This invention relates to door knob covers and an object is to provide an improved and sanitary cover which will eliminate the annoyance of electrical shocks to persons touching the knob, which may be easily found in the dark, which will reduce the danger of injury to persons accidentally striking the knob, which will avoid injury to furniture or walls against which the knob may strike, which may be easily applied to most inside door knobs without the use of tools or the need of special skills, and which will be attractive in appearance and ornamental on the knob.

Other objects and advantages will be apparent from the following description of an embodiment of the invention, and the novel features will be particularly pointed out hereinafter in the appended claims.

In the accompanying drawing:

Fig. 1 is a plan of a knob cover constructed in accordance with this invention;

Fig. 2 is a side elevation of the same;

Fig. 3 is a plan of a strip of cellular rubber of which one of the parts of the cover is formed;

Fig. 4 is a transverse sectional elevation of the same, the section being taken approximately along the line 4-4 of Fig. 3;

Fig. 5 is a plan of another part of the cover;

Fig. 6 is a transverse, sectional elevation of the same, the section being taken approximately along the line 6-6 of Fig. 5;

Fig. 7 is a transverse sectional elevation of the cover, the section being taken approximately along the line 7-7 of Fig. 1; and

Fig. 8 is a diagram illustrating a step in the manufacture of the cover.

In the illustrated embodiment of the invention, the cover is a generally cup shaped body or element 1 with a cavity 2 (Fig. 7) in one face of a size to receive and fit over a door knob. The body 1 has an endless, elastic ring 3, having a shape somewhat like the frustum of a hollow cone, and a circular sheet 4 is bonded across the larger end of the ring 3 to close its passage and form an end wall for the cup shaped body. An annulus 5, shown separately in Figs. 5 and 6, is secured or bonded to the smaller end of the ring, with its inner margin extending partially across the passage of the ring so as to form an inwardly extending flange 6 at the open face of the cavity 2. The depth of the cavity 2 from its open face is approximately equal to the thickness of a standard or ordinary door knob, and the diameter of the cavity at its larger end is approximately equal to the diameter of the ordinary door knob.

The ring 3 and sheet 4 are both made of split, cellular, elastic rubber with no skin faces, and the annulus 5 is made of a split, cellular rubber known as "neoprene," but with one skin face constituting the exposed face of the annulus. The term rubber is intended to cover both natural rubber and the so-called synthetic rubbers or rubber substitutes. Rubbers may also be defined as those materials which when stretched to 200% or more elongated and released will return practically immediately to their original shape and position. The "neoprene" is an oil resistant, synthetic rubber of much greater tensile strength than the other rubbers, and it also is used in cellular form, but with its exposed face 7 the "skin" face.

The bottom wall of the body, formed by the sheet 4, is provided with a shouldered passage 8, located at the center of the bottom, and a button or plug 9, preferably of cellular rubber is secured, as by cement, in the larger, inner end of the passage 8 against the shoulder of the passage. The face of the button 9 which abuts against the shoulder is provided with a coating or layer 10 of luminous or other material of any suitable kind which will glow somewhat in the dark, and be visible through the outer or smaller end of passage 8.

In the preferred manner of making this cover, a strip 11 of split, cellular rubber with no skin faces, see Fig. 3, is first formed by splitting it from a mass of cellular rubber, and its sides 12 and 13 are beveled off somewhat, as shown in Fig. 4 particularly. The strip 11 is then flexed into a ring shape and its ends cemented together with a suitable rubber cement, to form the endless ring 3. This ring 3 is then placed in a tapered passage which forms the ring into a frustum of a hollow cone, and an annulus 5 is then cemented to the smaller end face of the cone or ring. The annulus 5 is wider, between its inner and outer peripheries, than the width of the smaller end face of the cone, and its outer diameter is equal to the outer diameter of the smaller end of the cone. The annulus 5, when cemented to the smaller end of ring 3, will thus extend into the smaller end of the passage of the ring and form the internal flange 6.

While the ring 3 is still in its tapered form, the sheet 4 is cemented to the larger end face or base of the ring. The passage 8 may be formed in sheet 4 before or after it is attached to ring 3. The button 9 is cemented in the passage 8 at any time after the passage 8 is formed. I have found it decidedly advantageous to make the sheet 4 of larger face area than needed, and cement it on the ring 3. The ring 3 and attached sheet 4 are then removed from the tapered form and placed on a cutting table. A tubular cutting knife or tool 14 then descends over the ring as shown in Fig. 8, and cuts off the excess marginal portion of the sheet 4. For this purpose, the inside diameter of tool 14 is that desired for the circular finished sheet 4.

In use, the open end of the element 1 is forced over a door knob to be protected, and the cellular rubber of element 1 will stretch and conform to the shape of the knob. The flange 6 will grip the door knob and resist removal of the cover. At night the luminous coating or layer 10 will glow to enable one to readily find the door knob, and anyone touching the knob to turn it, will not receive a shock due to a discharge of static electricity from the person to the knob. The cover is an efficient insulator, and it eliminates the very annoying shocks that formerly resulted when one walked over a wood rug, during certain atmospheric conditions, and touched the knob. The cushioning of cellular rubber also cushions any impact against it, if one should fall against the knob accidentally, and if the door is swung against furniture, the cover will engage the furniture and cushion the blow. One size of cover will fit most standard inside door knobs. It is completely washable and hence can be kept sanitary under all conditions.

It will be understood that various changes in the details, which have been herein described and illustrated in order to explain the nature of the invention, may be made by those skilled in the art within the principle and scope of the invention as expressed in the appended claims.

1 claim:

1. A door knob cover comprising a generally cup-
shaped element of cellular, elastic rubber, an annulus of "neoprene" latex bonded to the open end face of said element concentrically therewith, with its inner marginal edge projecting partially across said open end to provide an internal, peripheral flange at the open end of said element, the distance between said flange and the closed end of said element being slightly less than approximately the thickness of the door knob to be covered, so as to fit snugly over said door knob.

2. A door knob cover comprising an endless, elastic ring having the shape somewhat like the frustum of a hollow cone, a sheet bonded across the larger end face of the ring to form an end wall for the passage thereof, an elastic annulus bonded to the smaller end face of the ring and extending inwardly of the ring a substantial distance to form an internal flange partially but not entirely across the smaller end of the passage of the ring, said ring, and sheet being formed of split, cellular, elastic rubber, and said annulus being formed of highly elastic, "neoprene" rubber.

3. A door knob cover comprising an endless, elastic ring having the shape somewhat like the frustum of a hollow cone, a sheet bonded across the larger end face of the ring to form an end wall for the passage thereof, an elastic annulus bonded to the smaller end face of the ring and extending inwardly of the ring a substantial distance to form an internal flange partially but not entirely across the smaller end of the passage of the ring, said ring, and sheet being formed of split, cellular, elastic rubber, and said annulus being formed of highly elastic, "neoprene" rubber with a skin face of the split "neoprene" rubber as the outer face of the annulus.

4. A door knob cover comprising an endless, elastic ring having the shape somewhat like the frustum of a hollow cone, a sheet bonded across the larger end face of the ring to form an end wall for the passage thereof, an elastic annulus bonded to the smaller end face of the ring and extending inwardly of the ring a substantial distance to form an internal flange partially but not entirely across the smaller end of the passage of the ring, said ring and sheet being formed of cellular, elastic rubber, the ring being of split, cellular rubber free of a skin surface, and said annulus being formed of a cellular, elastic "neoprene" rubber, with its outer face having a skin surface.

5. A door knob cover comprising an endless elastic ring, an elastic cellular sheet bonded to one end face of said ring and extending at least partially across the passage of the ring, and a highly elastic annulus bonded to the other end face of said ring and extending partly, but not entirely, across the passage of the ring, said ring being formed of cellular split, elastic latex, and said annulus being formed of cellular "neoprene" rubber, with its exposed face a skin surface.

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