July 17, 1928. 1,677,372

B. A. RUHLING

SHEET RUBBER

Filed May 13, 1927

Fig. 1.

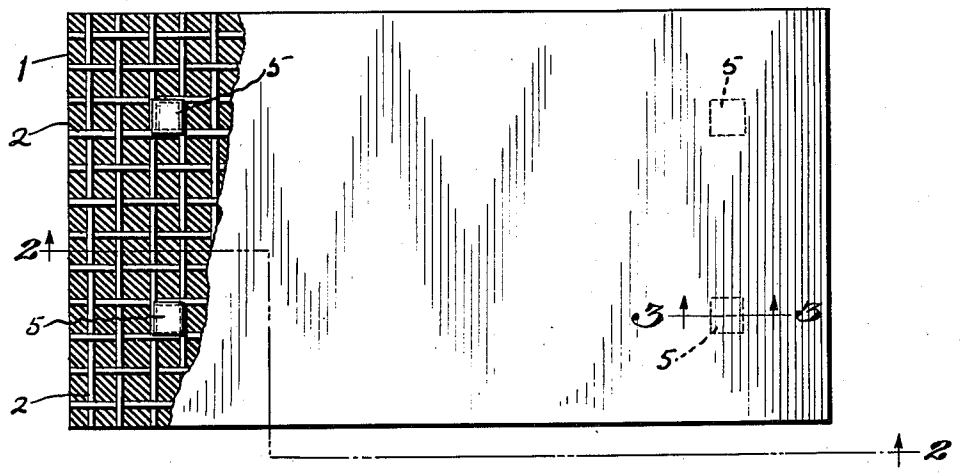


Fig. 2.

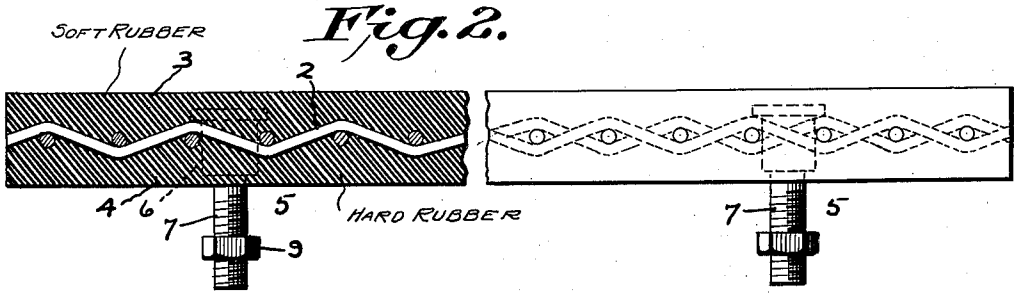


Fig. 3.

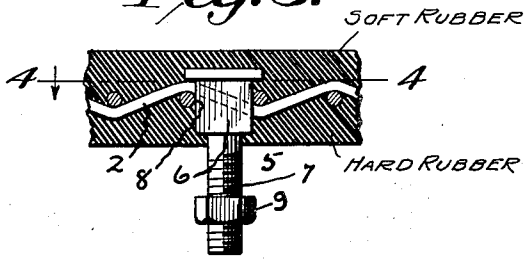


Fig. 5.

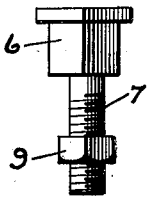
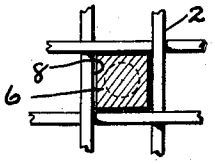


Fig. 4.



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UNITED STATES PATENT OFFICE.

BERNARD A. RUHLING, OF ELKHART, INDIANA.

SHEET RUBBER.

Application filed May 13, 1927. Serial No. 191,234.

My invention relates to improvements in sheet rubber, and particularly to reenforced sheet rubber.

The object of my invention is to provide reenforced sheet rubber for use in making automobile bodies, floor boards, running boards, tops, fenders, and other parts which are now made of wood and steel.

Another object of the invention is to provide a reenforced sheet rubber for use in the manufacture of furniture, cabinets, tables and building material of certain character.

A third object of the invention is to provide a reenforced sheet rubber in which fastener members are embedded. Other objects of the invention are mentioned and described herein.

The preferred embodiment of the invention is illustrated in the accompanying drawing wherein Figure 1 is a plan view of the sheet rubber broken away to disclose the wire netting reenforcing element embedded therein and the fastener members; Fig. 2 is a section taken on line 2—2 of Fig. 1; Fig. 3 is a section taken on line 3—3 of Fig. 1; Fig. 4 is a section taken on line 4—4 of Fig. 3; and Fig. 5 is a view of one of the fastener members.

Similar numerals of reference indicate like parts throughout the several views on the drawing.

It is well known that steel and wood when used in motor cars are objectionable on account of the rapid wear and deterioration thereof, and that they intensify sounds due to vibration. My improved rubber sheet, when used for floor boards, running boards, and other suitable parts in a motor car, become very desirable and most durable, for they will not rattle, rust, corrode, rot or decay. They readily absorb noises and facilitate the cleaning or washing of the car parts. Moreover, rugs and carpets may be wholly dispensed with when my improved reenforced sheet rubber is used as a floor board or covering.

Referring to the details of the drawing the numeral 1 indicates a plan view of my improved sheet rubber in which the reenforcing wire netting 2 is embedded, the latter being preferably relatively heavy for motor car floor boards, running boards, and the like, to produce a semiinflexible sheet of rubber. The wire netting 2 may be of steel, brass, copper, or other suitable metal, and is embedded in the sheet by placing it between two separate sheets of plastic rubber which are then rolled to the desired thickness and vulcanized to the desired consistency, either in a mold, or otherwise in any suitable manner.

For certain uses or purposes one side of the sheet, 3 for example, may be vulcanized softer than the opposite side 4, which would reduce the noise of falling objects, car vibration, &c. In other cases a plurality of fastener members 5 may be embedded in the sheet when being vulcanized, to enable its attachment to surrounding objects, brackets, or other supporting elements. Such a fastener member may take the form of a headed stud 5 provided with a polygonal shank 6 and a screw threaded section 7, the former being embedded in the rubber sheet and within the polygonal interstice 8 of the netting 2 to hold the stud against rotation, and the latter projecting to the sheet exterior to receive a nut 9.

In case a very heavy wire netting 2, or any metal reenforcing element, is used, some of the ends thereof may be extended to the exterior of the sheet end or side and screw threaded to take a nut, to function as fastener members. As illustrated, the head of the stud 5 is invisible from one side of the rubber sheet, which side may serve as the upper or outer side of the sheet when in use, being the exposed side thereof.

I claim:

1. As a new article of manufacture, a solid sheet of rubber having wire netting embedded in its interior and provided with polygonal interstices, and a fastener member embedded in said sheet of rubber and projecting to the exterior thereof, said fastener member having a polygonal shank engaging in one of the netting interstices.

2. As a new article of manufacture, a solid sheet of rubber having a metal reenforcing element embedded therein, said re-

enforcing element being provided with a plurality of apertures some of which are of polygonal formation, and a plurality of fastener members having one end embedded in the rubber sheet, each of said fastener members being provided with a polygonal section which engages one of the polygonal apertures in said reenforcing element, and each of said fastener members having its free end screw threaded.

In witness whereof I have hereunto affixed my signature this 11th day of May, 1927.

BERNARD A. RUHLING.