Nov. 17, 1953 R. F. BRENNAN 2,659,169

MAGNETIC ATTACHING MEANS FOR ORNAMENTAL OBJECTS

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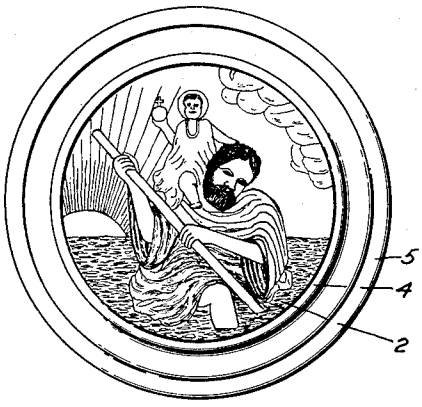


Fig. 1.

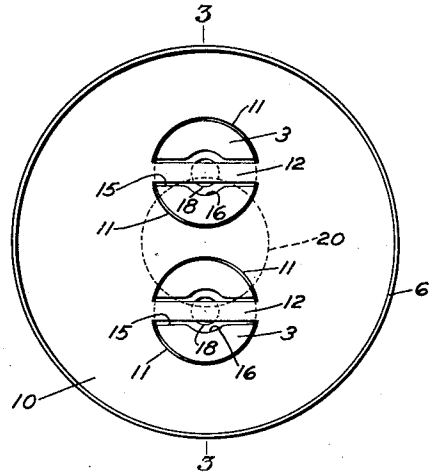


Fig. 2.

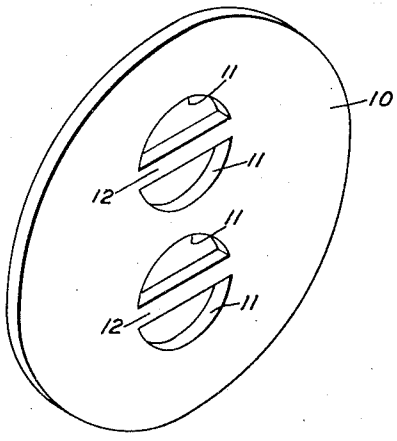


Fig. 4.

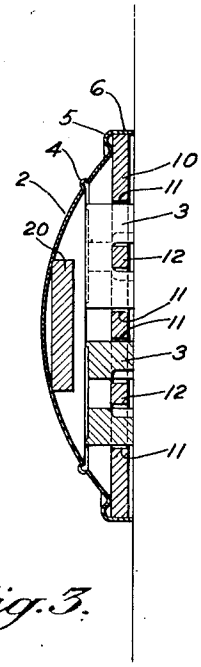


Fig. 3.

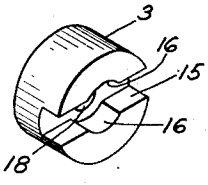


Fig. 5.

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MAGNETIC ATTACHING MEANS FOR ORNAMENTAL OBJECTS

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7 Claims. (Cl. 40—1.5)

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This invention relates to improved means for attaching ornamental objects or other articles to metal surfaces.

As herein illustrated the fastening means are applied to an ornamental medallion, emblem or the like for magnetically attaching it to the metal panel on the dash of an automobile or to any other metal surface. In other instances, the present improved attaching means may be applied to articles of utility such as ash-trays, condiment containers or the like.

One object of the invention is to provide means embodied in a medallion or other ornamental object for magnetically attaching it to a panel or other metal part.

Another object is to provide in an article of the type indicated loosely-supported permanent magnets projecting rearwardly from the article for contacting the face of a metal panel or the like to attach the article thereto.

Another object is to provide in an article of the type indicated a plurality of permanent magnets supported loosely to adapt them to be attracted toward the panel or other metal surface to which the article is to be attached.

Another object is to provide an article of the type indicated in which the magnetic means are enclosed and entirely concealed from view when the article is attached to a metal surface.

Further objects of the invention are set forth in the following specification which describes a preferred form of construction of the article and its attaching means as shown by the accompanying drawings. In the drawings:

Fig. 1 is a view of the obverse side of a medallion having an embossed, crowned face with ornamentation such as raised figures thereon;

Fig. 2 is a similar view of the inverse side of the object showing the magnets and the means for mounting them thereon;

Fig. 3 is a transverse sectional view of the article taken on line 3—3 of Fig. 2 and illustrating the magnetic means in detail;

Fig. 4 is a perspective view of the rearward closure-plate of the hollow article showing the means for movably mounting the permanent magnets thereon; and

Fig. 5 is a perspective view of one of the permanent magnets.

According to a prevailing custom, travelers carry St. Christopher medals for protection on their journeys. These are worn on the person or attached to some article carried with them. In conformity with this custom medallions having a representation of St. Christopher thereon are frequently attached to a portion of the interior of an automobile or other vehicle. For this purpose the present invention provides efficient

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means for attaching a medallion or other ornamental object to the metal panel on the dashboard of an automobile or to any other metal part selected.

Fig. 1 illustrates a medallion having an embossed, crowned front wall 2 with suitable ornamentation thereon and provided at the rear with one or more permanent magnets 3, shown in Fig. 2, for attaching the medallion to any desired metal surface. Referring particularly to Fig. 3, the front wall 2 of the medallion may be struck up from sheet-metal in hollow spherical form for providing a recess at the rear in which the magnets 3 are located. For ornamentation, the face of the front wall 2 may be embossed to raise a circular bead 4, while its outer rim is formed with reversely-bent portions extending outwardly at 5 and terminating in a cylindrical marginal flange 6. Further ornamentation of the front wall 2 may be provided by embossing figures thereon or otherwise delineating a design by painting it thereon or by the use of transfer processes.

Held within the cylindrical flange 6 which surrounds the front wall 2 is a rearward closure-plate or disk 10 constructed of plastic or other non-metallic material such as fiber. The disk 10 is provided with one or more circular openings 11 bridged diametrically by transverse crossbars 12.

The attaching elements may be in the form of cylindrical plugs 3 of suitable permanently-magnetized material. One flat face of each magnetized plug 3 is formed with a transverse or diametrically-extending slot 15 of a width to adapt it to fit freely around the crossbar 12 in the opening 11 in the rear closure-plate or disk 10. Preferably, the slot 15 in each magnetic plug 3 is hollowed out on each side with axially arranged arcuate recesses 16. The plug 3 may be drilled to form an axial bore 18 through its main portion and counterbored to form the arcuate recesses 16. The magnetic plugs 3 are of somewhat less diameter than the openings 11 in the rear closure-plate or disk 10 and the slots 15 have clearance around the crossbars 12 so that when the magnets are mounted within the hollow of the medallion as shown in Fig. 3 they have a limited freedom of movement to provide for self-adjustment when in contact with slightly convex or irregular surfaces. The axial bores 18 and arcuate recesses 16 provide openings for preventing atmospheric pressure from limiting the sliding action of the plugs 3 when they adjust themselves to the surface on which the medallion or other object is attached.

A wafer or disk 20 of cardboard or any other suitable non-metallic material is fastened to the

interior of the crowned front wall 2 of the article by cementing or otherwise with a space between its inner face and the ends of the magnetic plugs 3. The disk 20 acts as an abutment or guard to prevent the magnetized plugs 3 from being displaced inwardly from the holding means or crossbars 12 and also serves as an insulator to prevent the plugs from becoming attached to the metal wall 2.

In use the method of operation of the magnetic attaching means is as follows: The fastening means are assembled with the ornamental article by first fastening a cardboard disk 20 to the inner face of the crowned front wall 2 by cementing it or in any other suitable manner. The magnetic plugs 3 are placed in the openings 11 of the closure-plate or disk 10 by straddling their slotted portions across the crossbars 12 and the disk is then forced into place with its periphery in frictional engagement with the interior of the flanged rim 6. The marginal rim or flange 6 may be slightly bowed inwardly if desired to secure a firmer frictional hold on the periphery of the disk 10 when the latter is snapped into place therewithin.

With the parts of the device thus assembled in unitary connection the medallion or other ornamental article, such as an emblem, badge, indicator or the like, may be attached to any metal surface extending either vertically as indicated at M in Fig. 3 or otherwise, by placing it thereagainst. As the rim of the medallion or other article makes contact with the surface M the magnetic plugs 3 will be attracted to slide forward and attach themselves thereto in the manner illustrated in Fig. 3 whereby to fixedly secure the article in place. When desired, the article may be removed from the surface to which it is attached by exerting a firm pressure under one edge to cant the rear plate 10 and pry the magnets away from the surface to which they cling.

It will be observed from the foregoing specification that the present invention provides a particularly simple compact and ingenious attaching means for fastening ornamental objects or other small articles to metal surfaces. When held in place by its magnetic adherence to the surface the mechanical parts of the device are completely enclosed and hidden from view and the whole is rendered of ornate appearance without the protrusion of any tabs, loops, or other obtrusive mechanical fastening means.

While the invention is herein shown and described as embodied in a preferred form of construction and applied to a certain type of article, it is to be understood that variations may be made in the structure and arrangement of its elements without departing from the scope of the following claims. Therefore, without limiting myself in this respect, I claim:

1. In combination with a hollow article of substantially concavo-convex form having a closure plate on its rearward side with openings therein, one or more permanent magnets held in said openings projecting beyond the plate for contact with a metal surface to attach the article thereto, and means to retain the magnets within said openings while permitting limited movement thereof relatively to said closure plate.

2. An ornamental hollow article having a rearward closure plate of non-magnetic material formed with a circular opening therein, a permanently magnetized plug extending through said opening, and means to permit limited axial sliding movement of said plug in the opening while preventing its complete withdrawal therefrom.

3. In combination with a hollow medallion, emblem, badge or the like having a rearward wall with openings therein, permanent magnets slidably held in said openings for limited movement relatively to said wall to project them into position to contact a metal surface and attach the article thereto, and means bridging said openings in the rearward wall and engageable with said magnets to retain them permanently in place while permitting them to slide to a limited extent in said openings.

4. A hollow medallion, emblem, badge or like article of concavo-convex form having a wall closing its rearward opening, an opening in said rearward wall formed with a bar extending thereacross, and a permanent magnet slidably mounted in said opening and formed with a slot, said bar engaging in said slot in the magnet to limit the sliding movement thereof and prevent its removal through the opening.

5. In a device of the type indicated a hollow shell, a wall of non-magnetic material closing the rearward opening in the shell, said wall having circular openings bridged by transverse crossbars, and permanently magnetized metal plugs loosely fitted in said openings and slotted to engage around the crossbars to retain them within the interior of the shell projecting beyond the rearward wall for contact with a metal surface to attach the shell thereto.

6. In a medallion, emblem, badge or the like comprising a concavo-convex forward wall, a rearward wall of non-magnetic material closing the opening in the forward wall, said rearward wall formed with openings bridged by transverse crossbars, and attaching means comprising permanently magnetized elements slidable in the openings in the rear wall and slotted to engage the crossbars to prevent disconnection from the article, said magnetized elements being adapted to make contact with a metal surface and adhere thereto for fastening the article in place thereon.

7. In an article of the type indicated of hollow construction having a forward ornamented wall, a rearward wall of non-magnetic material held within the marginal rim of the forward wall, said rearward wall formed with circular openings bridged by relatively narrow crossbars, cylindrical plugs of permanently magnetized material projecting through the circular openings in the rearward wall and slotted to engage around the crossbars thereof, and an abutment of non-metallic material fastened to the inside of the front wall of the article in spaced relation to the ends of the magnetized plugs.

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