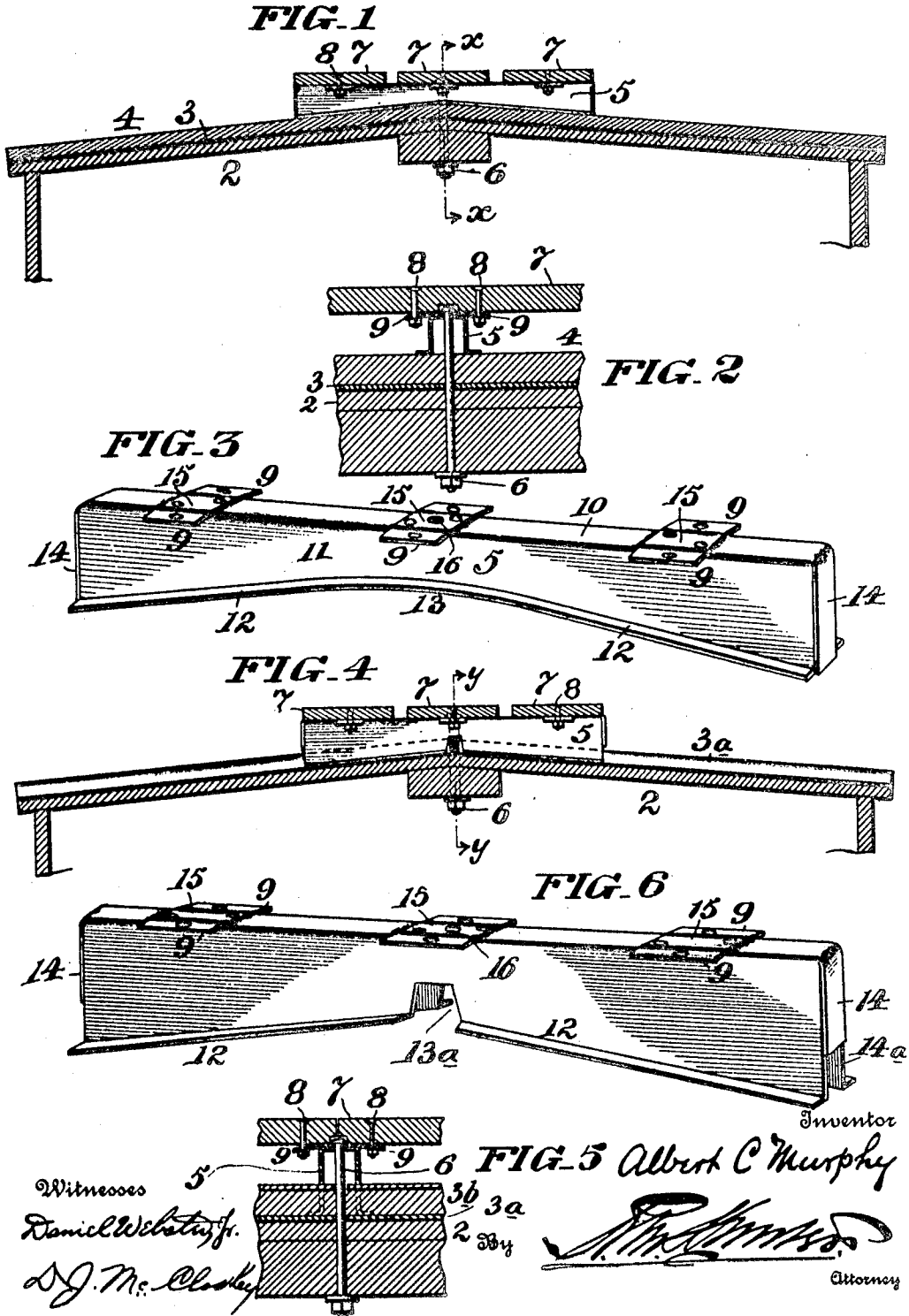


A. C. MURPHY.
 RUNNING BOARD FOR CARS.
 APPLICATION FILED JUNE 27, 1911.

1,050,377.

Patented Jan. 14, 1913.



UNITED STATES PATENT OFFICE.

ALBERT C. MURPHY, OF NEW YORK, N. Y., ASSIGNOR TO MURPHY EQUIPMENT COMPANY, A CORPORATION OF NEW YORK.

RUNNING-BOARD FOR CARS.

1,050,377.

Specification of Letters Patent.

Patented Jan. 14, 1913.

Application filed June 27, 1911. Serial No. 635,588.

To all whom it may concern:

Be it known that I, ALBERT C. MURPHY, a citizen of the United States, and a resident of the city of New York, county of New York, State of New York, have invented an Improvement in Running-Boards for Cars, of which the following is a specification.

My invention has reference to improvements in running boards for cars, and consists in certain improvements which are set forth in the following specification and shown in the accompanying drawings which form a part thereof.

The object of my invention is to provide a running board structure for cars in which the boards are to be supported upon metallic saddles secured at intervals along the ridge of the car roof, the said saddles being formed of sheet metal, whereby a durable construction is insured at a minimum cost.

My invention consists of a running board saddle formed of sheet metal bent into inverted trough shape with oppositely directed inclined supporting edges preferably provided with flanges and the top or closed portion furnished with means for attachment to the running boards of a car roof.

My invention also consists of a combination of a plurality of saddles of pressed sheet metal shaped to fit upon the ridge of the car roof, with a plurality of running boards each secured to the respective saddles, and means for securing the saddles to the car roof.

My invention also comprehends details of construction which, together with the features above specified, will be better understood by reference to the drawings, in which:

Figure 1 is a cross section of the upper part of a car having an inside metal roof having my improvements applied thereto; Fig. 2 is a longitudinal section of a portion of the same on line $x-x$; Fig. 3 is a perspective view of one of my improved saddles employed in the construction illustrated in Figs. 1 and 2; Fig. 4 is a cross section of the upper portion of the car body having an outside metallic roof and with my improvements applied thereto; Fig. 5 is a longitudinal section of a portion of the same on line $y-y$ of Fig. 4; and Fig. 6

is a perspective view of the saddle employed in the application of my invention to the outside metallic roof construction.

2 is the roof of the car and may be of the inside metal construction shown in Fig. 1 or the outside metal construction shown in Fig. 4. In the inside metal construction 3 is the metal covering of the inner boards and 4 is the outer covering. In the case of the outer metal roof there are no outer boards and 3^a represents the metal which is united at intervals by suitable seams. These roofs of the cars may be of any suitable construction. Arranged over the ridge of the roof are a series of metallic saddles 5, the said saddles being secured to the roof by the bolts 6. Supported upon the saddles and extending lengthwise of the car are the running board strips 7, the same being bolted to the saddles.

More specifically considering the construction of the saddle shown in Figs. 1, 2 and 3, the same is made of pressed sheet metal in the form of an inverted trough formed by the sides 11, top 10 and the end flaps 14. The lower edges of the sides 11 are inclined and flanged as at 12, the inclination being upward toward the middle at 13. The inclination of these flanged edges 12 corresponds to the inclination of the top of the roof of the car. Riveted or otherwise secured to the top 10 of the saddles are the plates 15 which are extended laterally beyond the saddle on each side thereof and form flanges 9, said flanges being provided with bolt holes. I prefer to employ three of these plates to support three running board strips 7, as indicated in Fig. 1. I furthermore prefer that the flanges shall be inclined obliquely downward so as to normally project away from the boards which rest upon the saddle. By reason of this downward projection, which is clearly indicated in Fig. 2, the bolts 8 which are passed through the flanges and the running boards 7 are put under tension, and consequently, when the ends are screwed up, the board is held with a spring action tightly upon the top of the saddle, and moreover, the nuts are held against turning and becoming loose, owing to the elasticity of the flanges. If desired, the nuts may be screwed tightly enough to bring the flanges 8 against the boards, but this is not essential. The bolt 6 which is em-

ployed to hold the saddle upon the ridge of the roof extends tightly through the middle portion of the saddle and through the roof structure. As shown, a central hole 16 is made through the metal plate 15 and top 10 of the saddle and the bolt is passed through this hole so that when the saddle is clamped to the roof it is centrally positioned and held against any lateral displacement. The fact that the saddle is bolted to the running boards and is also arch shaped to fit over the ridge of the roof will prevent any possible displacement by rotation about the center retaining bolt 6. The flaps 14 at the ends act to keep out the rain, snow and dust and thereby prevent united cause for rusting or wearing out of the saddle at those places where it cannot be easily reached for painting.

In the construction shown in Figs. 4, 5 and 6 there is no difference from that shown in the other figures except that the central portion of the saddle is notched as at 13^a so as to fit over the metal seam 3^b of the roof which projects at the ridge thereof, and in the single other respect that the flaps 14 are of less depth so as to provide the space 14^a through which the upwardly projecting seam or corrugation 3^a of the roof may extend, all of which will be clearly understood from the drawings.

While my invention is especially designed for being made from flat sheet metal such as sheet steel, I do not restrict myself thereto nor to the particular manner of forming the inverted trough shaped structure constituting the saddle, as the same may be formed in some other manner, my invention residing in the employment of the metallic saddle as a foundation for the running boards and a machine for properly positioning the same upon the roof of a box car. Likewise while I prefer the spring flanges 9 in connection with the bolts 8 as a particular means for uniting the running boards to the saddles, I do not restrict myself thereto, as said boards may be fastened in place in other suitable manner than that shown. The particular construction shown is not only advantageous in maintaining a tight union which will withstand all jarring due to the travel of the car, but it also provides excellent means for supporting two abutting running boards in cases where the length of the wide strips are not sufficient to extend throughout the entire length of the car.

Having now described my invention, what I claim is new and desire to secure by Letters Patent is:—

1. As an article of manufacture, a metallic saddle for running boards of cars consisting of an inverted trough-shaped structure formed of sheet metal with a straight flat top and downwardly extending sides terminating at the bottom with inclined

flanged lower edges, said flanges being inclined upward toward the center and in which the metal of the top is extended and bent downward to close the space at the ends of the saddle for a part of the way down only and said saddle also provided with flanges at its top for providing connection with the running boards.

2. In a running board structure for cars, the combination of the roof of the car, a series of metallic saddles fitting the crown of the roof and each composed of sheet metal pressed into inverted trough shaped form closed at the top and open between the sides throughout its length, a plurality of running boards extending over and resting upon the saddles, means for connecting the running boards with the saddles, consisting of separate flat plates riveted to the top of the saddles and forming lateral flanges on the sides thereof and bolts extending through the flanges and the running boards, and means for connecting the saddles with the roof of the car.

3. In a running board structure for cars, the combination of the roof of the car, a series of metallic saddles fitting the crown of the roof and each composed of sheet metal pressed into inverted trough shaped form closed at the top, a plurality of running boards extending over and resting upon the saddles, means for connecting the running boards with the saddles consisting of a plurality of plates riveted to the top of the saddles and forming downwardly inclined flanges and bolts for drawing the flanges upwardly to the running boards and thereby utilizing the spring action of the flanges to hold the boards tightly to the saddles and prevent the nuts of the bolts working loose, and means for connecting the saddles with the roof of the car.

4. In a running board structure for cars, the combination of the roof of the car, with a series of metallic saddles fitting the crown of the roof and each composed of sheet metal pressed into inverted trough shaped form closed at the top and open at the bottom, a plurality of running boards extending over and resting upon the saddles, means for connecting the running boards with the saddles said means comprising cross plates riveted to the closed top of the saddle to provide overhanging yielding flanges whose ends are directed downward and providing spring action for taking up lost motion, bolts extending through the flanges and running boards, and means for connecting the saddles with the roof of the car consisting of a bolt extending entirely through the saddle and the top of the car structure for holding the saddle to the ridge of the car roof.

5. A saddle for a running board of a car consisting of a sheet metal saddle made in

the form of an inverted trough having closed top sides and ends and having its lower lateral edges inclined upwardly toward each other at the middle of the saddle and having plates secured to the closed top of the saddle and projecting laterally to form flanges provided with apertures, and also having a centrally arranged hole through the top of the saddle and one of the plates.

6. A saddle for a running board of a car consisting of a sheet metal saddle made in the form of an inverted trough having closed top sides and ends and having its lower lateral edges inclined upwardly toward each other at the middle of the saddle and having plates secured to the closed top of the saddle and projecting laterally to form downwardly inclined flanges provided with apertures, and also having a centrally arranged hole through the top of the saddle and one of the plates.

7. A running board saddle consisting of an inverted trough shaped structure formed of sheet metal with a straight top and inclined flanged lower free edges said flanges being inclined upward toward the center, combined with attaching means extending beyond the top portion of the saddle on both sides said means consisting of plates secured to the top of the saddle and providing free oppositely directed spring flanges having their outer edges at a lower plane than the top of the saddle, said flanges adapted to receive bolts by which the running boards may be drawn tightly down to the top of the saddle under spring action.

8. A saddle for a running board consisting of an inverted trough structure composed of pressed sheet metal, having its sides and top of one continuous piece of bent sheet metal and its top closed and bottom open and its ends closed by extensions of said sheet metal at the top bent over and downward at the ends, and the bottom edges

of the sides being inclined upwardly toward the middle.

9. A saddle for a running board consisting of an inverted trough structure composed of pressed sheet metal, having its sides and top of one continuous piece of sheet metal and its top closed and bottom open and its ends closed by extensions of said sheet metal at the top bent over and downward at the ends, and the bottom edges of the sides being inclined upwardly toward the middle and notched at the bottom of the sides at the middle portion.

10. A saddle for a running board consisting of an inverted trough structure composed of pressed sheet metal, having its sides and top of one continuous piece of bent sheet metal and its top closed and bottom open and the ends closed by extensions of said sheet metal bent over the ends, and the bottom edges of the sides being inclined upwardly toward the middle and also provided with laterally extending flange portions projecting from opposite sides of the saddle adjacent to its top closed portion.

11. The combination with the car roof, of a plurality of metallic saddles having horizontal top portions and oppositely inclined lower portions which latter fit over the ridge of the car roof and correspond to the inclinations thereof at each side of the ridge, running boards resting upon the horizontal portions of the saddles, and means for firmly securing the running boards to the saddles consisting of spring flanges extending from the saddles and bolts extending through the spring flanges and running boards.

In testimony of which invention, I hereunto set my hand.

ALBERT C. MURPHY.

Witnesses:

JOHN H. CRUM,
WM. F. MADILL.