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3,121,511

EYEWASH DEVICE

Filed Nov. 8, 1961

Fig. 1

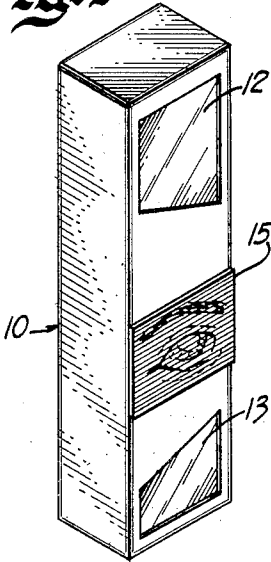


Fig. 2

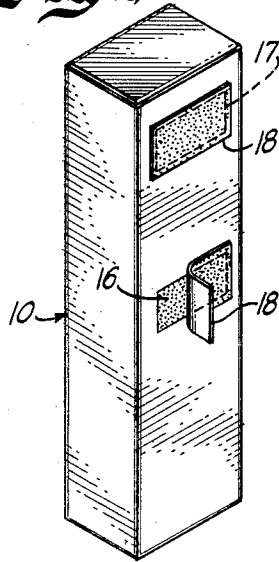


Fig. 3

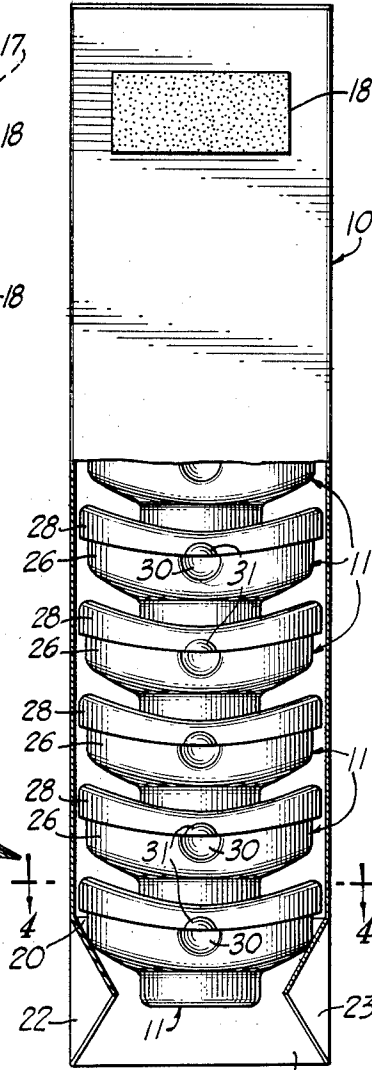


Fig. 4

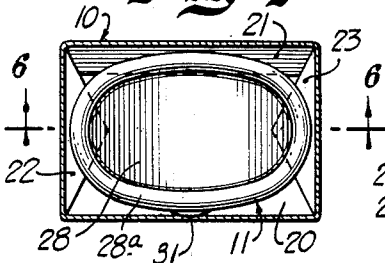


Fig. 5

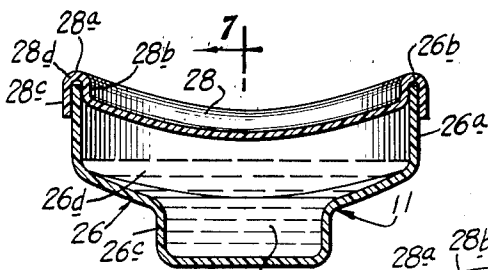
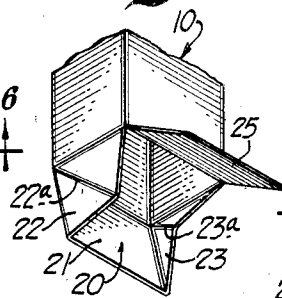


Fig. 6

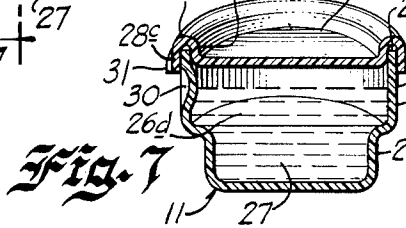


Fig. 7

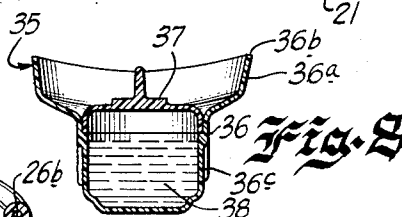


Fig. 8

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1

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EYEWASH DEVICE

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4 Claims. (Cl. 221-283)

The present invention relates to an eyewash device, and more particularly, to a disposable prefilled eyewash cup and to a dispensing container for the cups.

It has been customary in the past to apply eyewash solution by an eyecup or a dropper. Plastic eyecups are today frequently sold one to a bottle of eyewash solution and some eyewashes are packaged in plastic dropper bottles. However, it will be appreciated that eyedroppers are messy and difficult to use. On the other hand, reusable eyecups are unsanitary and difficult to fill.

Irritants to the eyes are on the upswing—smog, television viewing, smoking, sunbathing, and the like, all irritate or tire the eyes. Moreover, although a customer will buy an eyewash because of an irritation or because his eyes are tired and he plans to use it every day, nothing has been provided to make it a part of his daily ritual. There is no device that puts the eyewash in view at home and in the stores such as a toothbrush in a toothbrush rack or a hand lotion dispenser. Accordingly, it would be desirable to provide a handy, inviting method of application of eyewash such as an individual disposable eyecup which has been prefilled with just the right amount of eyewash for a single application. The eyewash then is never exposed until it is ready for use. Moreover, each cup should be adequately sealed by its own cover to provide for a clean, sanitary wash. Additionally, it would be desirable to provide a dispenser for the eyewash cups that may conveniently be placed on the wall of the bathroom or other convenient place and that may be put up and taken down with little effort.

Heretofore difficulty has been experienced in enclosing an eyewash cup since the special eyecup is provided with an oval-shaped concave open edge conforming to the general contour of a face around the eye. Covers of thin plastic film are unsatisfactory since they may leave sharp edges or may flake causing irritation to the eye. Eyewash cups having special sealing means associated with the open edge are difficult and expensive to manufacture and may produce difficulties in the removal of the seal thereof.

Accordingly, it is an object of the present invention to provide a new and improved eyewash device.

A further object of the present invention is to provide a new and improved eyewash cup.

A further object of the present invention is to provide a new and improved disposable prefilled eyewash cup.

Yet another object of the present invention is to provide a new and improved dispensing container for eyecups.

In accordance with these and many other objects, there is provided an improved disposable prefilled eyewash cup formed with an oval-shaped portion having a concave open edge, and a cup-shaped portion depending therefrom and forming a reservoir or container adapted to be filled with the correct amount of eyewash solution for a single application. A cover is provided to seal and enclose the eyewash solution in the eyecup.

In a specific embodiment, there is provided a concave oval-shaped cover having a double crimped lip portion which entirely covers the oval-shaped concave open edge of the eyecup. It will be appreciated that a cover according to this embodiment provides a very sanitary eyewash cup, with no contamination of the cup or solution and provides a good closure to the eyewash container which is easy to get off. Moreover, the double

2

crimped lip construction of the cover eliminates dripping from the cover when the cover is removed. A tab may be provided on the side of the cup to provide for more ready removal of the cover.

In accordance with another aspect of the present invention, there is provided a dispensing container of generally tubular box shape, the bottom flaps of which may be partially open so as to hold the stacked eyecups in such a way that the bottommost one can be withdrawn from the bottom of the container as needed. The dispensing container is provided with adhesive portions on the back surface thereof so that it may be secured to a bathroom wall or the like.

In yet another embodiment of the present invention the cover is formed as a plug fitted into the top of the cup-shaped portion to hold the dose of eyewash solution.

The above and other objects and advantages of the present invention will become apparent from a consideration of the following description thereof when taken in conjunction with the accompanying drawings wherein:

FIG. 1 is a front perspective view of a dispensing container according to the present invention;

FIG. 2 is a rear perspective view of the dispensing container of FIG. 1;

FIG. 3 is a rear view, partly broken away, of a dispensing container according to FIG. 1, but drawn to a larger scale than FIGS. 1 and 2, and illustrating an elevational view of the improved eyecup;

FIG. 4 is a plan sectional view of the dispensing container of FIG. 1, taken along lines 4-4 of FIG. 3, and illustrating a plan view of an improved eyewash cup;

FIG. 5 is a bottom perspective view of the eyewash container of FIG. 1, illustrating the opening of the lower flaps;

FIG. 6 is a cross-sectional elevational view of the eyewash cup illustrated in FIG. 3, and taken along line 6-6 of FIG. 4;

FIG. 7 is a side sectional view of the eyewash cup of FIG. 3, taken along line 7-7 of FIG. 6, but assuming that FIG. 6 illustrates the complete eyewash cup; and

FIG. 8 is a side sectional view of an improved eyewash cup according to another embodiment of the present invention.

Referring now to the drawings, there is illustrated in FIGS. 1 to 5 thereof an improved dispensing container generally illustrated at 10 of cardboard or other suitable material and adapted for dispensing eyecups 11 according to the present invention. The dispensing container 10 is of generally tubular box shape, rectangular in cross section, to accommodate a stack of eyecups 11 as best illustrated in FIG. 3. It will be appreciated that the dispensing container 10 may contain any suitable advertising, printed matter, and the like on its exterior; however, as illustrated in FIG. 1, the dispensing container 10 is provided with a plurality of transparent plastic windows 12 and 13 to permit a visual examination of the eyecups 11 remaining within the dispensing container 10. Additionally, the front of the dispensing container 10 is provided with a polarized wink eye 15, of the type well known to wink when viewed from different angles, so as to attract the attention of prospective users. Moreover, as illustrated in FIG. 2, the rear of the container 10 is provided with a plurality of adhesive members 16 and 17, each covered by a suitable removable cover 18 such as of plastic. The adhesive members 16 and 17, with the removable covering 18 thereof removed, provide for sticking or hanging the dispensing container 10 on the wall of a bathroom or the like, in such a manner that it may be readily removed and discarded when empty. The dispensing container 10 accordingly may be conveniently positioned in the bathroom to provide ready access to the eyecups 11.

3

To permit removal of the eyecups 11 one at a time through a lower opening 20, the dispensing container 10 is provided with a plurality of bottom flaps which may be partially opened so as to hold the stacked eyecups in such a position that the lower one thereof may be gripped and pulled out of the dispensing container 10. More specifically, the lower end of the dispensing container 10 is provided with a back flap 21 folded from the back of the container 10 and a pair of side flaps 22 and 23 folded from respective sides of the container 10 and connected to the back flap 21 along adjacent edges. The side flaps 22 and 23 are provided with a diagonal inward fold 22a and 23a, respectively, so that the flap 21 is foldable inwardly to close the lower opening 20 with the side flaps 22 and 23 folding in accordion-like fashion. The lower opening 20 may additionally be closed by a removable front flap 25 adapted to fold over the folded back flap 21 and side flaps 22 and 23, but which is perforated to be torn off by the user when the dispensing container 10 is hung on the wall. The natural resiliency of a container of cardboard or other suitable material will be sufficient to retain the eyecups 11 from falling through the lower opening 20, being restrained by the back flap 21 and side flaps 22 and 23, as best illustrated in FIG. 3. However, it will be appreciated that a user may grip the lowermost of the eyecups 11 and pull it through the opening 20.

The improved eyecup 11 according to the present invention includes a cup portion 26 forming a reservoir or container adapted to be filled with suitable eyewash solution 27 enclosed by a cover 28 as best illustrated in FIGS. 6 and 7. Eyewash solutions are well known and are not herein described in detail. The cup portion 26 includes a prismatic oval-shaped portion 26a formed of a smooth side wall having parallel wall surfaces and terminating in an upper unbeaded open edge 26b, somewhat concave along its major axis. It will be appreciated that the open edge 26b conforms generally to the contour of the face adjacent an eye so that the edge 26b may be placed against the skin and the cup portion 26 inverted so that the solution 27 flows therefrom to wash the eye. Moreover, the cup portion 26 is additionally provided with a cup-shaped portion 26c depending from the oval-shaped portion 26a, closed at its bottom, and forming a reservoir for additional solution 27. The cup portion 26 as heretofore described is filled with the proper amount of suitable eyewash solution 27 to a level 26d to provide for a single application and the eyecup 11 is discarded after such use.

Although the eyecup 11 may be made of any suitable material, it will be understood that the open edge 26d which fits against the face should be smooth and perhaps slightly rounded to prevent damage or irritation to the face. Moreover, the material forming the cup 11 should not flake or powder off so as to contaminate the solution 27. Slightly springy materials have been found quite suitable for the eyecup 11, including both the cup portion 26 and cover 28 and, more particularly, many of the well-known transparent or opaque plastic materials may suitably be used.

In order to retain the solution 27 within the cup portion 26 and to protect the eyecup 11 and particularly the solution 27 and edge 26b from contamination, the cover 28 is generally concave, oval-shaped conforming to the contour of the edge 26b and is provided around its edge with a double crimped lip portion 28a. The lip portion 28a includes a pair of spaced parallel legs 28b and 28c interconnected by a bight portion 28d forming a downwardly opening U-shaped lip covering the open edge 26a of the cup portion 26.

The cup portion 26 is additionally provided with an indent 30 in its side wall so that the tip of a thumb or other finger may be inserted therein and the cover 28 is provided with a corresponding tab 31 to facilitate prying up of the cover 28 to open the cup 11.

The eyewash device, as described above, provides a

4

disposable, ready-to-use, prefilled and sanitary eyecup containing just the proper amount of eyewash solution for a single application. Moreover, the eyecups are made available in a handy dispenser tube that sticks to bathroom walls and the like and readily comes off when empty. Of course, it is understood that the individually sealed and prefilled eyecups may also be made available individually as at drug counters and the like.

FIG. 8 illustrates an embodiment of an eyecup 35 formed of a cup portion 36 and including an oval-shaped cup portion 36a having an upper concave open edge 36b and a cup-shaped portion 36c depending therefrom. The eyecup 35 is provided with a cover 37 in the form of a plug fitted into the upper open end of the cup-shaped portion 26c, thereby to form a container or reservoir for eyewash solution 38 within the cup portion 36c. The cup portion 36 may be similar to the cup portion 26 heretofore described except that it may be desirable to provide the cup-shaped portion 36c thereof deeper than the cup-shaped portion 26c since eyewash solution in the eyecup 35 will not rise into the cup portion 36a when the cover 37 is in place.

Although the present invention has been described in conjunction with particular embodiments thereof, it is obvious that numerous other embodiments may be devised by those skilled in the art. It is therefore intended in the appended claims to cover all such embodiments as fall within the true spirit and scope of this invention.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. In combination, a tubular-shaped dispensing container of rectangular cross section and open at its lower end, and provided with a first flap folded from a first wall of said container adjacent said opening and provided with a pair of side flaps having their edges adjacent to said first flap foldably connected therewith and having their edges adjacent said tubular portion foldably connected therewith, said first flap being foldable to restrict said opening and said side flaps being foldable in accordionlike fashion therewith, and a stack of disposable prefilled eyewash cups formed of an oval-shaped portion having a concave upper edge portion and a portion depending therefrom and forming a reservoir for eyewash solution, and cover means for said reservoir portions of said eyewash cups, said flaps of said dispensing container having sufficient resiliency to hold the stacked eyewash cups within said tubular container and being sufficiently flexible to permit removal of a lower one of said plurality of stacked eyewash cups, said dispensing container being provided with means on one side thereof for securing the same to a support structure.

2. The combination as set forth in claim 1 above and additionally including an additional flap foldable from the edge of another wall of said tubular member and adapted to be removed therefrom.

3. The combination as set forth in claim 1 above wherein the last-mentioned means comprises adhesive means.

4. In combination, a tubular shaped dispensing container open at its lower end, and provided with a first flap folded from a first portion of said container adjacent said opening and provided with a pair of side flaps having their edges adjacent to said first flap foldably connected therewith and having their edges adjacent said container foldable therewith, said first flap being foldable to restrict said opening and said side flaps being foldable in accordionlike fashion therewith, and a stack of disposable prefilled eyewash cups having a concave upper edge portion and including a reservoir portion for eyewash solution, and cover means for said reservoir portions of said eyewash cups, said flaps of said dispensing container having sufficient resiliency to hold the stacked eyewash cups within said tubular container and being sufficiently flexible to permit removal of a lower one of said

5

plurality of stacked eyewash cups, said dispensing container being provided with means for securing the same to a support structure.

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