No. 684,885. Patented Oct. 22, 1901.

W. D. THOMPSON & S. HERBERT.

CAR ROOF.

(Application filed Apr. 27, 1901.)

(No Model.)

Fig. 1.

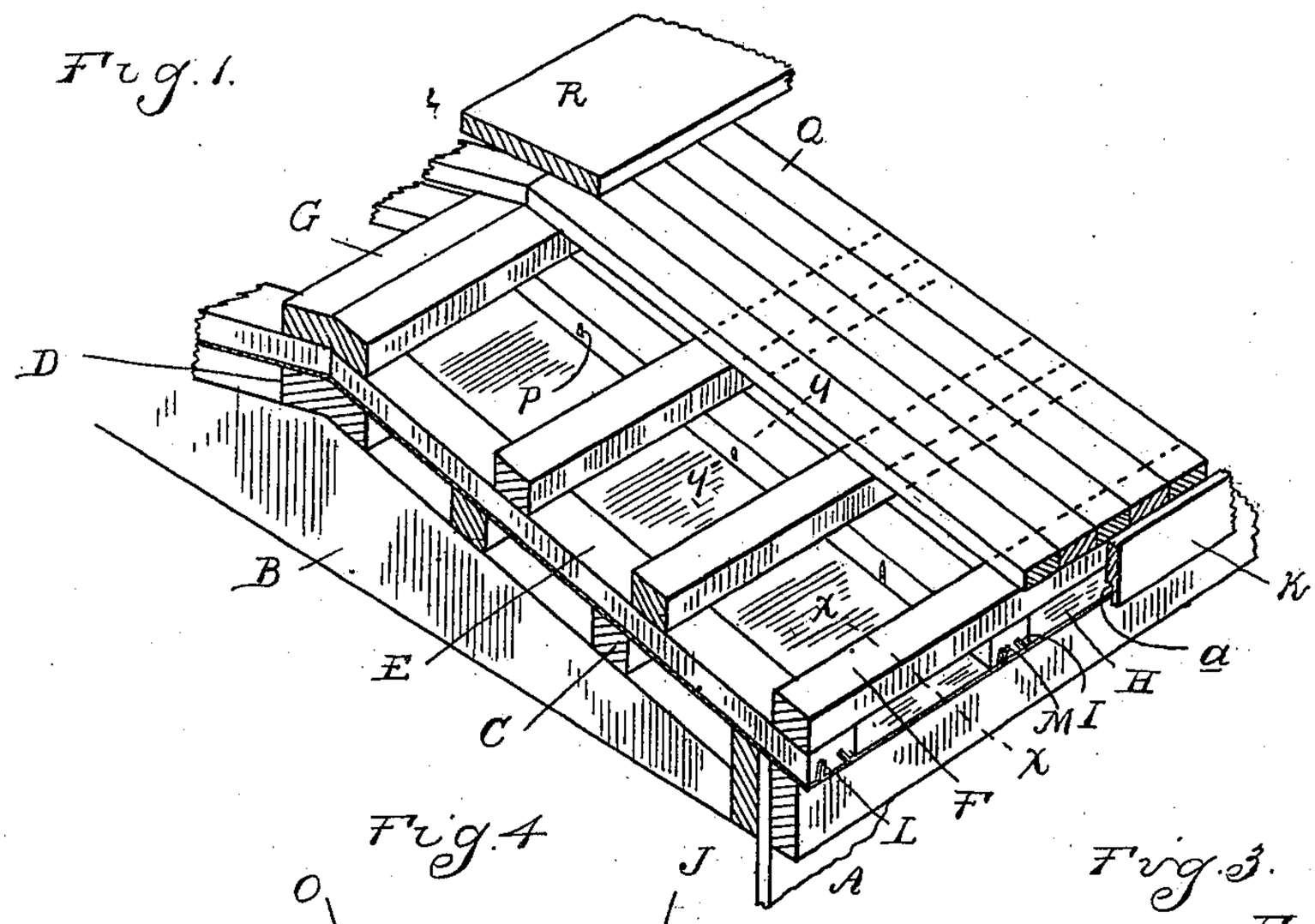
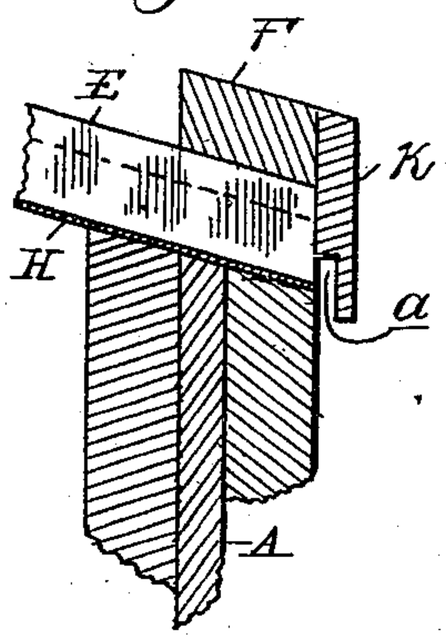


Fig. 4

Fig. 3.



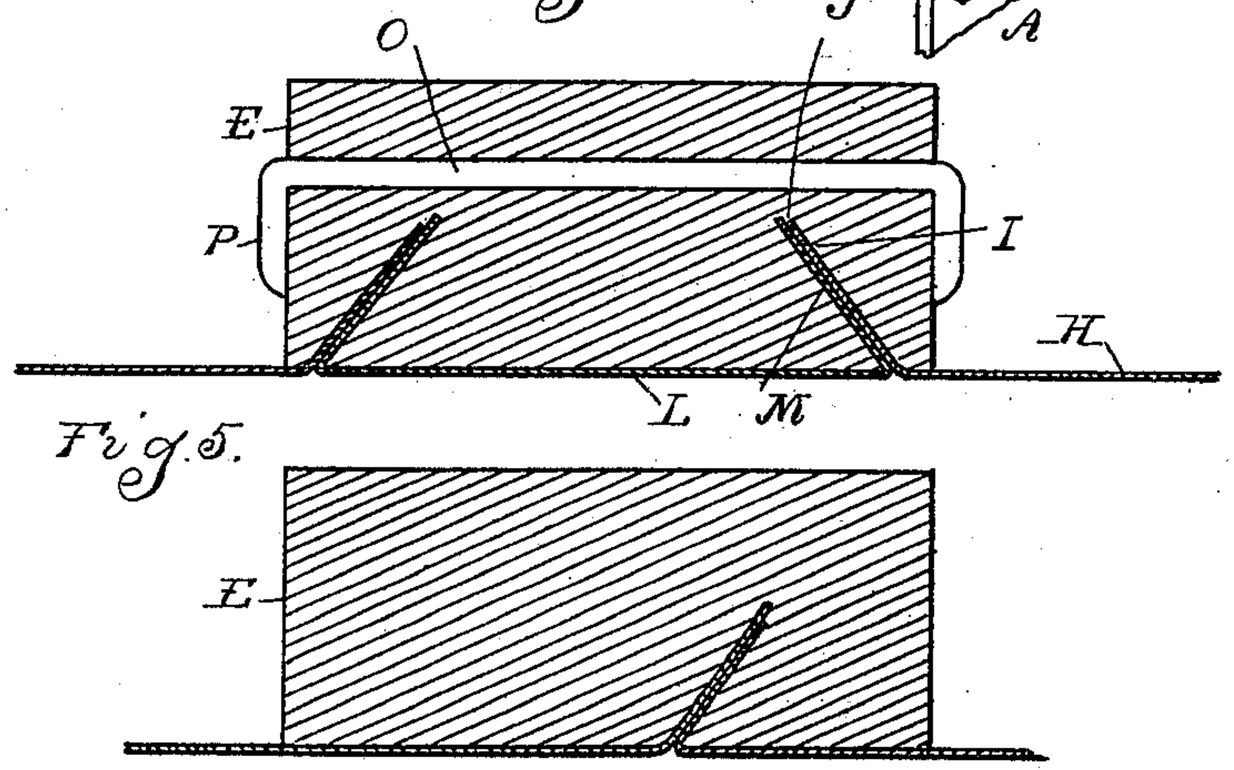
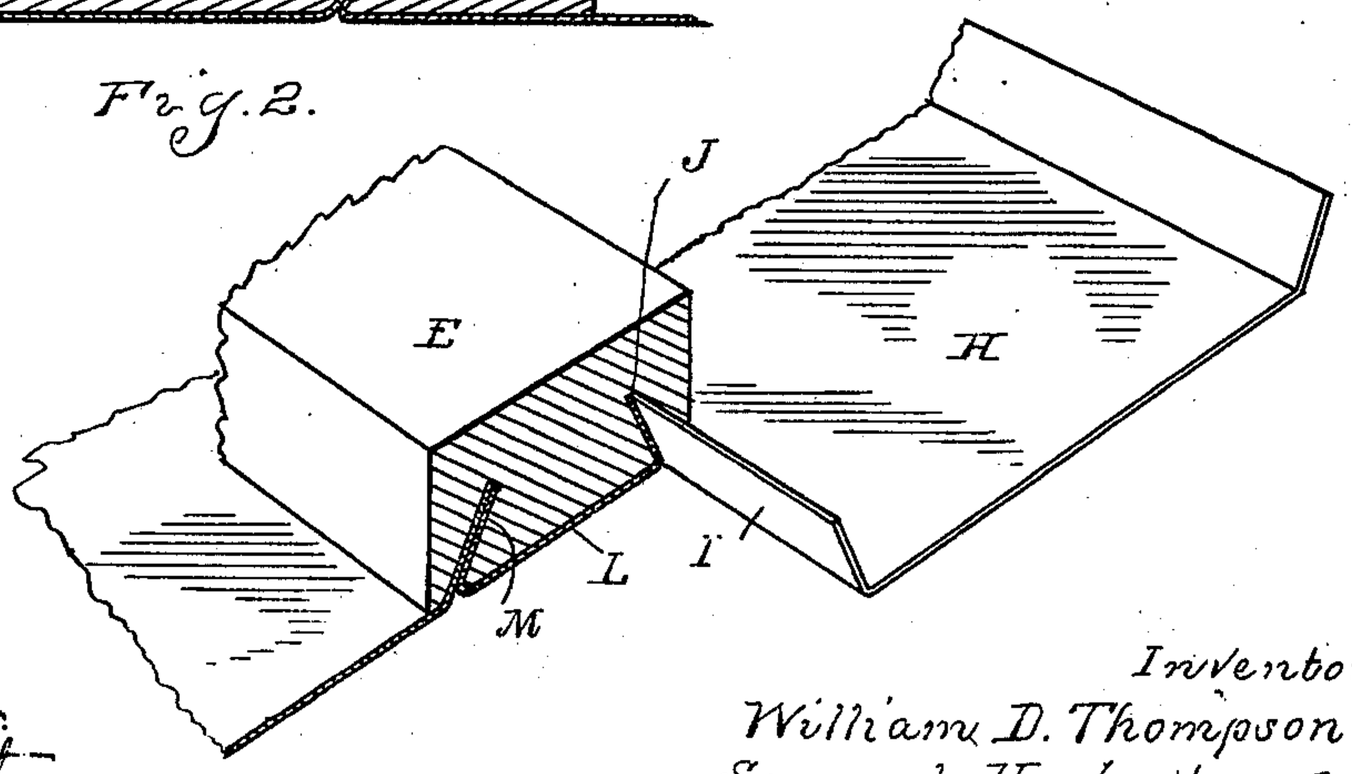


Fig. 5.

Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM D. THOMPSON AND SAMUEL HERBERT, OF DETROIT, MICHIGAN, ASSIGNORS OF ONE-FOURTH TO STEPHEN J. BOWLING, OF SAME PLACE.

CAR-ROOF.

SPECIFICATION forming part of Letters Patent No. 684,885, dated October 22, 1901.

Application filed April 27, 1901. Serial No. 57,728. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM D. THOMPSON and SAMUEL HERBERT, citizens of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Car-Roofs, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention has reference generally to car-roofs, and particularly to an inner metallic roof formed of a plurality of metallic sheets arranged upon the framework forming a part of the roof structure for independent movement.

The invention consists, essentially, in the novel means employed for securing the sheets to the framework, in the peculiar arrangement of the plates or sheets relatively to each other, and in various other details of construction, as will be hereinafter set forth, and shown in the drawings, in which—

Figure 1 is a sectional perspective view of a car-roof embodying our invention. Fig. 2 is a similar view of a portion of the roof, showing the arrangement of the plates and the manner of securing the same in position. Figs. 3 and 4 are sections taken on lines *x x* and *y y*, respectively, Fig. 1; and Fig. 5 is a sectional view of a modified form of inner roof structure.

In the drawings thus briefly referred to the reference-letter A designates a car of any approved construction the roof of which comprises an internal framework composed of carlines B, purlins C, and a ridge-pole D, and an external framework comprising supercarlines E, superpurlins F, and an outer or super ridge-pole G. Arranged intermediate the frameworks described is our improved metallic roofing, comprising a plurality of plates arranged for independent longitudinal movement and extending from the super ridge-pole to the eaves.

The metallic roofing referred to may be formed of a number of plates, such as H, Fig. 2, having upwardly-extending inclined flanges I at their side edges, which engage within grooves J, formed in the under faces of the supercarlines. As indicated, the flanges are bent outwardly, forming obtuse angles with the plate-bodies, and the grooves within the carlines are correspondingly inclined, two saw-kerfs being formed in the supercarlines, as indicated, which extend preferably in a direction toward each other.

The plates H, as shown, are arranged intermediate the supercarlines, and on account of the inclination of the slots the plate-bodies are held in contact with the supercarlines the entire length of the latter, the inclined grooves forming practically a lock for maintaining the sheets in their proper position. As shown, the plates are open-ended, which permits of their upper portions extending not only to the super ridge-pole but beneath the same, and the flanged portions of the plates at their lower ends are adapted to bear against the usual facia K, which latter serves to prevent any considerable endwise movement of the roof-sections. A groove, such as *a*, Fig. 3, is formed in the inner face of the facia, near its lower edge, producing a drip-passage which is arranged immediately opposite the body portions of the plates to permit of the discharge of the water from the plates.

In order that a continuous metallic roof may be provided for the car, additional metallic plates, such as L, are employed and arranged beneath the supercarlines. These plates are provided with upwardly-inclined flanges M, which are bent inwardly to permit of their engagement within the saw-kerfs, as plainly indicated in Fig. 2. Thus in addition to assisting to form a continuous metallic covering the latter plates serve to clamp that portion of the supercarlines which they embrace, thus preventing any splitting or checking of the latter which may be caused by the wrenching of the car. For the purpose of preventing the splitting of the corners of the supercarlines tie members, such as O, are used, which extend through the supercarlines, as indicated in Fig. 4, and are provided at their ends with heads P, bent in angular relation to the bars to embrace the sides of the supercarlines, as indicated. The external roof-structure is preferably provided with an outer wooden covering Q, and centrally of the roof extends the usual running-board R.

In Fig. 5 a continuous roof structure is shown of a modified form. In this type only

one saw-kerf is formed in each supercarline which receives the adjacent flanges of adjoining plate-sections. By forming the roof in this manner less material is required and less labor is necessary, thereby reducing the cost of construction of the roof.

From the above description of our invention it will be readily seen that the grooves in the form of straight and inclined saw-kerfs can be readily and quickly formed within the supercarlines, which is a desirable feature of construction, and, as above stated, by inclining the grooves as set forth they serve to prevent the plates from falling or sagging from their position. It will also be obvious that the plates may be readily attached or detached from between the two frameworks and independently of each other, if desired, and that when arranged to form a continuous roof the meeting and abutting flanges of adjoining plates are inclined, so that the possibility of water leaking through the roof at the joints is prevented.

What we claim as our invention is—

1. In a car-roof, the combination with an internal and an external framework composed of wooden carlines and purlins and supercarlines and superpurlins respectively, the supercarlines being provided with inclined slots formed in their lower faces and leading upwardly therefrom, of a covering for the external framework, an inner metallic roof intermediate the frameworks formed of a series of thin galvanized plates extending beneath the supercarlines and having upwardly and outwardly inclined flanges at their side edges engaging within the slots formed in the supercarlines.

2. In a car-roof, the combination of the supercarlines having inclined grooves or slots formed within and leading upwardly from their lower faces, and an inner roof formed of a series of metallic plates extending uninterruptedly beneath the supercarlines, each sheet having upwardly-inclined flanges at its side edges, and the adjacent flanges of adjoining sheets abutting and engaging within the slots formed in the supercarlines.

3. In a car-roof, the combination with an internal and an external framework composed of carlines and purlins and supercarlines and superpurlins respectively, the supercarlines being provided with inclined slots or grooves leading upwardly from their lower faces, of a covering for the external framework, an inner metallic roof intermediate the frameworks, formed of a series of metallic plates extending in a common plane and uninterruptedly beneath the supercarlines and upwardly-inclined flanges at the side edges of the plates, the adjacent flanges of adjoining plates or sheets abutting and engaging within the slots or grooves in the supercarlines.

4. In a car-roof, the combination of a series of supercarlines each provided with two grooves extending upwardly from the lower face and inclined toward each other, and a continuous inner metallic roof comprising clamping-plates having inwardly-inclined flanges at their side edges engaging the correspondingly-inclined slots in the supercarlines, and connecting-plates provided with upwardly-inclined side flanges engaging the adjacent grooves in adjoining supercarlines.

5. In a car-roof, the combination with the supercarlines, of an inner roof formed of a series of flanged metallic plates having a sliding engagement with the supercarlines, and a facia bearing against the flanged portions of the sheets at the lower ends of the latter and provided with a recess forming a drip-passage opposite the bodies of the sheets.

6. In a car-roof, the combination with an inner framework composed of carlines and purlins, of supercarlines thereon, a metallic roof formed of a series of plate-sections abutting at their side edges and extending uninterruptedly beneath and covering the under faces of the supercarlines, and side flanges upon the plate-sections engaging said supercarlines.

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

WILLIAM D. THOMPSON.
SAMUEL HERBERT.

Witnesses:
L. J. WHITTEMORE,
H. C. SMITH.