A mounting device for attaching a running board to a roof of a railway vehicle and including bracket portion fixedly secured to the roof and an interlocking saddle portion fixedly secured to the running board. A depending tab portion of the saddle fits over a finger portion of the mounting bracket and is deflected to provide a biasing or tightening force as alignment and fastening openings on the bracket and on the saddle are brought into alignment for fastening.

5 Claims, 6 Drawing Figures
RUNNING BOARD MOUNTING BRACKET ARRANGEMENT

BACKGROUND OF THE INVENTION

1. Field of the Invention
This invention relates to railway vehicle running board members and in particular to the mounting bracket arrangement for attaching the running board securely to the roof of the railway vehicle.

2. Description of the Prior Art
Prior art mounting devices utilized in securing a running board to a generally flat roof structure have been L-shaped brackets or C-shaped brackets welded to the roof and including a horizontally extending element for mounting and fastening of the running board. Because of dimensional variations in the running boards and the nonuniform spacing of these mounting brackets, dimensional problems have been encountered which interfere with rapid assembly of running boards to the roof. Additionally, because of the L-shaped or C-shaped profile of these mounting brackets after the attachment of brackets to the roof, problems have been encountered with automated paint spraying operations because of unpainted areas which result generally in the area below the horizontally extending portions of the running board mounting brackets. These problems have been eliminated with the present invention which permits complete paint coverage of the roof structure after attachment of the mounting bracket and also allows for ease of assembly even in the presence of dimensional variations between the mating running board mounting members.

SUMMARY
The present invention relates to a running board mounting device for use on the roof of a railway vehicle to permit rapid and efficient attachment of a running board to the roof structure. A generally vertically extending mounting bracket is fixedly attached to the roof of the railway vehicle and includes a laterally extending finger portion and a pair of spaced openings spaced inwardly from the finger portion. The running board which is to be attached to the roof structure includes a saddle member having a depending flange portion containing an opening which receives the finger portion of the roof mounted mounting bracket. As aligning and fastening openings on the two members are brought into alignment the tab will deflect to provide a biasing and holding force to insure a secure attachment between the mounting bracket and the running board saddle member.

BRIEF DESCRIPTION OF THE DRAWINGS
FIG. 1 is a pictorial illustration, with portions removed and elements shown in phantom, of the running board bracket and mounting saddle of the present invention;
FIG. 2 is a pictorial illustration of the mounting bracket and running board saddle;
FIG. 3 is an end view of the running board mounting assembly;
FIG. 4 is a top plan view of the device illustrated in FIG. 3;
FIG. 5 is a view taken along line 5—5 of FIG. 3; and
FIG. 6 is a removed and enlarged top view of the interlocking portions of the present invention.

DETAILED DESCRIPTION
The roof of a railway vehicle is illustrated in part in FIG. 1 and designated by the numeral 10. Positioned atop and spaced from the roof surface is a running board member 12 which is illustrated in phantom for purposes of clarity. The running board may be of a general construction which is conventionally a grate type of member including a top surface which is serrated or coated with an abrasive to insure safe footing. Mounting brackets 14 are secured to the roof top as by welding, and combine with the running board mounted saddle members 16 for attaching the running board to the railway vehicle.

The mounting bracket 14 is a generally thin member including a pair of spaced leg portions 18. A saddle attaching finger portion 20 extends outwardly from the bracket 14. Spaced from the securing finger 20 are a pair of alignment and fastening holes designated by the numbers 21, 22 respectively. These openings correspond with the associated openings 21a, 22a in the running board mounting saddle 16. Opposite the securing finger 20 is a beveled edge portion 24 adjacent the openings 21, 22 which is present to eliminate a sharp corner which would otherwise exist and possibly present a safety hazard.

The running board saddle member 16 is of a generally L-shaped configuration and includes a side portion 26 and a top running board support and attaching portion 28. One end of the saddle 16 includes the bent-over tab portion 30 which includes an opening 32 which receives the securing finger 20 of the roof mounted mounting bracket.

A fastener 34 is indicated in FIG. 2 and is illustrated as one method of fastening the running board mounting bracket to an associated saddle member.

An assembly rod 36 is illustrated schematically in phantom in FIG. 4 and is used to align the associated openings in the running board mounting bracket and in the saddle to align the openings for insertion of a fastening device. Openings 38 in the top horizontal portion 28 of the saddle are used for insertion of fasteners for securing the running board to the saddle.

In operation, to utilize the device of the present invention it is contemplated that the locking bracket 14 would be assembled to the roof structure and fixedly attached thereto as by welding. The saddle members 16 would be initially assembled to the running board and then subsequently positioned atop the mounting brackets 14. To assemble the saddle member over the mounting bracket 14, the finger 20 of the bracket 14 would be inserted into the associated opening 32 of each saddle 16. The running board would then be positioned so that openings 21a, 22a of the saddle 16 would be in proximity to the associated openings 21, 22 of the mounting bracket 14. When these openings have been brought into close relationship the alignment rod 36 would then be inserted, for example, into the openings 21, 21a at which point the openings on the saddle 16 would be brought into alignment with the associated openings on the bracket 14. During this alignment process the tab portion 30 of the saddle member would be deflected in both a horizontal and a vertical direction to provide a double flexing action and thereby permit movement of the saddle 16 for alignment of the openings 21a, 22a with the associated openings 21, 22 of the mounting bracket. This deflection of the tab member
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3

30 provides a biasing force which holds the assembly together after fastener 34 is inserted through the openings 22, 22a and fixedly secured thereto. As illustrated in FIGS. 1 and 6, a right hand and a left
hand saddle member may be used in combination with a single roof mounted mounting bracket 14. This combination of an assembly may be desirable where two segments of running board abut. Thus it is noticed that the present invention provides a simplified method of attaching a running board to the roof of a railway vehicle wherein the effect of dimensional tolerances has been minimized due to the reflectable tab portion 30 of the saddle 16 which provides for a wide variety of dimensional variations which could exist in the mounting bracket 14, the running board 12 or the running board saddle 16. A running board may be easily attached to the roof of a railway vehicle without the use of special assembly tools, welding equipment or riveting equipment.

The foregoing description and drawings merely explain and illustrate the invention and the invention is not limited thereto, except insofar as the appended claims are so limited, as those skilled in the art who have the disclosure before them will be able to make modifications and variations therein without departing from the scope of the invention.

What is claimed is:

1. A running board mounting and supporting apparatus adapted to secure a running board to the roof of a railway vehicle and including:
a roof mounted support member fixedly secured to said roof and extending generally upwardly therefrom;
a saddle member having portions adapted to fixedly connect the saddle with said running board;
said roof mounted support member and the saddle having interlocking means including finger portion and an associated apertured deflectable tab portion;
said roof mounted support member having openings spaced a first distance from the said interlocking means and said saddle member also having alignment and fastening openings spaced a second distance from the associated interlocking means and

4 said first and said second distances being unequal to provide a deflection of said tab portion during alignment of the openings of the support member with the alignment and fastening openings of the saddle members thereby providing a connecting biasing force between the attached roof mounted support member and the running board saddle.

2. The invention according to claim 1, and:
said finger member forming a portion of said roof mounted support member and extending laterally of the vehicle and said alignment and fastening openings spaced therefrom;
said deflectable tab portion extending from the running board attached saddle and including said opening for receiving the finger portion of the roof mounted support member.

3. The invention according to claim 1, and:
said saddle comprising an angular member having depending top and side flange portions extending at right angles to each other;
said deflectable tab means extending from said top flange portion.

4. The invention according to claim 2, and:
said support member having spaced leg members fixedly attached to said roof;
said saddle including first and second openings cooperative with the opening of the deflectable tab portion for assembling said saddle to the support member in biased alignment, and said first distance being longer than said second distance to provide the deflection of the saddle mounted tab portion when the openings of the roof mounted support are in alignment with the alignment and fastening openings of the saddle member.

5. The invention according to claim 3, and:
said deflectable tab means having an extension extending laterally of said side flange portion of the saddle and including an opening for receiving said support mounted finger portion, said extension providing a double flexing member deflectable in both a horizontal and in a vertical direction for providing a biasing force in securing the support member to the saddle.

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