Jan. 29, 1935. C. M. VILLANYI 1,989,218

CLOSURE

Filed Aug. 27, 1929

Fig. 1.

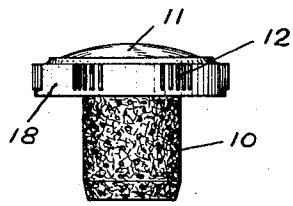


Fig. 2.

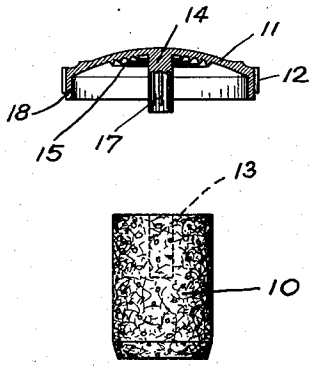


Fig. 3.

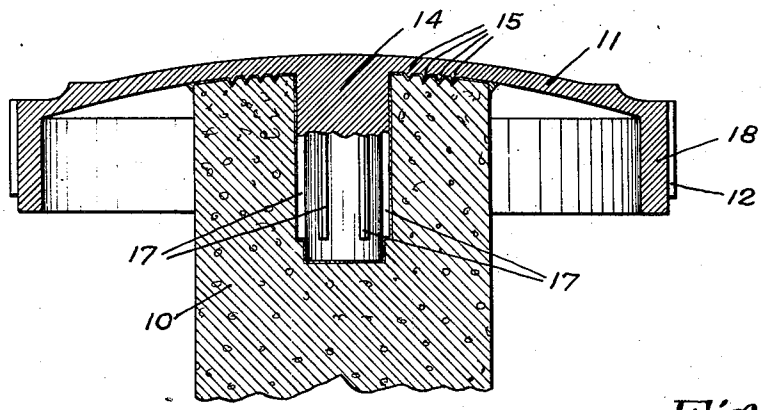


Fig. 4.

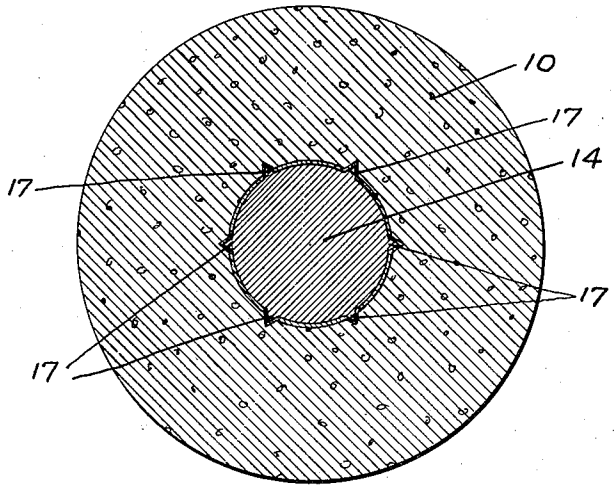
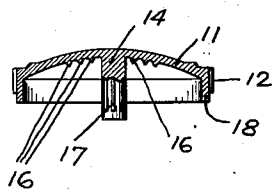


Fig. 5.



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Patented Jan. 29, 1935

1,989,218

UNITED STATES PATENT OFFICE

1,989,218

CLOSURE

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Application August 27, 1929, Serial No. 388,647

3 Claims. (Cl. 215—48)

This invention relates to a closure and aims to provide a device of this character particularly adapted for use in connection with the sealing of the mouths of receptacles and particularly bottles, and by means of which a closure is provided which will effectively prevent the escape of the contents of the receptacle but which may at the same time be readily removed in case it is desired to dispense such contents.

More specifically stated, it is an object of the invention to provide a structurally improved closure of this type which will be attractive in appearance and which will include preferably only two parts united against the probability of accidental detachment from each other and which parts may be readily manufactured and so united to provide an article costing a relatively nominal amount and usable over long periods of time with freedom from difficulty.

It is well appreciated that in a closure embodying cap and plug portions that considerable difficulty has been experienced incident to accidental detachment of the parts when united by a cement or glue, or whether they were attached to each other by a mechanical structure. It has, of course, always been feasible at relatively large expense to provide what, in effect, amounts to a permanent union, but it is obvious that closures of such a type offered a disadvantage of not being commercial in view of the expense.

Thus, among other objects of the invention, is that of providing a closure which may be sold for a nominal sum and by means of which the parts will be united in such manner that despite frequent use, they will not become detached.

A further object is that of providing a closure which may be employed in connection with various sized receptacles, the present invention providing the cap portion capable of use with many different sizes of plugs.

With these and additional objects in mind, reference is had to the attached sheet of drawing illustrating one practical embodiment of the invention, and in which:

Fig. 1 is a side elevation of the closure;

Fig. 2 is a partly sectional view thereof showing the parts detached;

Fig. 3 is an enlarged sectional view of the parts in a similar position;

Fig. 4 is a transverse sectional view;

Fig. 5 is a fragmentary view of a slightly different construction which may be employed.

In these views, the numeral 10 indicates a plug constructed of any desired material as, for example, cork, fiber, etc., and to which a cap 11 is to be secured. As shown, this cap may present a convex upper surface and be ornamented with ridges 12 which according to the present invention may serve the purpose of providing spaced gripping portions to be grasped so that the cap may be removed with facility.

This cap may be constructed of any desired material as, for example, bakelite, and with a view to securing the cap to the plug, the latter is preferably formed with a recess 13 to receive a stem 14 extending inwardly from and forming a part of the cap. The area of this plug is such that it will snugly fit within the recess or socket 13 and at this time, it will be noted that the inner face of the cap is, as shown in Figs. 2 and 3, preferably formed with a concentric series of ridges 15 or as in Fig. 5 with a series of inwardly extending prong portions 16, it being, moreover, noted that ribs 17 or equivalent spacing elements are provided extending longitudinally of the stem.

With the parts thus formed, it will be obvious that the socket 13 may be filled with cement or other suitable adhesive, and by simply inserting the stem 14 into this socket, the fluid will be forced from within the socket and will provide a film extending between the adjacent surfaces of the cap and plug. Due to the flanges, ribs and/or prongs, these surfaces will be spaced so that it will not be possible to force all of the cement from between these adjacent surfaces. However, the spacing will not be such that a very thick film of cement or glue is left which again—as may readily be appreciated—would result detrimentally. It will be understood that instead of filling the well provided by the socket, the parts of the cap and/or plug might be coated with a film of retaining material. In any event, the results shown in Figs. 3 and 4 will prevail as aforedescribed.

It will, moreover, be noted that the cap is preferably formed with a depending flange 18 upon which the portions 12 are provided. The area of this flange is such that it is adequate to permit of the application of plugs of all usual sizes to the cap without these plugs coming in contact with the flange. In fact, in most instances, it will be found that the space is sufficient to permit the pouring lip of the bottle to extend between the flange and the plug. Accordingly, it is only necessary to make a single size cap and then to apply any desired size of plug thereto. In conclusion, it will be understood that in lieu of the ribs, flanges and prongs illustrated, it may in certain instances prove entirely feasible to employ a suitably roughened surface conceding that the

raised portions of the latter will constitute gauge elements equivalent in function to those provided by the parts afore referred to.

From the foregoing, it will be understood that among others, the several objects of the invention are achieved. It will be appreciated, however, that numerous changes in construction and rearrangements of the parts might be resorted to without departing from the spirit of the invention as defined by the claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A closure including, in combination, a cap and plug to be united to each other by a layer of adhesive, a stem extending from said cap and said plug being formed with a recess to receive said stem, and means extending from and longitudinally of said stem and from the inner face of said cap to space the adjacent surfaces of the cap and plug to an extent sufficient to provide a substantially unbroken film of adhesive material between them.

2. A closure including, in combination, a cap, a plug to be united with said cap by a layer of adhesive material, a stem extending from said cap and said plug being formed with a recess to receive said stem, means extending from the inner face of said cap and for contact with the upper face of said plug, and further means extending from and longitudinally of said stem for contact with the inner face of the plug socket whereby such parts will be maintained out of intimate contact and allow for a substantially unbroken film of adhesive between them.

3. A cap including, in combination, a body, a stem extending from said body, a plug formed with an uninterrupted bore and to be applied to said stem, and longitudinal ribs extending from said stem and maintaining the faces of said plug spaced from the stem body and to accommodate in such space sealing material.

CHARLES M. VILLANYI.