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(54) **CUP HOLDER INSERT**

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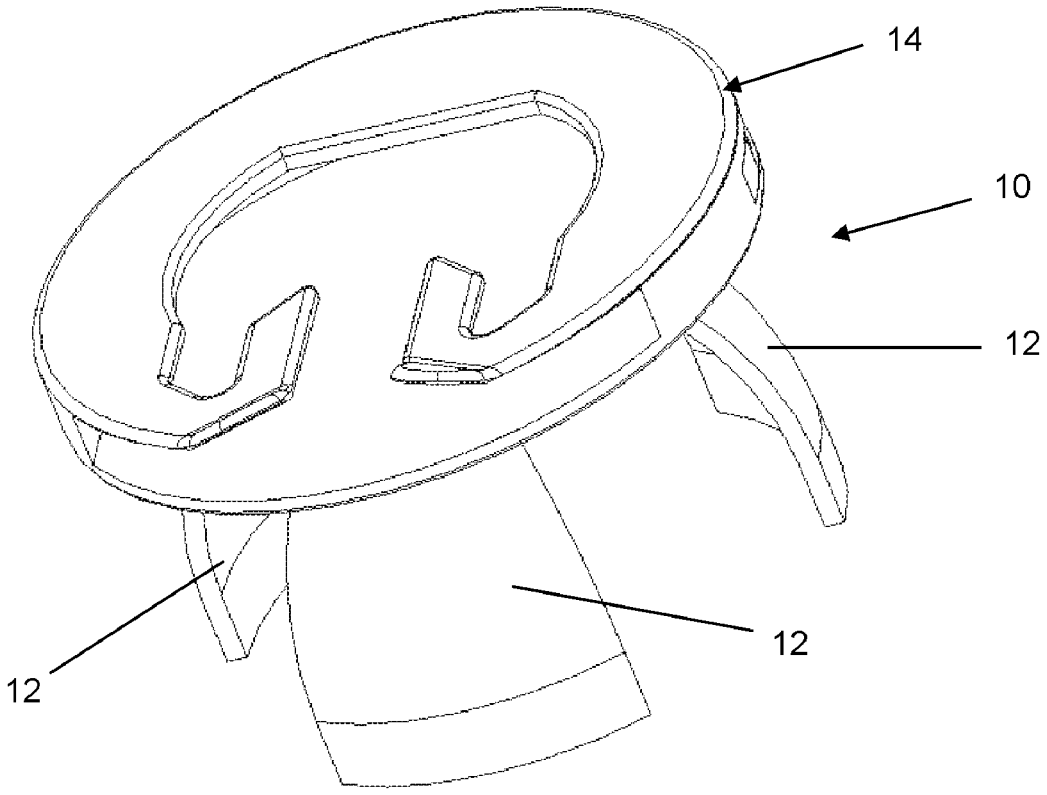
(57) **ABSTRACT**

An insert for a cup holder or similar orifice with an inner wall has a plurality of arcuate legs. The legs arc outward from a proximal end to a distal end and are flexible inward via application of a force. The legs return flex outward when the force is released thereby forming a pressure fit against the wall of a cup holder or insert to rigidly maintain the insert within the wall.



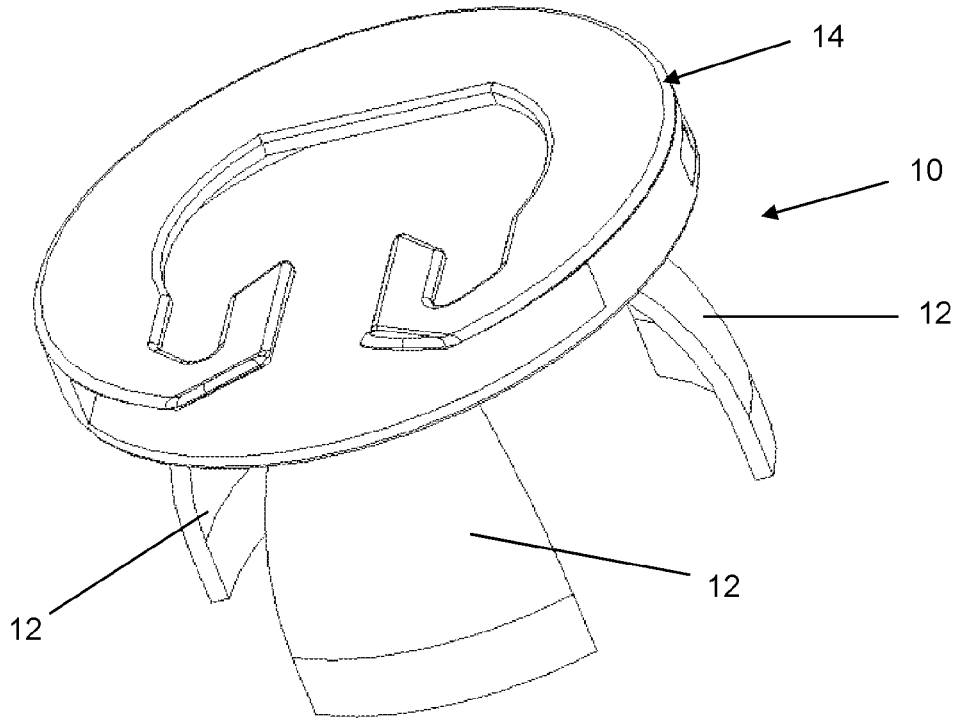


Figure 1

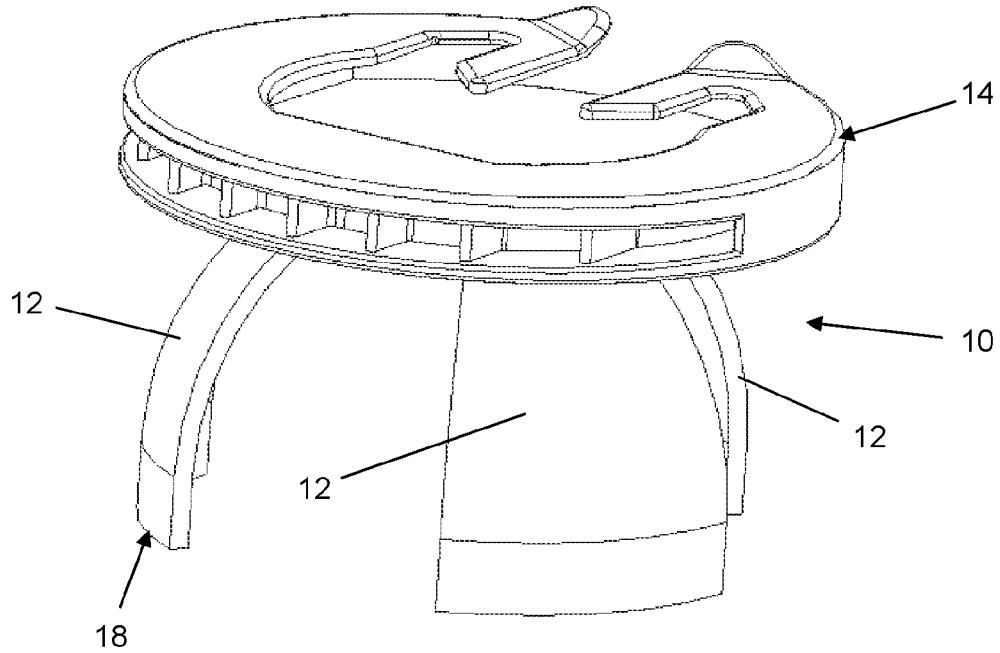


Figure 2

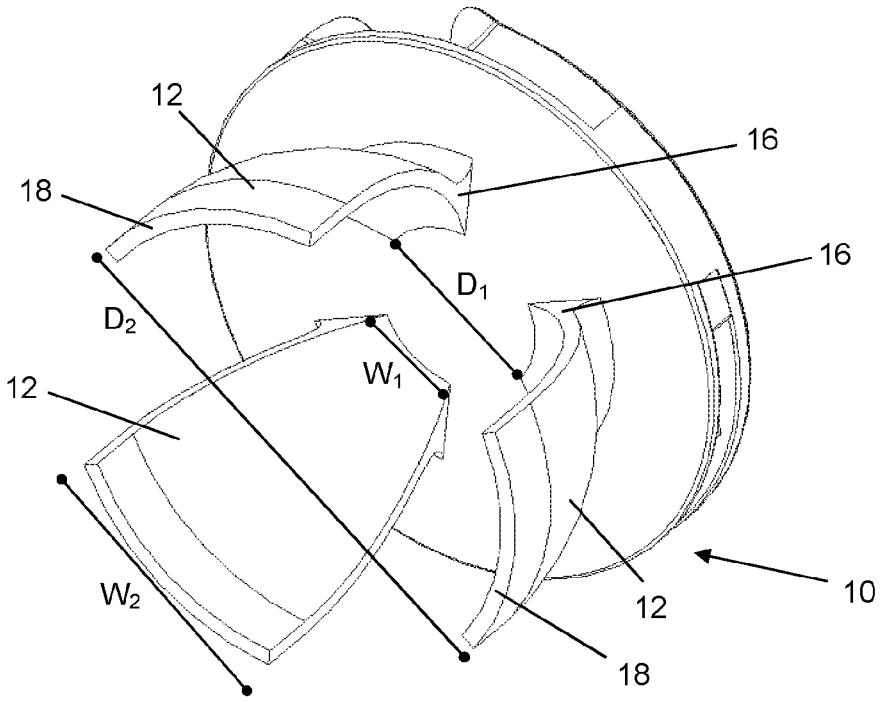


Figure 3

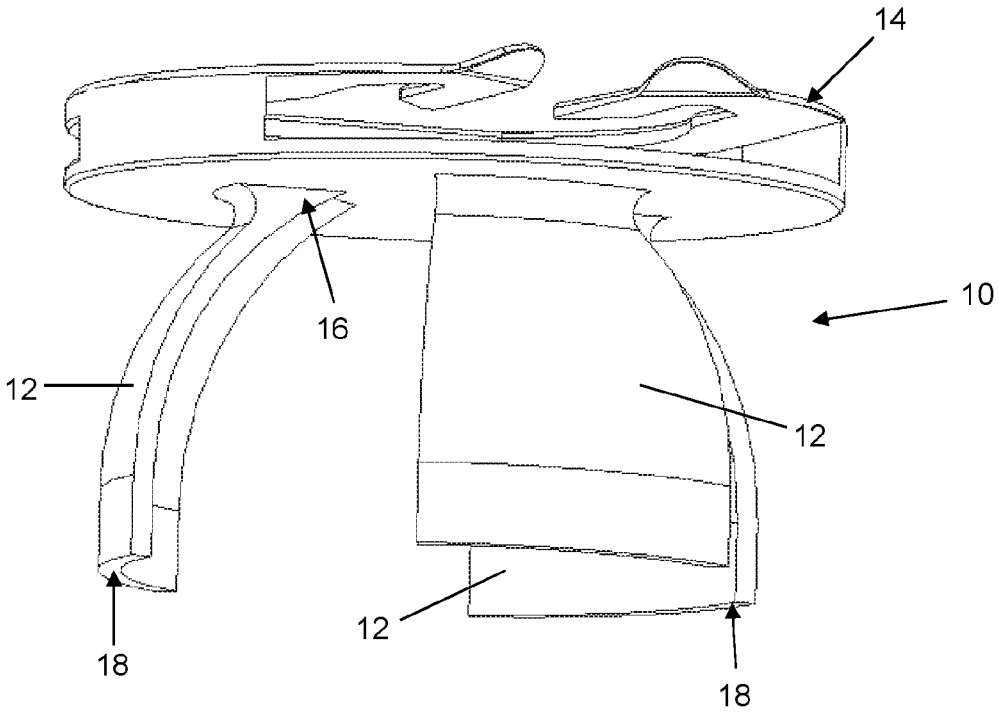


Figure 4

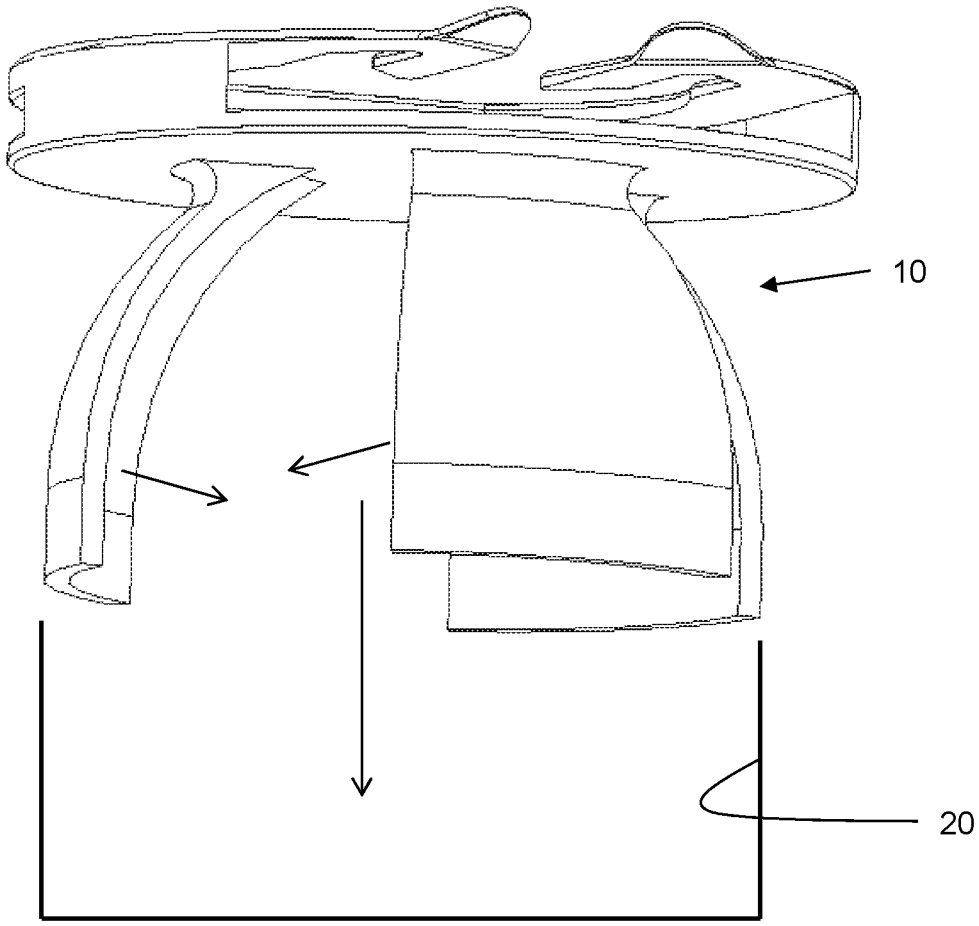


Figure 5

CUP HOLDER INSERT

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims priority to U.S. Provisional Patent Application No. 62/322,828 filed on Apr. 15, 2016, the entire contents of which is hereby incorporated by reference.

BACKGROUND

[0002] The present disclosure relates generally to an insert for an open orifice, and more specifically, it relates to an insert for use in an existing cup holder to securely maintain an item relative to the cup holder.

[0003] It can be appreciated that cup holder inserts are known in the art. Specifically, U.S. Pat. No. 8,132,770 describes and claims an embodiment of a stemware holder for use as an insert into a cup holder. While the prior art cup holder inserts provide for sturdy support of stemware (or another item) relative to a standard cup holder, they lack versatility for use in cup holders of different sizes. It would be useful to have an insert that is versatile and offers a sturdy, substantially rigid engagement within a variety of cup holders or similar orifices of different sizes.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] Various other objects, features and attendant advantages of the present disclosure will become fully appreciated as the same becomes better understood when considered in conjunction with the accompanying drawings, in which like reference characters designate the same or similar parts throughout the several views, and wherein:

[0005] FIG. **1** is a top perspective view of an embodiment of the cup holder insert according to the disclosure;

[0006] FIG. **2** is a side perspective view of the cup holder insert of FIG. **1**;

[0007] FIG. **3** is a bottom perspective view of the cup holder insert of the prior Figures;

[0008] FIG. **4** is another side perspective view of the cup holder insert of the prior Figures; and

[0009] FIG. **5** is an exemplary representation of the insert of the prior Figures being positioned within a cup holder.

DETAILED DESCRIPTION

[0010] Among the benefits and improvements disclosed herein, other objects and advantages of the disclosed embodiments will become apparent from the following wherein like numerals represent like parts throughout the several figures. Detailed embodiments of a cup holder insert are disclosed; however, it is to be understood that the disclosed embodiments are merely illustrative of the invention that may be embodied in various forms. In addition, each of the examples given in connection with the various embodiments of the invention which are intended to be illustrative, and not restrictive.

[0011] Throughout the specification and claims, the following terms take the meanings explicitly associated herein, unless the context clearly dictates otherwise. The phrases "In some embodiments" and "in some embodiments" as used herein do not necessarily refer to the same embodiment(s), though it may. The phrases "in another embodiment" and "in some other embodiments" as used herein do not necessarily refer to a different embodiment, although it may. Thus, as described below, various embodiments may be readily combined, without departing from the scope or spirit of the invention.

[0012] In addition, as used herein, the term "or" is an inclusive "or" operator, and is equivalent to the term "and/or," unless the context clearly dictates otherwise. The term "based on" is not exclusive and allows for being based on additional factors not described, unless the context clearly dictates otherwise. In addition, throughout the specification, the meaning of "a," "an," and "the" include plural references. The meaning of "in" includes "in" and "on.

[0013] Further, the terms "substantial," "substantially," "similar," "similarly," "analogous," "analogously," "approximate," "approximately," and any combination thereof mean that differences between compared features or characteristics is less than 25% of the respective values/magnitudes in which the compared features or characteristics are measured and/or defined.

[0014] Turning now descriptively to the drawings, the attached FIGS. **1-4** show an embodiment of the disclosed cup holder insert **10**. Notably, the embodiment of the cup holder insert **10** is depicted with an upper platform **14** configured for maintaining a base of a piece of stemware. The platform **14** is present in the illustrative Figures and discussed herein for the purpose of better explaining the inventive features of the base **10**. The platform **14** is representative of any upper element that one may desire to secure substantially rigidly above a cup holder or similar cylindrical orifice with a wall. This particular upper platform **14** is known and does not presently make up an inventive portion of the cup holder insert **10**.

[0015] As shown, the insert **10** comprises a plurality of outwardly arcuate legs **12** circumferentially spaced from each other. The legs **12** each extend downward from the underside of the platform **14**. The depicted embodiments include three substantially identical legs **12** evenly spaced from one another about 360° below the platform **14**. The number of legs **12** depicted is non-limiting; i.e., embodiments of the insert exist with four, five or more legs. Moreover, it is not essential that the legs be substantially identical or necessarily evenly spaced, however the depicted embodiment is particularly preferred. Each leg **12** extends from a proximal end **16** at a position on the underside of the platform **14** that is radially inward from the respective leg's distal end **18**. As shown, the legs **12** each have an outwardly arcuate contour from the proximal to distal ends (**16** to **18**). In the depicted embodiment, the legs **12** arc outward to substantially tangent the vertical. As shown most clearly in the bottom view of FIG. **3**, the outward arc of the legs **12** is such that the peripheral diameter D**1** defined between the legs at the proximal (top) end **16** is smaller than the diameter peripheral diameter D**2** at the distal end **18**. In other embodiments, the legs **12** can touch or overlap with one another at their proximal ends; i.e., the space separating them from one another on the bottom surface of the platform **14**, shown in FIG. **3**, is non-limiting. Moreover, it can be seen that each leg **12** expands circumferentially outward from its proximal end toward its distal end; i.e., the legs have a proximal width W**1** that is smaller than the distal width W**2** of the respective leg.

[0016] The legs **12** are made from a resilient somewhat bendable material such as molded from plastic. However, other resilient materials, such as metals may be substituted. In a typical operation, a user may flex the plurality of legs

inward to slide the insert **10** into a cup holder or similar orifice with a wall **20**. Once the legs **12** are within the cup holder, the legs **12** flex outward in the direction toward their initial position, thereby providing an outward force to maintain the insert **10** in a pressure fit with the wall **20**. The pressure fit of the legs **12** to the inner wall of the cup holder has been shown to be particularly strong and allows a substantially rigid engagement of the device into orifices having a wide variety of shapes and sizes.

[0017] The configuration of the arcuate legs **12** is such that the insert **10** can be used in cup holders of varied dimensions, so long as the diameter of the wall **20** is at least slightly smaller than the outer diameter defined by the outermost surfaces of the legs **12**, such that outward forces from the legs **12** returning toward their initial position cause a press fit on the wall **20**. An aspect of the

[0018] As noted above, the insert **10** is shown and described in the context of being a base for a substantially flat platform **14** with a slot, which is configured to maintain the base of a piece of stemware. The insert **10** comprising outwardly arcuate legs can be used with virtually any upper portion that a user wishes to maintain in a rigid relationship to a cup holder or similar orifice.

[0019] With respect to the above description, it is to be realized that the optimum dimensional relationships for the parts of the disclosure, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described herein are intended to be encompassed by the present disclosure.

[0020] Therefore, the foregoing is considered as illustrative only of the principles of the disclosure. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the disclosure to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the disclosure.

What is claimed is:

1. An insert for maintaining a substantially rigid connection with a cylindrical orifice defining a circumferential wall, comprising

a plurality of arcuate legs that each arc outward from a proximal end to a distal end, wherein

the legs are inwardly flexible upon application of an inward force, and the legs return flex outward upon a release of said inward force.

2. The insert of claim **1**, comprising three legs circumferentially spaced evenly from one another around 360°.

3. The insert of claim **2**, wherein the legs are spaced at equal distances from one another.

4. The insert of claim **1**, comprising two or more legs.

5. The insert of claim **4**, comprising three or more legs.

6. The insert of claim **5**, comprising three legs equally spaced from one other about an entire circumference.

7. The insert of claim **1**, wherein outward pressure from the legs forms a pressure fit with the circumferential wall when the legs are positioned within the orifice.

8. The insert of claim **1**, wherein the arcuate legs are integrally formed of molded plastic.

9. The insert of claim **1**, wherein each leg has a proximal width W_1 and a distal width W_2 that is greater than W_1.

10. The insert of claim **1**, wherein the legs are separated from one another at their distal end by a diameter D_1 and separated from one another at their proximal end by a diameter D_2 that is less than D_1.

11. An insert for maintaining a substantially rigid connection with a cylindrical orifice defining a circumferential wall, comprising

a plurality of arcuate legs that each arc outward from a proximal end with a width W_1 to a distal end with a width W_2 that is greater than W_1, wherein

the legs are inwardly flexible upon application of an inward force, and the legs return flex outward upon a release of said inward force, and said outward flexure provides pressure on the circumferential wall to maintain the insert within the wall.

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