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CONTACT LENS CASE

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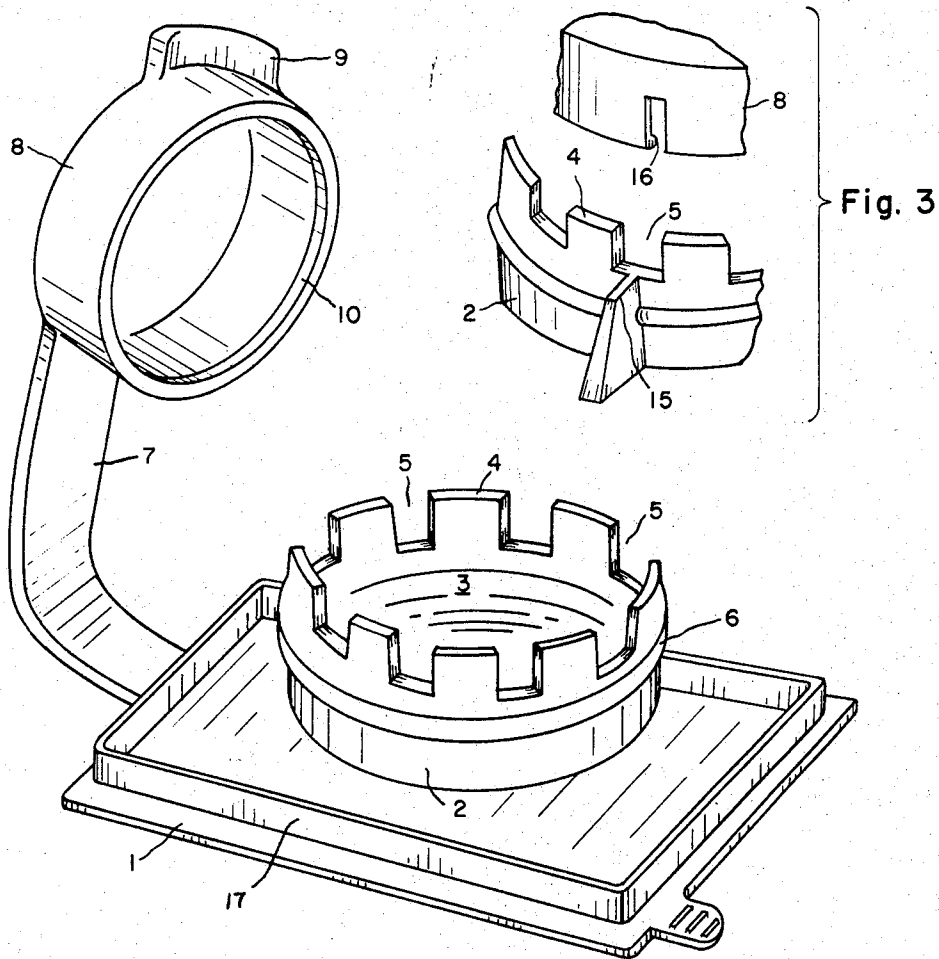


Fig. 1

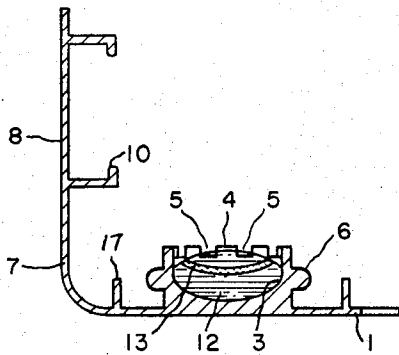


Fig. 2

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CONTACT LENS CASE
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ABSTRACT OF THE DISCLOSURE

A case or holder for a fluid immersed contact lens. The case is provided with one or more orifices below the rim of the lens holding well to prevent the fluid level from rising to too high a level and allowing the lens to float over the rim edge, to prevent damaging the lens when the case lid is closed. A preferred form comprises a case well with a castellated rim.

This invention relates to a contact lens holder or case.

The prior art contact lens holder or case comprises a small plastic receptacle provided with a snap-on closing lid. For overnight storage, the lens is removed from the eye, the user places a drop or two of a protective fluid in the well of the receptacle, places the lens in the fluid, supplies sufficient additional fluid to cover the lens completely, and then snaps the lid over the receptacle. A problem encountered due to the lightness of the lens is that the fluid's surface tension forms a convex meniscus on which the lens may float. If too much fluid is supplied, the lens may actually float at or above the rim of the well, and if the case is jostled or tilted the lens may project over the well edge. In such case snapping shut of the lid may fracture or damage the lens.

The principal object of the present invention is a new case construction for holding a fluid immersed contact lens which protects against floating of the lens over the case edge during closure.

In accordance with the invention, the case wall defining the well is provided with a fluid traversible orifice below its upper rim to prevent the fluid level from rising above a level spaced sufficiently far from the rim to prevent the lens from floating over the well edge.

The invention will now be described in greater detail with reference to the accompanying drawing wherein FIG. 1 is a perspective view of one form of contact lens case in accordance with my invention, and FIG. 2 is a vertical cross-sectional view through the case of FIG. 1 with a fluid immersed lens shown contained within it. FIG. 3 shows a modification.

FIG. 1 illustrates one form of case in accordance with my invention comprising a base member 1 having upstanding cylindrical wall portions 2 forming a well 3 at the center for receiving the fluid and lens. The upper edge or rim 4 of the walls is castellated forming a series of radial slots 5 constituting apertures large enough to allow the protective fluid to flow through but small enough to prevent the contact lens itself from passing through. The slots 5 may for example have a height and width of about $\frac{1}{16}$ ". Below the slots is provided an annular bead 6. Attached to the base 1 by a flexible strip 7 is a snap-on cap or lid 8 provided with a small handling tab 9. Around the inside of the lid 8 is provided an annular bead 10 sized to fit or snap over the bead 6 serving as a locking ring.

The use of the device is illustrated in FIG. 2. For storage of the lens, the user first places a few drops of a protective fluid 12 in the well 3. The protective fluid is usually a saline solution which maintains the usual hard

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plastic contact lens wet and ready for reinsertion in the wearer's eye. For those lenses of hydrophylic plastic material, the fluid also helps maintain the lens soft. The contact lens 13 is placed in the well. To maintain it immersed in the fluid, additional fluid is added until it overflows through the slots 5. Because of the fluid's surface tension, a convex meniscus is formed which projects above the bottom of the slots 5, but not above the upper rim 4. Hence, the upwardly projecting wall portions 4 prevent the lens from slipping laterally over the rim, so that when the lid 8 is brought down and snapped over the wall 2 with the lid bead 10 over the wall bead 6 there is no danger of the lens 13 being damaged, which occasionally happened with the prior art device if too much fluid was inadvertently introduced into the well. The provision of the overflow orifices 5 maintains the fluid level below the well rim.

The case shown may be conveniently molded in one piece from any suitable elastomeric material, such as polyethylene. The orifices 5 can be larger than the dimensions specified above so long as they are not so large as to allow the lens also to pass through. While plural radial slots are shown, it will be appreciated that only a single orifice or slot is necessary to achieve the desired results. The orifice can also be, if desired, a hole, rather than a groove, in the upstanding wall portions 2.

While only a holder for one contact lens is shown, it will be appreciated that, as is traditional, two holders, one for the left lens and one for the right lens, can be provided side by side on a common base.

If the surface tension of the fluid employed is too high to flow through the orifice 5, a wetting agent can be added to the fluid to reduce its surface tension. Alternatively, the user can be instructed to touch with his finger the fluid meniscus at the orifice, or shake the case slightly, which will break the surface tension and initiate the flow. As a further alternative, by providing an extension 15 at the bottom of the groove 5, as shown in FIG. 3, the surface tension is broken allowing the fluid to flow out. In the latter case, the cap 8 will require a groove 16 to accommodate the extension piece 15 during closure. The over flowing fluid is collected on the base within the rim 17.

What is claimed is:

1. A holder for a contact lens comprising a member having upstanding wall portions defining a well for receiving a contact lens immersed in a fluid, said wall portions having an upper rim, said wall portions having at least one orifice large enough to pass the fluid but not so large as to pass the lens extending sufficiently below the level of the rim such that when the well is filled with fluid to the level of the orifice, the lens floats at a level below the upper rim, and a lid for mounting on the holder to close off the well.

2. A holder as set forth in claim 1 wherein the wall portions include an upper castellated portion forming plural apertures capable of passing the fluid but not the lens.

3. A holder as set forth in claim 2 wherein the wall portions contain on the outside an annular bead below the apertures.

4. A holder as set forth in claim 3 wherein the lid comprises a cap having an internal annular bead for snapping over the annular bead on the holder wall portions.

5. A holder as set forth in claim 4 wherein both the lid and holder wall portions are formed of an elastomeric material, and the lid is attached to the case by an elastomeric strip.

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6. A holder as set forth in claim 1 in combination with a protective fluid in the well and a contact lens immersed in the fluid in the well.

7. A holder as set forth in claim 1 wherein an extension piece is provided leading from the bottom edge of the orifice to break the fluid surface tension.

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