J. H. S. KERR.

RUBBER MAT.

APPLICATION FILED MAY 14, 1921.

1,426,296. Patented Aug. 15, 1922.

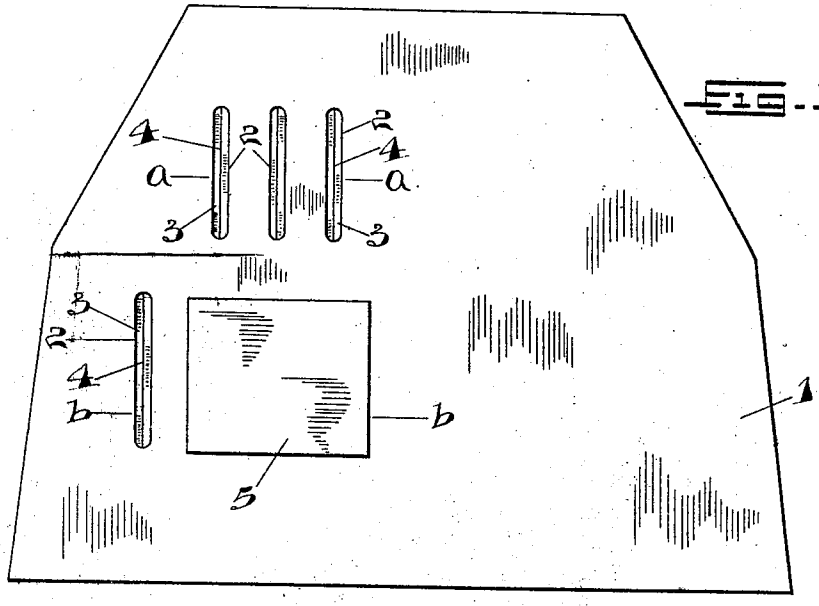
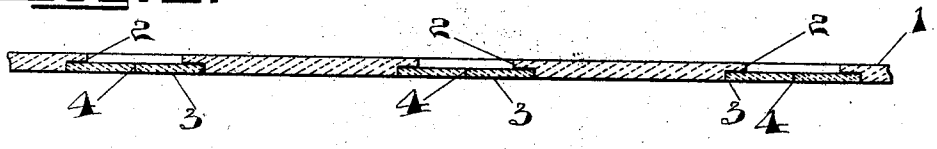


FIG. 1.

FIG. 2.



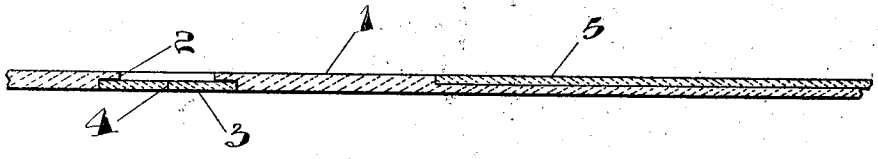


FIG. 3.

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RUBBER MAT.

1,426,296. Specification of Letters Patent. Patented Aug. 15, 1922.

Application filed May 14, 1921. Serial No. 470,819.

To all whom it may concern:

Be it known that I, JAMES H. S. KERR, of the city of Toronto, in the county of York, Province of Ontario, Canada, a subject of the King of Great Britain, have invented certain new and useful Improvements in Rubber Mats, of which the following is a specification.

This invention relates particularly to rubber mats used on the foot boards of automobiles of the Ford type, which mats have to be provided with openings for the brake lever and foot operated pedals of the automobile. These mats are usually constructed with one large opening for the three foot pedals and a separate opening for the brake lever, though in some cases separate openings are provided for each of the foot pedals. These separate openings for the foot pedals have, however, always been of large size so that the edge of the openings would not contact with the pedals. These large openings have a number of disadvantages, among them that of allowing in the winter time cold air from the outside to enter the front part of the automobile, and in the summer time allowing the heat from the engine to enter.

My main object therefore is to so construct the mat that it will maintain a tight fit around the pedals as they move, leaving substantially no opening for the entrance of cold or hot air as the case may be.

As these mats are particularly subject to wear where the driver's heels rest, a further object is to provide the mats with extra wearing qualities at this point.

I attain my objects by constructing the mat substantially as hereinafter described and illustrated in the accompanying drawings in which—

Fig. 1 is a plan view of a mat constructed in accordance with my invention;

Fig. 2 a section, partly broken away, on the line *a*—*a*, in Fig. 1; and

Fig. 3 a section, partly broken away, on the line *b*—*b*, in Fig. 1.

In the drawings like numerals of reference indicate corresponding parts in the different figures.

1 is a mat suitably shaped to fit the automobile in which it is to be used, which mat is provided with a plurality of slots 2 through which the brake lever and foot pedals may operate. These mats have usually been made of a low grade of rubber, and hence the openings 2 have had to be made of large size (usually about $\frac{1}{4}$" wide), as otherwise the mat would become quickly worn with the constant rubbing of the pedals. It is extremely desirable, however, as stated in the preamble of the specification, that the mat fit tightly around the pedals, and while this could be accomplished by making the entire mat of a high grade of rubber, to do this would mean a very marked increase in the cost of the mat.

I overcome the difficulty therefore by making the body of the mat of the usual low grade rubber, the mat having the slots 2 therein of about the size of the slot in the mats at present on the market. On the back of the mat over each opening is secured a comparatively narrow piece 3 of very pliable high grade rubber. While the mat proper may be of the same thickness throughout, it will usually be of reduced thickness adjacent the slots 2, so that when the pieces 3 are added to the back of the mat, the thickness of the mat will not be increased and the back surface of the mat will be perfectly flat. While the pieces 3 may be of the same thickness as the mat proper inside the openings 2, I prefer to have the same of lesser thickness, as this renders the pieces 3 more pliable.

The pieces 3 will be slit to provide openings 4 for the passage of the pedals, but preferably none of the material will be removed.

As automobiles of the Ford type are usually provided with three foot pedals placed closely together, if desired one large opening may be formed in the mat and a single piece 3 of high grade rubber large enough to fill the entire opening inserted. In this case the piece 3 would be provided with a separate slit for each pedal.

As the pieces 3 are made of very high grade pliable rubber, and none of the material removed when the slots are made, the edges will always meet except as they are held apart by the stems of the pedals, and will quickly come together as the pedals are moved forward and backward, so that at no time is there an opening of any size around the pedals.

As these mats are particularly liable to wear where the driver's feet rest, it is desirable to strengthen the mat at this point. I therefore place on the upper surface of the mat at this point a layer 5 of highly fiber-

ized tough rubber having great wearing qualities. I prefer, however, to have the thickness of low grade rubber at this point of less thickness than the rest of the mat, so that when the layer of highly fiberized rubber is added, the mat will be of equal thickness at all points.

While the pieces 3 of high grade rubber and the layer 5 of highly fiberized rubber may be added after the mat is completed, they will preferably be incorporated in the mat during manufacture and the mat vulcanized as a whole, so that in effect the mat will be of a single piece of rubber.

A mat constructed as described will be found to attain the objects of my invention as set out in the preamble of this specification, will be simple to manufacture, and will cost but little more than a mat constructed entirely of low grade rubber, while its cost will be considerably less than a mat constructed entirely of high grade rubber and will last practically as long.

What I claim as my invention is:—

1. A mat, having an opening therein, constructed of low grade rubber, said opening being closed with a portion of high grade rubber having a slit therein, said portion of high grade rubber being secured to the mat to form an integral structure.

2. A mat, having an opening therein, constructed of low grade rubber, the mat adjacent the opening being of reduced thickness, a patch of high grade rubber being secured to the portion of reduced thickness to close said opening, said patch having a slit therein, said patch of high grade rubber being secured to the mat to form an integral structure.

3. A mat, having a slot therein, constructed of low grade rubber, said slot being closed with a portion of high grade rubber having an elongated slit therein, said portion of high grade rubber being secured to the mat to form an integral structure.

4. A mat constructed in the main of low grade rubber having a layer of highly fiberized rubber secured to part of its upper surface to form an integral structure.

5. A mat constructed as set forth in claim 3 in which the thickness of low grade rubber is reduced where the layer of highly fiberized rubber is secured to the upper surface.

6. A mat constructed in the main of low grade rubber and having an opening therein closed with a patch of high grade rubber, said patch having a slit therein, the mat also having a layer of highly fiberized rubber secured to a portion of its upper surface, said patch of high grade rubber and layer of highly fiberized rubber being secured to the mat to form an integral structure.

7. A flexible mat having an opening therein, said opening being closed with a relatively softer and more flexible material integrally united with the mat around said opening and having a slit therein.

8. An integral flexible mat having a slit therein, the portion of the mat surrounding the slit being of lesser thickness than the main portion of the mat.

9. An integral flexible mat having a slit therein, the portion of the mat surrounding the slit being more flexible than the main portion of the mat.

Signed at Toronto this tenth day of May 1921.

JAMES H. S. KERR.