

United States Patent

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[54] **RECEPTACLE AND RETAINER MEANS**

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[52] U.S. Cl. **206/19.5 R, 224/29 R, 335/285**

[51] Int. Cl. **A45c 11/00**

[58] Field of Search **335/285, 286, 303; 206/19.5 R; 248/206 A; 224/29 R**

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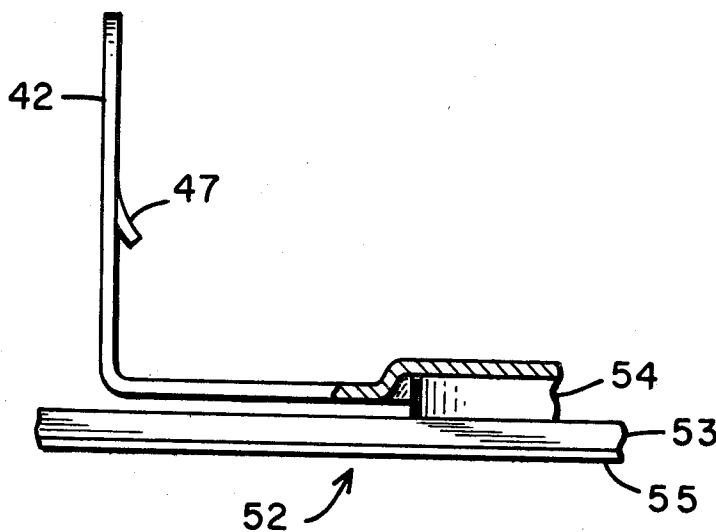
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[57] **ABSTRACT**

A means for mounting a receptacle device on an interior automobile surface comprising, in combination, base pad means with upper and lower major surfaces, the lower surface having an adhesive film applied and secured thereto for bonding the base pad to an interior automobile surface, the upper surface having a permanent magnet bonded thereto which is arranged to be positioned adjacent to the base of a receptacle device, the base of the receptacle device being within the field of the permanent magnet. The permanent magnet is provided with a protruding portion extending outwardly from the upper surface of the base pad. The receptacle device has a baseplate with a member having permanent magnetic properties exposed along at least a portion of the baseplate, the magnetic member being adapted to be positioned adjacent to and within the field of the permanent magnet, the baseplate further having a recessed zone formed therein and defining an inner shoulder arrangement with a configuration generally similar to the configuration of the protruding portion of the permanent magnet.

8 Claims, 8 Drawing Figures



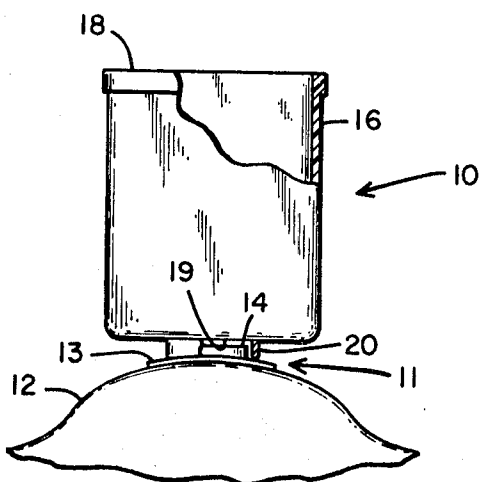


Fig. 1

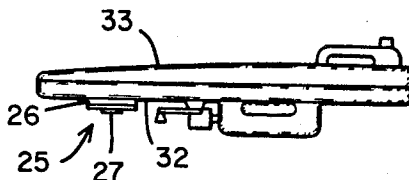


Fig. 2

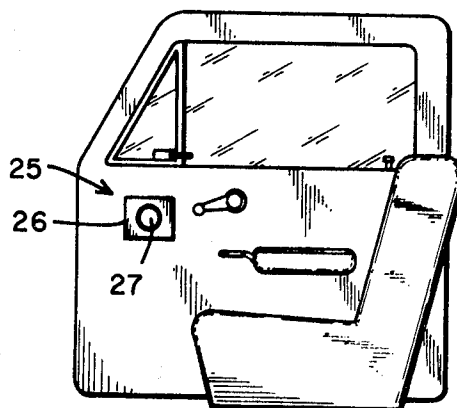


Fig. 3

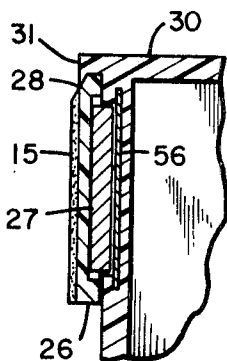


Fig. 4

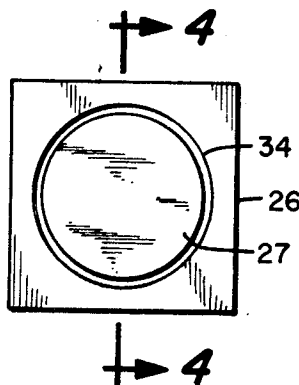


Fig. 5

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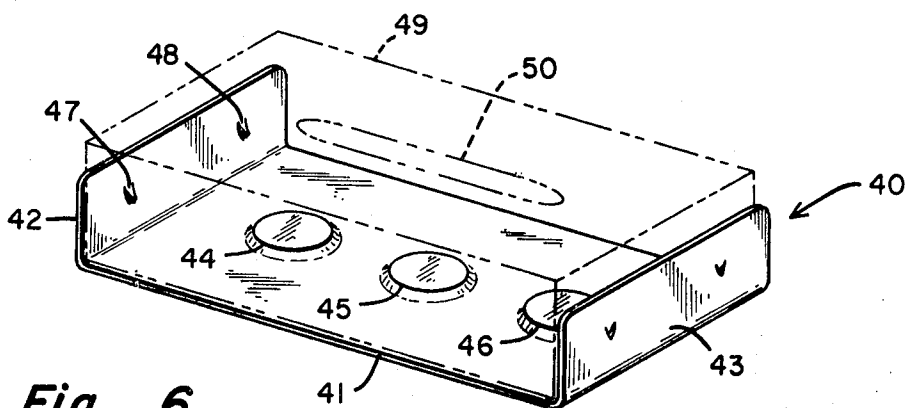


Fig. 6

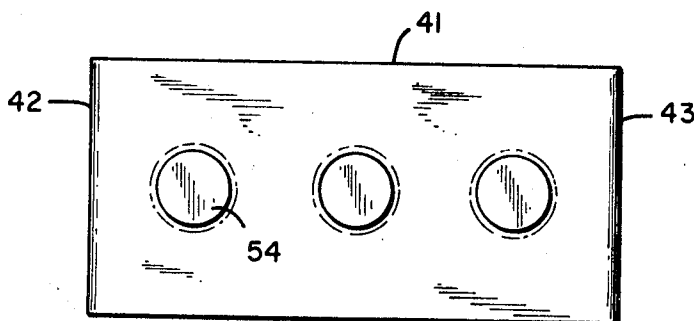


Fig. 7

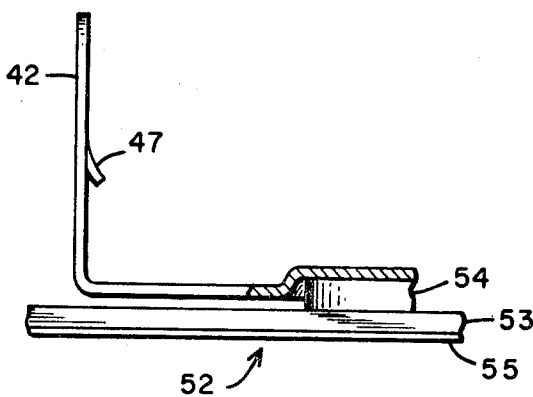


Fig. 8

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RECEPTACLE AND RETAINER MEANS

The present invention relates generally to a means for mounting a receptacle device on an interior automobile surface, and more particularly to such a device which utilizes a base member having a permanent magnet bonded thereto for providing a holding force coupling the receptacle device to the base pad.

In automobile interiors, it is frequently desirable to provide a waste receptacle such as a wastebasket or the like. Also, it is frequently desirable to provide a receptacle device which may be utilized to receive and retain a box of small tissues to be dispensed therefrom. Inasmuch as the interior design of various makes of automobiles are frequently distinctly different, one from another, extremely difficult to provide a universal means for mounting a receptacle device on the interior surface of an automobile.

Furthermore, in the interest of passenger safety, it is desirable to provide a receptacle device which may be firmly mounted to the surface of the automobile interior, but which, when subjected to shock, may be readily knocked free of its mounting. Such an arrangement will prevent a passenger from experiencing personal injury when he may be thrust against such a receptacle device which is firmly and rigidly mounted on the automobile interior surface.

The present invention provides the combination of a base pad which may be adhesively secured to any convenient interior automobile surface, the base pad further having a permanent magnet bonded to the upper or outer exposed surface thereof, the magnet being arranged to receive the base of a receptacle device in close proximity adjacent the surface of the magnet. Accordingly, the field of the permanent magnet will provide the force necessary for retaining the receptacle device in a reasonably firm mounting disposition, but also permitting convenient removal or dislodging of the receptacle device from the base pad.

This arrangement provides, therefore, a simple means for mounting a base pad along an interior automobile surface, the base pad providing a means for removably retaining and supporting a receptacle device.

It is therefore an object of the present invention to provide an improved means for mounting a receptacle device on an interior automobile surface, the combination including base pad means with a surface having an adhesive film applied thereto for bonding the pad to the interior automobile surface, the upper surface of the base pad having a permanent magnet bonded thereto which is arranged to provide a holding force for a receptacle device held adjacent thereto.

It is a further object of the present invention to provide a means for mounting a receptacle device on an interior automobile surface which comprises, in combination, a flexible base pad which has an adhesive film applied to one surface, and a permanent magnet secured to the opposite surface thereof, the base pad being arranged to be firmly mounted to a surface of the automobile, the receptacle device being arranged to be coupled to the base pad means when it is so mounted.

It is yet a further object of the present invention to provide a versatile means for mounting a receptacle device on an interior automobile surface comprising, in combination, flexible base pad means which are provided with an adhesive film along one surface thereof, and a permanent magnet along the oppositely disposed surface thereof, the base pad being arranged to be bonded to any convenient area of the automobile interior, the receptacle device being arranged to be held in contact with the base pad by means of the force available from the permanent magnet.

Other and further objects of the present invention will become apparent to those skilled in the art upon a study of the following specification, appended claims, and accompanying drawings wherein:

FIG. 1 is an elevational view of the combination of the present invention showing the base pad means mounted to the interior surface of the transmission hump of an automobile floor surface together with a receptacle device secured to the base pad means;

FIG. 2 is a top elevational view of an automobile door showing the base pad means of the combination mounted on the interior surface of the door, with the receptacle device removed therefrom;

FIG. 3 is an elevational view of the portion shown in FIG. 2;

FIG. 4 is a detail sectional view of a base pad means useful in the combination of the present invention, and showing a modified inner surface, this figure further illustrating a receptacle device secured to the base pad means, the receptacle device being partially broken away; the base pad means portion of this figure having been taken along the line and in the direction of the arrows 4—4 of FIG. 5;

FIG. 5 is a plan view of the base pad means shown in FIG. 4;

FIG. 6 is a perspective view of a receptacle device adapted to retain a box of tissues, the tissues being dispensed from the box, a typical such box being shown in phantom in this figure;

FIG. 7 is a bottom plan view of the receptacle device shown in FIG. 6; and

FIG. 8 is a detail elevational view, partially broken away and sectioned, and on a slightly enlarged scale, on one end of the receptacle device shown in FIG. 6, this figure also showing a portion of the base pad means to which the receptacle device may be mounted.

In accordance with the present invention, and with particular attention directed to FIG. 1 of the drawings, the receptacle device generally designated 10 is mounted and retained upon a base pad means generally designated 11, the base pad means 11 being adhesively bonded to the transmission-housing hump 12 of a typical automotive interior. The base pad 11 includes a flexible pad member 13 with a permanent magnet 14 secured to the upper or outer surface thereof. As is illustrated in FIG. 4 of the drawings, the lower major surface of the base pad 11 is provided with an adhesive film 15 for accommodating mounting of the base pad means 11 onto the interior automobile surface such as at 12.

The receptacle device 10 includes a container member or the like 16 which is in the form of a rectangular container having an open top as at 18. This receptacle device 10 may function as a trash or waste receptacle, and may, if desired, be provided with means for retaining a cup or the like if desired.

The base 13 may be fabricated from a variety of materials, one suitable material being rubber or synthetic resin such as flexible vinyl or the like. This will enhance the versatility of the device inasmuch as the mounting possibilities are increased. The permanent magnet 14 is preferably in the form of a disc, and may be fabricated from any of a variety of substances having permanent magnetic properties. For example, the permanent magnet may be fabricated from either steel or a ceramic material such as a ferromagnetic ceramic or the like. Magnetic steels and ferromagnetic ceramics are commercially available and it is merely desirable that a unit be utilized which is relatively insensitive to temperatures normally encountered in the interior of an automobile.

With particular attention being continued to be directed at FIG. 1, it will be seen that the receptacle device 10 is provided with a base having a recessed zone as at 19 for encompassing the permanent magnet 14. External shoulders are provided as at 20 for confining the protruding portion of the permanent magnet 14. When the permanent magnet 14 is in the form of a disc or the like, the edges form a protruding external shoulder for mating with and cooperating with the internal shoulder arrangements of the recessed zone 19. Also, this arrangement will permit ready removal of the receptacle device by merely twisting and lifting the receptacle device away from the base pad means.

Attention is now directed to FIGS. 2-5 of the drawings wherein a somewhat modified form of base pad and receptacle device are shown. The base pad means generally designated 25 includes a base pad member 26 along with a permanent magnet 27 secured to the outer surface thereof. The base pad member 26 has a film of pressure sensitive adhesive 15 applied to the under or lower surface thereof, and the edge of the base pad member is beveled inwardly as shown at 28. This beveling arrangement is provided in order to provide a cavity or the

like which can receive a projection or the like of a receptacle device mounted thereon. With attention being directed to FIG. 4 of the drawings, the receptacle device 30 has a claw or the like 31 formed along one edge thereof in order to assist the retention of the receptacle device when modest shock forces are experienced, such as those modest shock forces which occur when the door of an automobile is slammed shut.

The structure 25 is secured to the interior surface 32 of the automobile door 33, the door structure being, of course, conventional in a variety of modern automobiles.

As is apparent in FIGS. 4 and 5 of the drawings, the base pad means has a thickness adequate to provide the mechanical strength required, and also is provided with a cavity or bore such as at 34 to receive the permanent magnet 27. In practice, the ID of the cavity 34 is substantially the same as the OD of the magnet 27.

Attention is now directed to FIG. 6 of the drawings wherein a tissue box receiving receptacle is shown, this receptacle being shown generally at 40, and including a bottom plate 41 along with sideplates 42 and 43. The bottom plate 41 is provided with a plurality of equally spaced recessed zones 44, 45, and 46, these zones being formed by conventional punching operations or the like. The sides 42 and 43 are provided with inwardly extending pointed burrs 47 and 48, these pointed burrs being adapted to engage the sides of the tissue dispensing box shown in phantom as at 49. Individual personal tissues are dispensed from the box 49 through the opening 50. Tissue dispensing boxes of this type are commercially available from a variety of commercial sources.

The receptacle device, in order to accommodate a variety of sizes of boxes is provided with a plurality of recess zones 44, 45 and 46 in order to permit the use of a number of permanent magnets for retention purposes. In this connection, therefore, the base pad utilized will be provided with three individual permanent magnets of disc configuration. Such a base pad means is shown generally at 52, the base pad means including a base pad member 53 along with a permanent magnet 54. As illustrated in FIG. 4, base pad member 53 is provided with a film of pressure sensitive adhesive 55 along the lower surface thereof to facilitate convenient mounting of the base pad means in any of a variety of desirable locations.

In the event a passenger should strike or bump against the receptacle device while it is located along the interior surface of an automobile, the force exerted by the passenger will cause the receptacle device to become dislodged from the base pad means, thereby accomplishing removal of the receptacle device without risking injury to the passenger. Also, the magnetic holding means permits simple removal of the receptacle device from the base pad when it is desirable to do so.

The receptacle device shown in FIGS. 6, 7 and 8 is preferably fabricated from galvanized iron or the like. This is desirable because of the magnetic properties of such material. In the event the receptacle device is prepared from molded synthetic resin or the like, which materials lack magnetic properties, an insert such as the insert plate or member 56 may be utilized, this plate 56 being fabricated from iron, steel, or other material having permanent magnetic characteristics.

It will be seen, therefore, that the combination of the

present invention provides a versatile, safe, and convenient means for mounting a receptacle device on the interior of an automobile surface. Those various embodiments shown are deemed illustrative of the embodiments which may be utilized.

What is claimed is:

1. Means for mounting a receptacle device on an interior automobile surface comprising, in combination:

- a. base pad means having upper and lower major surfaces, the lower surface having an adhesive film applied thereto and arranged to be bonded to an interior automobile surface, the upper surface having a permanent magnet bonded thereto arranged to receive the base of a receptacle device adjacent the surface of the permanent magnet and within the field of the permanent magnet, said permanent magnet having a portion protruding outwardly from the said upper surface and providing said permanent magnet with external shoulders; and

- b. a receptacle device having a baseplate with a magnetic member exposed along at least a portion of said baseplate and positioned adjacent to and within the field of said permanent magnet and releasably secured to said base pad means by magnetic force between said permanent magnet and said magnetic member, said baseplate having a recessed zone formed therein and defining an inner shoulder arrangement with a configuration generally geometrically similar to the configuration of said protruding portion for circumscribing and immediately encompassing said external shoulders in closely spaced relationship thereto.

2. The combination as defined in claim 1 being particularly characterized in that said baseplate is provided with a beveled edge along and adjacent the edge of said lower surface and claw means are formed in and along the upper edge of said receptacle device, said claw means being adapted to engage said beveled edge to enhance the attachment between said base plate and said receptacle device.

3. The combination as defined in claim 1 being particularly characterized in that said permanent magnet has a disc configuration.

4. The combination as defined in claim 1 being particularly characterized in that said base pad means is provided with a plurality of permanent magnets.

5. The combination as defined in claim 1 being particularly characterized in that said permanent magnet is disposed immediately adjacent the edge of said base pad means.

6. The combination as defined in claim 5 being particularly characterized in that said permanent magnet has a disc configuration.

7. The combination as defined in claim 1 being particularly characterized in that said receptacle device is fabricated from sheet steel.

8. The combination as defined in claim 1 being particularly characterized in that said receptacle device is fabricated from molded synthetic resin and has a metallic plate mounted therein and arranged to be disposed adjacent said permanent magnet when said receptacle device is mounted on said base pad means.

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