Jan. 29, 1957 W. MORRIS 2,779,518

CONDIMENT SHAKER

Filed June 14, 1955

Fig. 1.

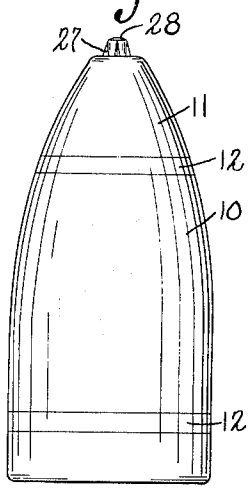


Fig. 2.

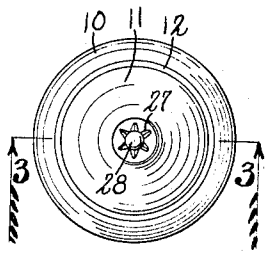


Fig. 3.

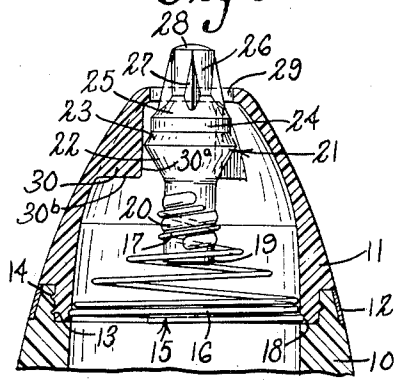


Fig. 4.

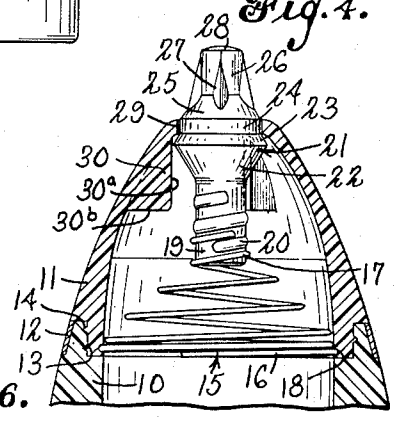


Fig. 5.

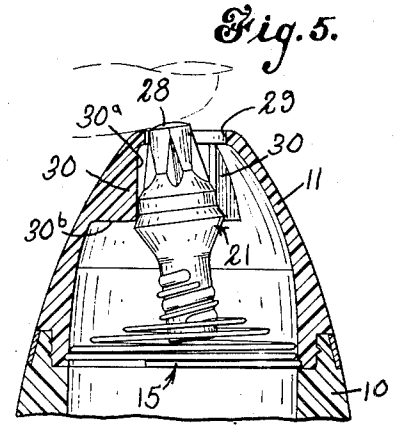


Fig. 6.

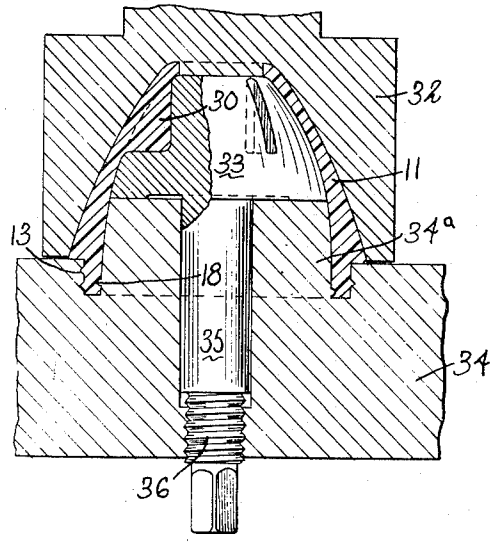
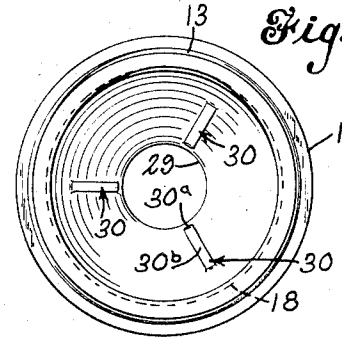


Fig. 7.



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CONDIMENT SHAKER

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2 Claims. (Cl. 222—501)

This invention relates to condiment shakers, and relates more particularly to improvements in the construction and arrangement of elements in a condiment shaker of the type illustrated and described in U. S. Patent No. 2,694,512, issued November 16, 1954, and comprising a casing having means providing a dispensing orifice and also comprising a threaded plug or valve member resiliently mounted in the casing, cooperating with the orifice and adjustable to vary the flow of condiment from the shaker.

One object of the invention is to provide an improved condiment shaker of the type characterized above.

Another object of the invention is to provide in a shaker an improved valve or plug member.

Another object of the invention is to provide in a shaker such as characterized above an improved casing.

Still another object of the invention is to provide a condiment shaker of pleasing appearance which may be die cast or readily molded of plastic or other suitable material, and which may be produced at low cost.

In the drawing:

Fig. 1 is an elevational view of a condiment shaker embodying the invention;

Fig. 2 is a top plan view of the shaker;

Fig. 3 is an enlarged fragmentary view taken on line 3—3 of Fig. 2 and illustrating the valve or plug member in one position thereof;

Fig. 4 is a view similar to Fig. 3 showing the valve or plug member in another position thereof;

Fig. 5 is a view similar to Fig. 4 but illustrates still another position of the plug member;

Fig. 6 is a fragmentary elevational view illustrating the threaded cap of the shaker and a mold for forming the cap; and

Fig. 7 is a bottom view of the cap.

To illustrate the presently preferred form of the invention, there is shown in the drawing a condiment shaker comprising a hollow tapered body 10 and a tapered cap 11 threaded on the body and forming with the latter a casing or container for condiment, the body 10 and the cap 11 preferably being formed of plastic material. The body 10 may be provided with a pair of vertically spaced metal bands 12 encircling the body, enhancing the appearance of the latter. The body 10 and the cap 11 have a flush joint, shown in Fig. 3, for example, and the cap 11 is externally threaded as at 13 to cooperate with internal threads 14 provided on the body 10. It will be understood that the cap 11 may be removed from the body 10 for the purpose of filling the latter with condiment.

Within the cap 11 there is mounted a helical spring 15 having relatively large coils 16 at the base thereof and having relatively small coils 17 at the upper end to serve as a threaded socket. The lower portion of the cap 11 is provided internally with a substantially full turn of a helical groove 18 of the same hand and pitch as the external threads 13, and the base 16 of the spring is threaded into the groove 18 for support by the cap. Threaded

into the socket-forming coils 17 of the spring is a stem 19 provided with a spiral rib 20. Integral with the stem 19 at the upper end thereof is a valve or plug member 21 having a base portion 22 of larger diameter than the stem 19 and tapering toward the latter. Above the base portion 22 and adjoining the latter, the plug member is provided with a portion 23 tapering upwardly to a cylindrical portion 24 of the plug member. Above and adjoining the cylindrical portion 24, the plug member is provided with a surface 25 tapering upwardly to a surface 26 which may also taper upwardly but to a lesser extent than the surface 25. The surfaces 25 and 26 are interrupted by a plurality of upwardly extending wedge-like ribs 27 spaced apart circumferentially of the plug member and preferably having sharp edges. The top 28 of the plug member, adjoining the surface 26, may be gently rounded, as shown in Fig. 3.

The cap 11 is provided with a dispensing orifice 29 at its upper end, the diameter of the orifice 29 being only slightly in excess of the diameter of the cylindrical portion 24 of the plug member so that the latter has a close fit in the orifice 29 when the plug member is in the position thereof shown in Fig. 4. In the last-mentioned position of the plug member 21, the tapered portion 23 of the plug member abuts the under side of the cap 11 and effectively seals the orifice 29 in the cap. It will be understood that the plug member 21 will not pass entirely through the orifice 29. When the plug member 21 is in the position of Fig. 4, the plug member inhibits accidental spilling of condiment, and also inhibits ingress of moisture. However, the plug member may be quickly and easily moved from the position of Fig. 4 to the position of Fig. 5 by finger pressure on the top 28 of the plug member to obtain a flow of condiment from the shaker when the latter is in inverted position.

The cap 11 is provided with a plurality of internal ribs or shoulders 30 for cooperation with the plug member 21, the ribs or shoulders 30 being radially disposed and being three in number in the instant form of the invention. A greater number of ribs 30 may be employed if desired. Each rib 30 has a free edge 30^a disposed in a plane substantially perpendicular to the horizontal and disposed a very short distance radially outwardly of the dispensing orifice 29, as shown in Fig. 7, for example. Each rib 30, located at the upper portion of the cap, is also provided with a free lower edge 30^b disposed at substantially right angles to the edge 30^a, and each rib 30 may be slightly rounded at the junction of the edges 30^a and 30^b. The ribs 30, integral with the cap 11, tend to break up any lumps in the condiment in the casing during the dispensing operation, and serve to guide the plug member 21 during movement of the latter in upward and downward directions. Moreover, the ribs 30, which closely confine the plug member 21 in the positions of Fig. 3 and Fig. 4, maintain the plug member 21 in concentric relation to the spring 15 in the dispensing position of the plug member 21 illustrated in Fig. 3, thereby inhibiting fatigue in the spring 15.

The plug member 21 may be threaded downwardly into the socket-forming coils 17 of the spring from the position of Fig. 4 to the position of Fig. 3. In the adjusted position of the plug member 21, shown in Fig. 3, the member 21 is closely confined by the ribs 30, and the dispensing opening 29 in the cap 11 is somewhat restricted by the tapered surface 25 of the plug member. When the plug member 21 is in the last-mentioned adjusted position thereof and the casing is inverted to dispense condiment, condiment in the casing flows around the ribs 30 toward the dispensing opening 29, and issues from the shaker in an open pattern owing to the provision of the ribs 27 of the plug member which tend to spread out condiment as it issues from the shaker. When

the plug member 21 is in the position of Fig. 3, and the shaker is inverted, condiment is obtained from the shaker as a slower rate than the rate of flow from the shaker when the plug member 21 is in the depressed position of Fig. 5. To increase the flow of condiment from the shaker, the user may depress the plug member 21 from the position of Fig. 3 to the position of Fig. 5 by finger pressure. To obtain condiment at a slower rate, the plug member 21 may be threaded upwardly in the socket-forming coils 17 of the spring to a position intermediate the positions of the plug member shown in Figs. 3 and 4 of the drawing.

When the plug member 21 is depressed by finger pressure to quickly increase the flow of condiment from the shaker, the plug member 21 may not be canted to the position of Fig. 5 until the widest point, the junction of the oppositely tapered portions 22 and 23 thereof, clears the free edges 30a of the ribs 30. In this position, the top 28 of the plug member is substantially flush with the top of the cap 11, and further downward movement of the plug member 21 by finger pressure is inhibited by the cap 11. When the plug member 21 is in the position of Fig. 5, a large flow of condiment may be obtained from the shaker for use as in cooking. It will be understood that when the plug member 21 is held in the position of Fig. 5 by finger pressure and then released, the spring 15 returns the plug member 21 to the position which the latter occupied prior to being depressed by finger pressure, the ribs 30 serving to guide movement of the plug member 21 in the upward direction. It will also be understood that the ribs 27 provided on the plug member facilitates grasping of the plug member to thread the same upward and downward in the socket-forming coils 17 of the spring. It will be noted that the spring support of the plug not only permits the plug to be depressed but also permits the plug to be moved to one side, as shown in Fig. 5, so that the finger of the user will not cover the dispensing orifice 29 when the plug member is in depressed position. Furthermore, it may be noted that the socket-forming coils 17 of the spring grip the stem 19 of the plug member to such an extent that the stem may be held in any position to which it is adjusted in the socket-forming portion of the spring 15.

The construction and arrangement of the plug member 21 is such that tampering with the plug member will rarely, if ever, render the shaker inoperative. As mentioned above, the plug member 21 will not pass entirely through the dispensing orifice 29 of the cap, nor can the plug member 21 be separated from the spring 15 by grasping the plug member 21 above the cap 11 and threading the plug member in a direction to unscrew the same as the spring 15 is compressed slightly when the plug member 21, in the fully closed position of Fig. 4, is threaded in a direction to withdraw the same from the spring. It may be noted that when the tapered portion 23 of the plug member is engaged with the cap around the dispensing orifice 29, the plug portion 23 tends to break up any incrustation of condiment around the dispensing orifice.

The cap 11 of the shaker may be easily made of plastic material in the mold shown in Fig. 6 and comprising an upper section 32, an intermediate section 33, and a lower section 34. As shown in Fig. 6, the threads 13 and the helical groove 18 of the cap are formed in the lower mold section 34, which is provided with an upward projection 34a extending into the cap 11. The intermediate mold section 33 above and adjoining the projection 34a is recessed to form the ribs or shoulders 30 of the cap 11, and is provided with a shaft 35 having threads 36 extending throughout a portion thereof, the threads 36 being of the same hand and pitch as the threads 13 and the helical groove 18. The shaft 35 extends through a bore formed in the mold section 34 and threaded throughout a portion thereof to receive the threads 36 of the shaft 35. When the mold is disassembled, the mold section 32 is first separated from the molded cap 11, and the shaft 35 is then rotated in a direction to screw the same upwardly in the bore formed in the mold section 34. Turning movement of the shaft 35 effects turning movement of the cap 11 through the ribs 30, and the rotation of the shaft 35 is continued until the threads 13 and the helical groove 18 of the cap 11 clear the lower mold section 34. When the lower mold section 34 has been separated from the molded cap 11, the shaft 35 may be withdrawn through the bore of the mold section 34, and the mold section 33 may be separated from the interior of the molded cap 11. Thus it will be understood that the ribs 30, which act as guides for the plug member 21 and serve to strengthen the cap structure, facilitate the removal of the cap from the mold, a task which would otherwise be very difficult owing to the smoothness and contour of the cap 11.

In accordance with the disclosure there is provided an improved condiment shaker of the type incorporating a threaded and resiliently mounted valve or plug member. There is also provided a condiment shaker having an improved valve or plug member for cooperation with an improved casing structure. Furthermore, the shaker is of pleasing appearance and may not readily be rendered inoperative by tampering. Still further, there is provided a condiment shaker which may be readily cast from plastic material and which may be produced at low cost.

While only one form of the condiment shaker has been illustrated in the drawing and described above, it will be understood that various changes in the details of the shaker may be made without departing from the principles of the invention and the scope of the appended claims.

What I claim is:

1. In a condiment shaker, an upwardly extending hollow body, an upwardly extending cap on the upper part of the body having means defining a dispensing orifice, an upwardly extending plug member for cooperation with the dispensing orifice, the plug member extending inwardly through the orifice and having a threaded stem portion received within the cap, and a coil spring within the cap having one end secured to the cap and providing at the other end thereof a socket threadedly receiving the stem portion of the plug member, the plug member being resiliently supported by the spring and being vertically adjustable in said socket to control the flow of condiment through said orifice, the plug member also being vertically adjustable by finger pressure on the portion thereof extending outwardly through the cap, the plug member having oppositely beveled portions forming an enlargement above said stem portion, the uppermost of said beveled portions being engaged with the orifice-defining means of said cap to seal said orifice when the plug member is in one vertically adjusted position, the cap having a plurality of spaced projecting members above the spring, arranged radially of and adjacent said orifice and suspended from the cap, said members projecting downwardly within the cap in fixed relation thereto and having free lower extremities a distance below said orifice-defining means, said projecting members normally engaging the plug member at the junction of the beveled portions of the latter to thereby maintain the spring-supported plug member in concentric relation to said orifice-defining means, when the plug member is in a vertically adjusted position below the first-mentioned position and free of contact with said orifice-defining means, the plug member being tiltable laterally, when the latter is depressed by finger pressure to a position in which said enlargement is below said free extremities of the projecting members, to quickly increase the flow of condiment.

2. In a condiment shaker, an upwardly extending hollow body, an upwardly extending cap on the upper part of the body having means defining a dispensing orifice, and an upwardly extending plug member for cooperation with the dispensing orifice, the plug member being mount-

ed in the cap by spring means adapted to support the plug member resiliently from below and so that the plug member is free of contact with said orifice-defining means, the plug member having an enlarged portion above said stem portion adapted to restrict the flow of condiment through said orifice, the plug member extending outwardly through said orifice and being adapted to be depressed by finger pressure to vary the flow of condiment from said orifice, and the cap having a plurality of spaced projecting members arranged radially of and adjacent said orifice and suspended from the cap, said members projecting downwardly within the cap in fixed relation thereto and having free lower extremities a distance below said orifice-defining means, said projecting members normally engaging said enlarged portion of the plug member to thereby maintain the spring-supported

plug member in concentric relation to said orifice-defining means, and the plug member being tiltable laterally, when the latter is depressed by finger pressure to a position in which said enlarged portion is below said free extremities of the projecting members, to quickly increase the flow of condiment.

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