Aug. 5, 1924. 1,503,773

F. H. STANWOOD

STEP PLATE

Filed Feb. 21, 1921

Fig-1

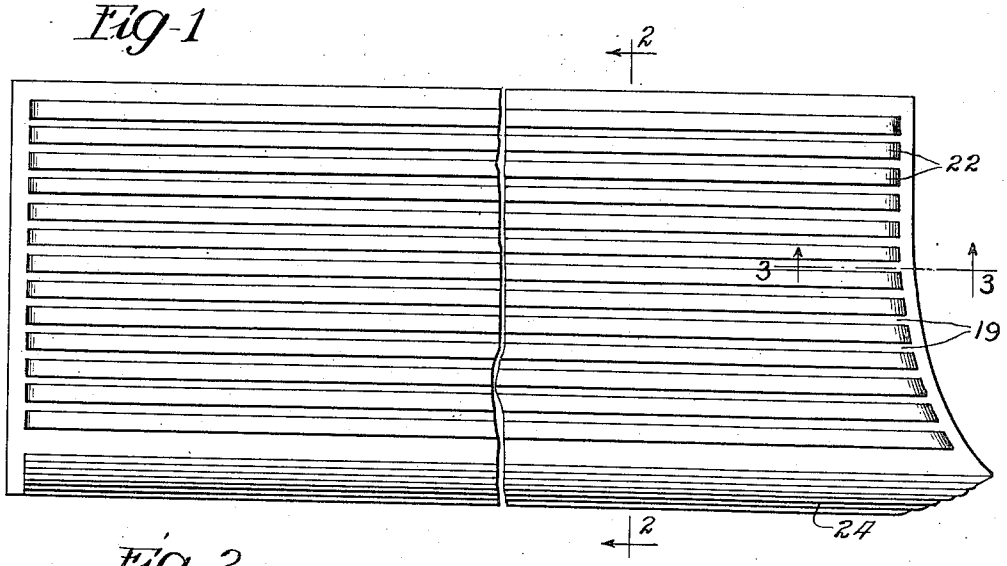
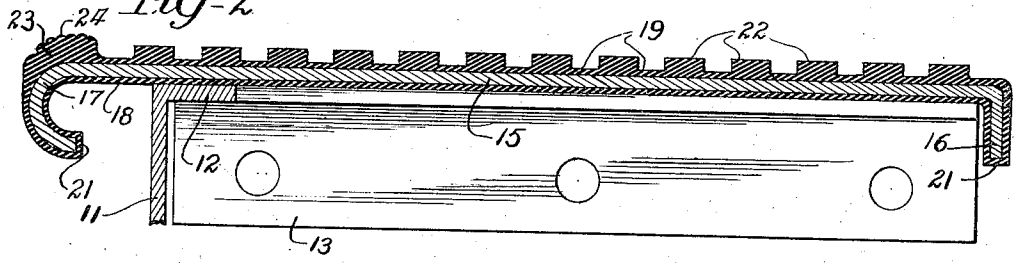


Fig-2



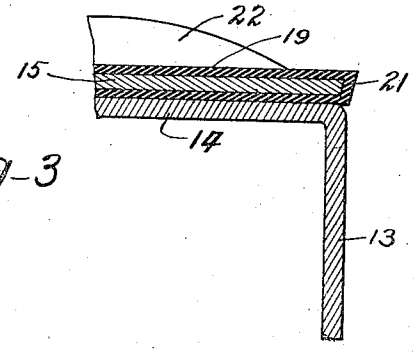


Fig-3

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UNITED STATES PATENT OFFICE.

FRANK H. STANWOOD, OF WILMETTE, ILLINOIS, ASSIGNOR TO STANWOOD EQUIPMENT COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF MAINE.

STEP PLATE.

Application filed February 21, 1921. Serial No. 446,786.

To all whom it may concern:

Be it known that I, FRANK H. STANWOOD, a citizen of the United States, residing in Wilmette, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Step Plates, of which the following is a specification.

This invention relates in general to steps for automobiles, railway cars and the like, the embodiment of the invention hereinafter more fully described for the purposes of illustration being capable of valuable use as steps for railway cars, Pullman, day coaches, diners and the like.

A principal object of my invention is the provision of a step of the character mentioned, which will be self-cleaning in service and which will provide effectually against slipping and for the cleaning of the feet of persons entering or leaving the vehicle in which it is incorporated.

Another and highly important object of the invention is the provision of a step plate of this character, which will, by reason of its construction, have extraordinary durability. The invention contemplates in this regard further the construction of the step in such fashion that moderate wear will not mar the appearance and require the step to be discarded while, except for the appearance, it is still in usable shape.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawing,

Figure 1 is a top plan view of a step embodying my present invention;

Fig. 2 is a section taken substantially on the line 2—2 of Fig. 1; and

Fig. 3 is a section taken substantially on the line 3—3 of Fig. 1.

For the purposes of illustrating my invention I have shown on the drawing a railway car step, in which it is embodied. This step has at one end, as will be noted, a curved part adapted to fit the car body, although it will be readily understood, of course, that other shapes may be provided.

Referring to Figs. 2 and 3, reference character 11 designates the usual riser having at the top the usual turned-in flange 12. And reference character 13 designates side plates fastened in suitable fashion to the car step hanger wall and having also turned in flanges 14 at the tops. Upon these supports I provide the step or tread in which my invention is embodied. This step or tread comprises a metal plate 15 having a downturned flange 16 at its rear side and gradually downturned flange 17 at the front. This flange at the front may be formed in the curved shape shown on the drawing or otherwise to provide the desired nosing.

The plate is preferably entirely enveloped in some vulcanizable material as rubber forming an undercoating 18 and an upper coating 19 joined at their ends or edges as at 21 at the front, back and sides. Upstanding, isolated ribs 22 are arranged on the top covering 19 and forms a part thereof and these ribs are shown in the present instance as arranged in parallelism. Over the metal nosing or gradually downturned flange 17 is provided a rubber nosing 23 forming a part of the upper covering and gradually thickened over the front of the nosing to a point back of its top to a height equal to or slightly greater than ribs 22 and this nosing is preferably corrugated slightly as shown at 24. The vulcanizable material is preferably corrugated slightly as shown at 24. The vulcanizable material is preferably caused to bond with the metal plate 15 by flashing or dirting the plate with copper prior to the vulcanization of the rubber so that firm bond adherence results between the covering and the metal.

This plate is self-cleaning since the spaces between the ribs are entirely open and the jarring of the vehicle in service causes any dirt collected to work out and be discharged. Should, however, these spaces become clogged it is a relatively easy matter to brush out the dirt toward either end. The ribs being upstanding and isolated, i. e. not reinforced by cross connecting ribs, present minimum opportunity of slipping by persons stepping upon them, and effectively clean the shoe.

Appreciable wear can occur by reason of the thickened nosing at the front without detracting materially from the appearance of the step and it will be manifest that the article provided, the rubber being of reasonably good material, will be durable in service.

It is thought that the invention and many

of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A step for automobiles, railway cars, and the like, comprising a metal step member having flanged edges, supports for the same, a complete coating of vulcanizable material above and beneath the same and entirely enveloping it, the upper coating being provided with upstanding, isolated ribs.

2. A step for automobiles, railway cars and the like, comprising a metal plate having downwardly extending front and rear flanges, a rubber covering entirely enveloping said plate and being vulcanized thereto, said covering having upstanding isolated ribs on its upper part.

3. A step for automobiles, railway cars, and the like, comprising a plate entirely enveloped in a vulcanizing material and having a gradually downturned flange at its front and a limiting flange at the rear, said covering having upstanding ribs on its upper side and a thickened nosing above said downturned flange.

4. A step for automobiles, railway cars, and the like, comprising a metal step member having downturned front and rear flanges, a rubber covering over said flanges and over the top of said plate, and provided with upstanding ribs above said plate.

5. A step for automobiles, railway cars and the like, comprising a metal step member having downturned front and rear flanges, a rubber covering over said flanges and over the top of said plate, and provided with upstanding ribs above said plate, said covering being vulcanized to the material of said plate and adhering thereto by reason of said vulcanization.

FRANK H. STANWOOD.