

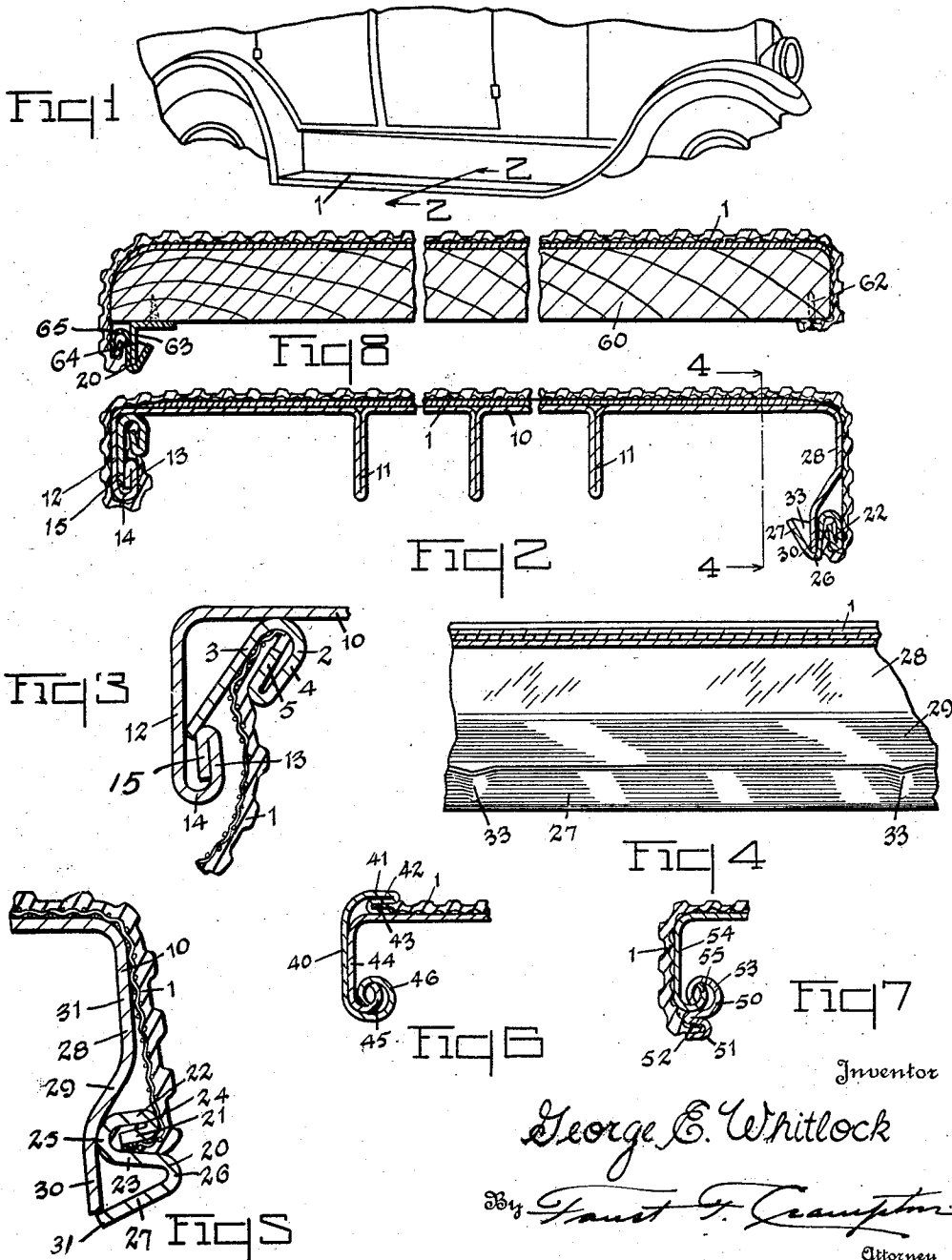
July 1, 1930.

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1,768,873

AUTOMOBILE TREAD

Filed June 15, 1929



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AUTOMOBILE TREAD

Application filed June 15, 1929. Serial No. 371,092.

My invention has for its object to provide an efficient means for securing a flexible cover to the surface of running boards to form a cushioned surface or tread part for those entering the automobile. The invention particularly relates to a construction whereby the tread may be readily secured or replaced. It particularly has for its object to provide a means whereby a flexible sheet material may be readily secured in a taut condition and so as to form an elastic cushion covering the upper surface of the running board.

The invention may be contained in structures that vary in their details and, to illustrate a practical application of the invention, I have selected a tread embodying the invention as an example of the various embodiments of my invention and shall describe it hereinafter. The construction selected as an example is shown together with one or two modifications of its details in the accompanying drawing.

Fig. 1 illustrates a perspective view of a part of an automobile wherein the running board is conventionally illustrated. Fig. 2 is a view of a transverse section of the tread taken substantially along the line 2—2 indicated in Fig. 1. Fig. 3 is an enlarged view of a part of the running board shown in Fig. 2. Fig. 4 is a view of a section taken on the plane of the line 4—4 indicated in Fig. 2. Fig. 5 illustrates the means that may be utilized for drawing the sheet material tightly across the surface of the running board. Fig. 6 is a modification of an attaching means shown in Fig. 2. Fig. 7 is a third modification of that attaching means. Fig. 8 illustrates a transverse section of a wooden running board wherein the means embodying my invention for drawing the sheet material across the surface of the running board is utilized.

In the form of construction shown in the figures, a flexible sheet material is secured at one edge of the running board and means is provided for tightly drawing the sheet material over the surface of the running board and securing it in its taut condition. If desired, a sub-cushioning material may be located below the sheet material in order to

produce a more pronounced cushioning effect. Preferably, the sheet material used is elastic and formed of a composition that will maintain its elasticity. In the particular examples selected for purposes of illustration, the sheet material is formed of rubber backed by a suitable fabric to strengthen it and to maintain it in the form in which it is drawn and prevent buckling, etc. It may be secured at one edge of the running board in any way desired, such as by nailing or clamping it along the edge, preferably, along the under side of the running board, while the opposite side edge of the sheet material is, preferably, secured by a means that may be utilized for drawing the sheet material taut over the surface of the running board or over the surface of the sub-cushioning elastic material, and which is so constructed that it may be easily clamped to the running board or to a part attached to the running board in order to hold it in the position wherein it will maintain the sheet material in its stretched condition.

In the form of construction shown in Figs. 2, 3, and 4, the sheet material 1 may be secured along one side edge of the running board by means of a sheet metal strip that extends substantially the length of the said side edge of the running board and to which the sheet material is secured as by it being tightly clamped in the folds of the strip 2. The strip 2 is provided with a flat body portion 3 and a folded portion 4 that has an inwardly extending returned portion 5. The edge of the sheet material 1 lies between the body portion 3 and the returned portion 5 and is tightly clamped therebetween to securely connect the strip 2 to the edge of the sheet material 1.

The running board 10, in the form of construction shown in Figs. 2, 3, and 4, is formed of sheet metal, it being provided with suitable closed looped portions 11 running lengthwise of the running board for reinforcing purposes. It is provided with a flange 12 extending along one side edge. The flange 12 has an upwardly extending portion 13 and a curved surface at the bend 14 that forms the lower edge of the flange 12. The flange

12 may also be provided with a returned portion 15 that is located in spaced relation and substantially parallel with the body portion of the flange 12. For clinching purposes, the upwardly extending portion 13 is bent inward to a position that is normally slightly inclined to the inner surface of the body of the flange 12. The body portion 3 of the strip 2 is formed to have a width such that when the lower edge of the portion 3 of the strip 2 is located in the space between the upper edge of the returned portion 15, the upper edge of the portion 3 of the strip 2 will lie against the under surface of the running board 10 and at a point remote from the inner corner between the inside surface of the flange 12 and the under surface of the running board 10, substantially as shown in Fig. 3. When, therefore, the upper part of the strip 3 is pressed towards the flange, the lower edge of the strip will force its way between the returned portion 15 and the body of the flange 12 and these parts will elastically clamp the strip 3 in position. As the upper end of the strip 2 is forced to approach the inside surface of the flange 12, the strip 2 will eventually snap into position, that is, the position shown in Fig. 2, and will be securely locked therein and may be removed therefrom only by pulling on the sheet material 1 in a direction away from the inside surface of the flange.

The sheet material 1 is then drawn downward over the curved surface of the bend 14 and so as to maintain the strip 3 in its locked position. The sheet material 1 extends upward over the body of the flange 12 and across the top of the running board to the opposite side edge where it is secured by any suitable means. Preferably, the edge of the sheet material 1, that is last to be secured, is connected to a means whereby the sheet material may be tightly drawn and then by the said means may be removably secured in its taut condition. Thus, if it is desired to remove the elastic covering, which may arise by reason of injury thereto as by colliding with some object, it may be easily done and the covering may be readily replaced by another.

In the particular embodiment of the invention shown in Figs. 2, 3, and 4, the edge of the sheet material 1 is provided with a strip 20 of sheet metal that may be bent so as to clinch one edge of the sheet material 1 as by the portions 21, 22, and 23, that are joined by the curved portions 24 and 25. The strip 20 is also bent to form a curved portion 26 and the portion 27, that is inclined to the central portion 23 of the strip 20. The portions 23 and 27 form a V-shaped portion for engaging an edge part attached to or formed integral with the running board. The running board 10 is provided with a flange 28 that extends along one of the side edges of the running board and it may be provided with a

heeled portion near its lower edge to enable engagement of the strip 20 as at the side of the portion 22 and the curved portion 25. In the particular form of construction indicated, the flange 28 is bent to form the inclined portion 29 and the edge portion 30 that may extend in a plane substantially parallel to the plane of the body portion 31 of the flange 28. The sheet material 1 is, preferably, cut at a width such as to enable the location of the curved portion 25 of the strip 20 against the flange 28 at a point located on the inclined portion 29 with the edge 31 of the strip 20 against the outside surface of the flange 28. Inward and downward pressure of the strip 20 causes a wedging action along the inclined surface of the portion 29 until the edge 31 of the strip 20 passes below the edge of the flange 28 and to a point substantially as shown in Fig. 5, which operates to draw the sheet material 1 tightly across the top of the running board. Inward pressure of the strip 20, as at the curved portion 26, will cause the strip to roll on the flange 28, it being held from upward movement by the inclined surface 29 and the friction, due to the pressure that is applied to the strip. This will cause the inner surface of the portion 27 of the strip 20 to wedge over the lower edge of the flange 28 until the lower edge of the flange 28 enters the curved portion 26 of the strip 20 in which operation the sheet material is further stretched by the movement of the strip 20 to a point such that the inside surface of the curved portion 20 engages the lower edge of the flange 28. The strip 20 may then be secured in position by bending the portion 27 or parts thereof, as at 33, against the inside surface of the flange 28. When it is desired to remove the sheet material 1, all that is necessary is to bend the portions 33, by means of a suitable tool, outward with respect to the strip 20, whereupon the strip 20 may be slipped over the edge of the flange 28 and thus the sheet material 1 will be released from along the said edge of the running board. The other edge of the sheet material may then be disconnected from the running board by merely yanking the body of the sheet material so as to pull the strip 2 away from the corner into which it is fitted, as heretofore described.

As shown in Fig. 6, the strip 3 may be replaced by a strip 40 that may also be nickel plated, or otherwise decorated to form a trim. The sheet material 1 is secured by forming the bent portions 41, 42 and 43. The flange 44 of the running board may be provided with a curved edge portion 45 and the strip 40 may also be provided with a curved portion 46 that may be easily slipped over the curved portion 45 in order to lock the lower edge of the strip 40 with the lower edge of the flange 44 of the running board.

As shown in Fig. 7, the sheet material may

be connected to a strip 50 by means of the bent portions 51 and 52, substantially in the same manner that the sheet material is secured to the edge of the strip 40. The strip 50 may be provided with a curved portion 53 and the flange 54 may be provided with a curved portion 55 and these curved portions may be interlocked, substantially in the same manner that the curved portions of the form of strip shown in Fig. 6, are interlocked. The strip 50, however, is much narrower than the strip 40 and so as to locate the edge of the sheet material 1 at a point below the edge of the flange 54. The edge portion of the sheet material 1 thus extends along the outer surface of the flange 54 and over the top of the running board.

In the construction shown in Fig. 8, the running board 60 is formed of wood and in place of the locking strips for securing one edge of the sheet material 1 along one edge of the running board, as described in connection with the forms of construction shown in Figs. 2, 6, and 7, the sheet material 1 may be tacked or nailed as by the nails 62, to one side edge of the running board. It may be secured to the under side surface of the running board and drawn over the top of the running board to the opposite side edge. The edge of the sheet material 1 may be provided with the bent strip 20 and the running board may be provided with an L-iron or L-shaped strip 63 having the flanged part 64. The L-shaped part may be located at a point such that the flanged part 64 will be located slightly remote from the lower corner 65 of the running board 60. This provides a heel along the lower side near the edge of the running board for engagement of the strip 20, that is, the engagement of the portion 22 and the curved portion 25 of the strip 20. The width of the flange 64, with respect to the portions of the strip 20, is such that when the portion 22 engages the under side surface of the running board, at the corner 65, the edge 31 may be located beneath the edge of the flange 64 and, upon rolling the strip 20, the portion 27 will wedge under the edge of the flange 64 so as to cause the sheet material 1 to be drawn taut in the same manner that the sheet material 1 is drawn taut by the strip 20, as described above and illustrated in detail in Fig. 5. The strip 20 may be likewise locked in position by bending portions thereof, as at 33, to lock the strip 20 to the flange 65 and, consequently, secure the sheet material in its taut condition over the surface of the running board.

I claim:

1. In a tread for running boards, the running board having a flange part, a resilient sheet material, means for securing one edge of the sheet material to the running board, and a metal strip connected to another edge of the sheet material and having a V-shaped

part, the edges of the V-shaped part adapted to engage the flange part of the running board, one edge of the V-shaped part adapted to engage the edge of the flange part and to draw the sheet material taut as the V-shaped part is pushed over the edge of the flange part to position the flange part in the crotch of the V-shaped part.

2. In a tread for running boards, a resilient sheet material, a strip of metal connected to one edge of the sheet material, the running board having a flange part, the flange part having a returned portion extending inwardly and upwardly, the body of the strip having a width such that when one edge is located at the top of the returned portion the upper part of the strip will engage the under surface of the running board at a point remote from the flange part of the running board and the strip will be secured to the flange part by pressing the strip towards the flange part against the elastic pressure of the returned portion of the flange part, and means for securing the other side edge of the sheet material to the running board.

3. In a tread for running boards, a resilient sheet material, a strip of metal connected to one edge of the sheet material, the running board having a flange part, the flange part having a returned portion extending inwardly and upwardly, the body of the strip having a width such that when one edge is located at the top of the returned portion the upper part of the strip will engage the under surface of the running board at a point remote from the flange part of the running board and the strip will be secured to the flange by pressing the strip towards the flange part against the elastic pressure of the returned portion of the flange part, and means secured to the other side edge of the sheet material and comprising a member for engaging an edge part of the running board and movable relative to the edge part when engaged to stretch the sheet material as the said member is moved relative to the said edge part.

4. In a tread for a running board, the running board having a pair of flange parts extending along its side edges, a resilient sheet material, a strip of metal connected to one edge of the sheet material, a flange part of the running board having a returned portion extending inwardly and upwardly, the body of the strip having a width such that when one edge is located at the top of the returned portion the upper part of the strip will engage the under surface of the running board at a point remote from the flange part of the running board and the strip will be secured to the flange part by pressing the strip towards the flange part against the elastic pressure of the returned portion of the flange part, and a metal strip connected to the other edge of the sheet material and having a V-shaped part, the edges of the V-shaped part adapted

to engage a flange part of the running board,
one edge of the V-shaped part adapted to en-
gage the edge of the flange part and to draw
the sheet material taut as the V-shaped part
5 is pushed over the edge of the flange part to
position the edge of the flange part in the
crotch of the V-shaped part.

In witness whereof I have hereunto signed
my name to this specification.

10 GEORGE E. WHITLOCK.

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