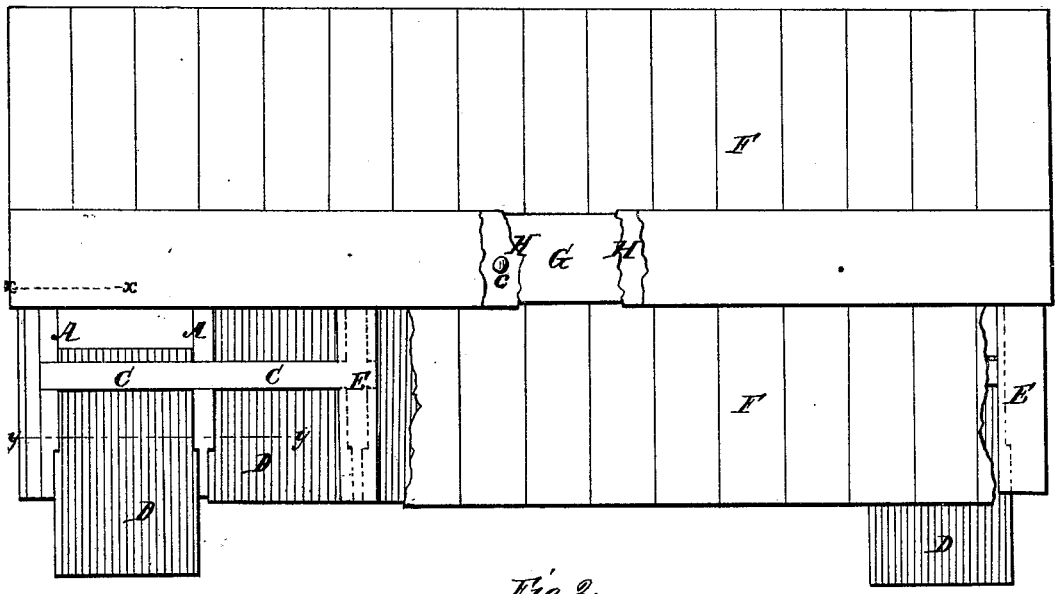


Fig. 2

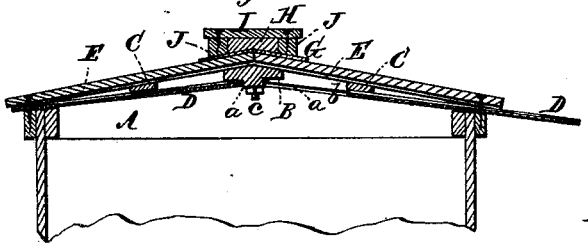


Fig. 4

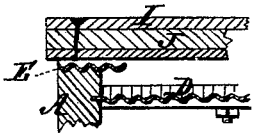


Fig. 5

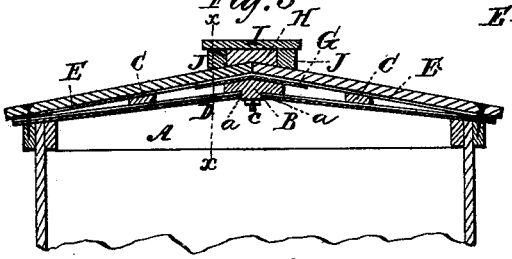
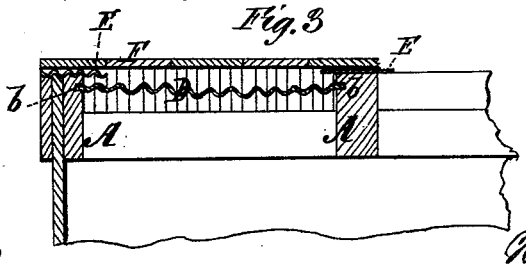


Fig. 3



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UNITED STATES PATENT OFFICE.

HIRAM ALDRIDGE, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF HIS RIGHT TO MOSES HILLARD, OF SAME PLACE, AND CHARLES W. KEISER, OF JACKSONVILLE, ILLINOIS.

IMPROVEMENT IN CAR-ROOFS.

Specification forming part of Letters Patent No. **186,189**, dated January 16, 1877; application filed December 9, 1876.

To all whom it may concern:

Be it known that I, HIRAM ALDRIDGE, of St. Louis, in the county of St. Louis and State of Missouri, have invented a new and useful Improvement in Car-Roofs; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a top view of my improved car-roof, with part of the wood covering and running-board and side clamp broken away, and with two of the metal sheets of the roof partly withdrawn from their proper position under the board covering. Fig. 2 is a transverse section of the same, also showing one of the metal sheets of the roof partly withdrawn. Fig. 3 is a longitudinal section in the line *y y* of Fig. 1. Fig. 4 is a longitudinal section in the line *x x* of Fig. 1. Fig. 5 is a transverse section, showing a modification of the roof, the metal-joint cap being placed under the wood covering instead of over it.

My present invention relates to an improvement in that class of car-roofs which are constructed of wood and metal, the metal portion being a sheet-metal covering over the framework or superstructure, and the wood portion being a plank covering over the sheet-metal covering.

The object of my invention is to make the metal covering of the class of roofs above referred to in sections which meet or nearly meet at the ridge of the roof, and slide to their places between the rafters of the superstructure or frame of the roof, in such a manner that the sections on each side of the ridge can be removed for repairs or other purposes without disturbing the sections on the other side, or any section adjoining the one to be removed, and also without removing the running-board, ridge-clamp, and ridge-joint cap.

Another object of my invention is to provide a roof made in sections, as above specified, with joint-strips, for covering the joints which are between the sheets and the rafters, in such a manner that these strips can be removed on either side of the ridge of the roof, and separately, without disturbing the running-board, ridge-clamp, and ridge-joint cap.

Another object of my invention is to provide a roof of the description above specified with a metal ridge-joint cap, which is in form of the ridge of the frame of the roof, and comes under or over the joint which is between the ridge ends of the boards covering the metal portion of the roof, and is clamped in position by a ridge-joint clamp, whereby, while the metal portion and the wood portion of the roof are made in sections, all possibility of leakage is prevented, and the whole firmly united at the ridge of the roof.

In the accompanying drawings, A A represent the rafters of a car-roof; B, the ridge-piece; C C, the purlins. The ridge-piece is in form of the letter T, with its top slanting in opposite directions. D D are galvanized or painted iron sheets for forming the metal portion of the roof. They may be either corrugated or smooth. These sheets are of a width a little greater than the spaces between the rafters, and of a length equal to the distance from one eave of the roof to one of the shoulders *a* of the ridge-piece. The sheets are passed up between the rafters and under the purlins, from the respective eaves of the roof to the shoulders *a a* of the ridge-piece B, and are held in position against vertical movement by means of grooves *b*, formed in the rafters, in which grooves the edges of the sheets enter, as represented. E are joint-strips of metal, of a little greater width than the thickness of the rafters, so as to cover the rafters and overhang the edges of the metal covering-sheets D D. One of these strips is placed upon each of the rafters, and extended up from the eave to the ridge of the roof. F F represent the wood portion of the roof. It is formed of planks of a length equal to one-half of the width of the roof. The planks are placed side by side one another, over the metal portions of the roof, so that their ridge ends meet, and they are fastened at their eave ends to the framing by screws, bolts, or any other suitable means.

G is a metal cap, corresponding in form to

the ridge of the roof, and of a width sufficient to overhang the ridge ends of the metal and wood portions of the roof. This cap is placed centrally upon the wood portion of the roof, as shown. H is a ridge-joint clamp, corresponding on its under side with the ridge of the roof. It is placed centrally on the cap G, as shown. I is the running-board, formed with two bearing-strips, J J, on its edges. It is placed centrally upon the ridge-joint clamp. The ridge-joint clamp, the metal cap, and board covering are firmly bolted together and to the ridge-piece B by bolts *c*, which pass down through them and the ridge-piece, and receive nuts on their ends.

As a modification of the roof described, the ridge-joint cap G may be a corrugated strip of metal, and it may be placed under the board covering of the roof, as shown in Fig. 5. This plan may possess advantages over the one shown in Fig. 2, as the corrugations may serve more effectually for conducting the water into the corrugations of the metal sheets D D. It will also be preferable to make the strips J J, which are placed on the end rafters of the frame, of corrugated metal, as shown in Figs. 1, 3, and 4, in order to prevent water beating directly in at the ends of the car-roof. It may also be practical to dispense with the grooves in the rafters, and to have the sheets just fit and slide singly between the rafters; but in such construction a groove would be provided in each of the edges of the ridge-piece to support the ridge ends of the sheets D D, and this groove might be formed by using a wide clamping-strip, and bolting it to the under side of the T-shaped ridge-piece B.

From the foregoing description and accompanying drawing it will be seen that a perfectly-tight combined wood and metal roof is secured, and yet every facility for taking off any one of the sheets on either side of the roof is afforded, and this without any necessity of removing any other part than the planks covering the part requiring to be repaired, and loosening the eave-fastenings of any sheet or metal strip which it may be desired to slide out or remove.

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

1. The sectional metal portion D D of the car-roof, arranged to slide in and out between the rafters on opposite sides of the roof, and made to abut against shoulders of the ridge-piece, and held against vertical movement, in combination with the sectional wood portion F F of the roof, by which the metal portion is covered, and, by the fastenings thereof, held in place, substantially as and for the purpose described.

2. The sectional metal joint-strips J, placed on top of the rafters, beneath the wood portion of the roof, and above the metal portion, and arranged to be removable on each side of the roof, substantially as and for the purpose set forth.

3. Metal ridge-joint cap, made in form of, and covering, the ridge of the roof, in combination with the sectional metal portion and the sectional wood portion of the roof, and with the ridge-piece and ridge-joint clamp, substantially as and for the purpose described.

4. A combined wood and metal roof, constructed substantially as described, whereby any one section of the sectional metal portion on the respective sides of the ridge is removable by simply taking off a part of the sectional wood portion, substantially as described.

Witness my hand in the matter of my application for a patent for an improved car-roof.

HIRAM ALDRIDGE.

Witnesses:

M. HILLARD,

JAMES MARTIN, Jr.