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E. F. WEBB

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GROMMET

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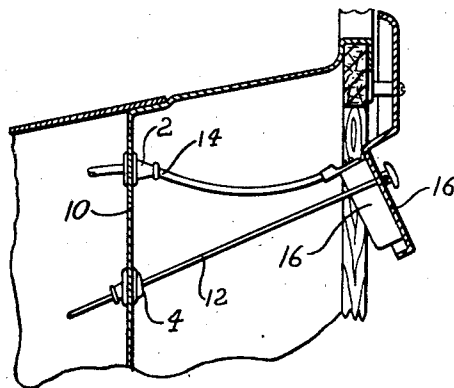


Fig. 1.

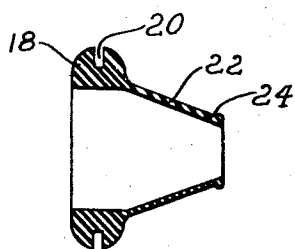


Fig. 2.

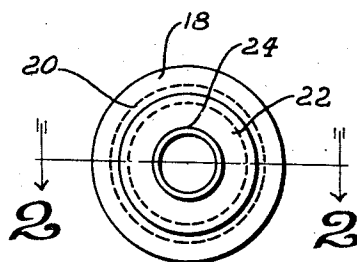


Fig. 3.

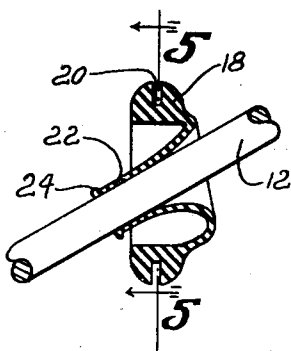


Fig. 4.

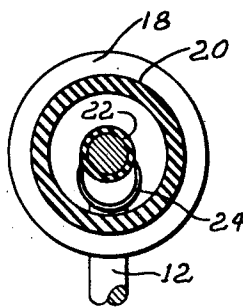


Fig. 5.

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GROMMET

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This invention relates to a grommet and is illustrated as embodied in a grommet for tubes, wires or control rods, which pass through an automobile dash.

5 An important object of the invention is to provide a grommet which will snugly embrace a member and at the same time permit free axial and radial movement thereof.

Another object of the invention is to provide an improved grommet in which the base portion can be of standardized size and another portion which resiliently embraces a member extending therethru, the latter portion snugly embracing the member.

15 Another object of the invention is to provide a grommet of standardized size, the base portion of which will accommodate a variety of sizes of members passing therethru and another portion of standardized size which is yieldable, so that it will snugly embrace the members of variable size.

Other objects and advantages of the invention will more fully appear from the following description taken in connection with the accompanying drawings in which:

25 Fig. 1 is a fragmentary vertical sectional view of an automobile dash, cowl and instrument board, provided with my improved grommet.

30 Fig. 2 is an enlarged longitudinal sectional view of my improved grommet taken on line 2—2 of Fig. 3.

Fig. 3 is a view in elevation of the improved grommet.

35 Fig. 4 is a view corresponding to Fig. 2 illustrating a modified application of the grommet.

Fig. 5 is a sectional view on line 5—5 of Fig. 4.

40 Referring to the construction shown on the drawings, the improved grommet is illustrated, Fig. 1, in two applications; on the dash 10 of an automobile, to support either an axially movable control rod 12, such as a choke, or an electric conductor 14. The control rod 12 extends through an instrument board 16 in the usual manner and the conductor 14 is secured to an instrument 16, extending through the dash 10 and grommet.

50 The grommet is preferably made of yield-

able rubber and comprises an annular tubular body portion 18, provided with a radially extending, outwardly opening groove 20, adapted to embrace the opposite sides of the marginal edge of an aperture in a metal panel or the like, such as the dash 10. Moulded integrally with the body portion 18, I have provided a yieldable sleeve 22 which consists of a tubular frusto-conical portion of relatively thin live rubber. The outer end of the portion 22 terminates with an exterior band 24 which is adapted to snugly embrace the rod 12 when passed therethru.

This improved grommet is preferably made of rubber, and the portion 22 and bead 24 on the end thereof are of live rubber so as to readily stretch, at all times yieldably and snugly embracing a control rod therethru which is of slightly greater diameter than the opening thru the end of portion 22.

70 Having this portion of the grommet of live rubber permits, within certain limits, the use of various size rods all of which are snugly embraced by the extended portion 22 of the grommet, so as to make a substantially air tight joint where the control rod passes through the dash, and at the same time permit unlimited axial movement of the rod and radial movement thereof.

The grommet, for the conductor 14 as illustrated at 2 in Fig. 1, is shown having the portion 22 extending axially beyond the body portion 18, while the grommet 4 has its outer end folded inside of the opening in the body portion 18 as shown in Fig. 4. When a rod, such as 12, is extended at an angle through an opening of the body portion 18, the end 24 more firmly embraces the rod 12 due to the fact that the portion 22 is not kinked as would be the case if a rod was extended at an angle through the opening in the grommet shown in Fig. 2.

Although but one specific embodiment of this invention is herein shown and described, it will be understood that the various changes including the size, shape and arrangement of the parts, may be made without departing from the spirit of my invention and it is not my intention to limit its scope other than by the terms of the appended claims.

I claim:

1. A grommet comprising a body portion adapted to be attached to a supporting base, said body portion having an opening there-
5 thru, and an elongated tubular portion having an opening therethru of smaller diameter than the opening through said body portion for receiving a member, a section of said tubular portion being yieldable for
10 snugly embracing such member.
2. A grommet comprising a body portion adapted to be attached to a supporting base, said body portion having an opening there-
15 thru, and an elongated tapered tubular portion having an opening therethru one end of which is of smaller diameter than the opening through said body portion for re-
ceiving and snugly embracing a member, the tubular portion being yieldable.
- 20 3. A grommet comprising a hollow body portion adapted to be attached to a support-
ing base, a portion adapted to yieldably embrace a movable member and a pliable sleeve
portion connecting said two first mentioned
25 portions for permitting such movable member to have such axial movement and limited radial movement relatively to said base portion.
- 30 4. The combination of a stationary member having an opening therethru, a member extending through said opening, a grommet interposed between said members comprising
a body portion embracing opposite sides of the marginal edge of said opening, a portion
35 snugly embracing said member and a pliable sleeve portion connecting said two first mentioned portions.
- 40 5. A grommet comprising a unitary elongated tubular structure having a base portion at one end adapted to be secured to a
supporting member and a portion at the opposite end adapted to snugly surround a
member extending through said base portion and an intermediate portion of live rubber
45 for permitting relative movement between said first mentioned two portions.
- 50 6. A grommet comprising a rubber body portion adapted to be attached to a supporting base, said body having an opening there-
thru and a tubular portion of live rubber for receiving and snugly embracing a member
extending through the opening in said body portion.
- 55 7. A grommet comprising a rubber body portion adapted to be attached to a supporting base, said body having an opening there-
thru and a frusto-conical portion of live rubber for receiving and snugly embracing a
member extending through the opening in
60 said body portion.
8. A grommet comprising a unitary structure having a base portion at one end provided with an opening, said base portion
adapted to be secured to a supporting mem-
65 ber, a portion at the opposite end provided with a smaller opening the wall of which is resilient, and an intermediate portion permitting relative movement between said first mentioned two portions.
9. A grommet comprising a resilient an-
70 nular body portion having a peripheral groove and a central opening, and a portion of reduced thickness extending inwardly and outwardly from said body portion and hav-
ing an opening of less diameter than the
75 opening in said body portion.

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