ABSTRACT OF THE DISCLOSURE

A squeeze-type eye drop dispenser including a stabilizer bumper which is at the approximate height of the dispensing tip and spaced therefrom a distance which permits the bumber to rest on the bridge of the nose, the eyebrow or cheek as drops are being dispensed.

This invention relates to a container for dispensing eye drops. A particular object of the present invention is to provide a convenient container for simply, safely and accurately administering eye drops.

The administration of eye drops is now quite commonplace for medications that are topically applied to the eyes by physicians, nurses or by the patient himself and for eye refresheners that are commonly self-administered to relieve the irritation from smoke, watching television, etc.

In the administration of eye drops it is important to hold the dispensing tip steady and distant from the eye in order accurately to hit the eye with the drop and to keep the tip from touching the eye. It is desirable to dispense the drop near the center of the eye and to do this with only one hand. In the self-administration of eye drops it is desirable if the eye is able to discern the tip from the surrounding background, as a safety aid in judging the position of the tip and its distance from the eye.

In stabilizing the dispensing tip for eye drop containers in general use it is common to rest the hand upon something solid and rely upon the agility of the fingers to manipulate the tip into a position for safe and accurate dispensing. Various mechanical means have been tried:

(1) In U.S. Pat. 1,006,945 there is disclosed a mask with various pockets and bulbs that is quite complex, massive and inconvenient for the facile, safe and quick dispensing of a few drops;

(2) In U.S. Pat. 2,722,316 there is disclosed another apparatus for stabilizing an eye dropper that requires two hands to operate and is rather bulky and contrived;

(3) In U.S. Pat. 2,722,316 there is disclosed another apparatus for stabilizing an eye dropper or other dispenser arranged across the long dimension of a piece with the tip essentially horizontal, compared with the essentially vertical arrangement in 2,676,592. The longitudinal, or horizontal arrangement is said to be needed to overcome an inherent danger thought to reside in the vertical arrangement. It discloses an eye drop dispenser with a nose bridge molded into the bottle in a manner that maintains an essentially longitudinal and horizontal posture for the bottle and dispensing tip. In conveniences encountered with use of this bottle are (a) messiness and inaccuracy—if the bottle is squeezed too hard the drop hits the face and if the bottle is squeezed too lightly the surface tension and/or the Coadna-type "teapot" (laminar flow, boundary layer) effects cause the drops to hit the nose or otherwise to miss the point of the eye aimed at; (b) difficulty of user, when self-administering drops, to discern the position of the tip against the backdrop of a ceiling or to determine the distance of the tip from the eye.

In U.S. Pat. 3,058,466 there are disclosed structures for bridging an eye and stabilizing a dispensing bottle on the bony structure under the eyebrow and the cheek while this avoids the contrivance of 2,676,592 and the inability to discern the tip from the background, applicant's invention provides for an even more facile, accurate and convenient container for dispensing eye drops.

Our invention overcomes the difficulties encountered with these previous efforts and provides many advantages. In accordance with our invention a resilient eye drop dispensing container is employed with a single stabilizing piece protruding from the container to a length approximately equal with the height of the dispensing tip. When the stabilization piece is engaged with the nose, eyebrow, or cheek, whichever is preferred by the individual user, the dispensing tip is essentially vertical so that the drops come straight down into the eye whether the bottle is squeezed lightly or hard and so that the dispensing tip is discernible against the bottle for better judgment of the distance of the tip from the eye. Only one hand is required for operation of the invention whether by a physician, nurse or aide for administration to a patient or by self-administration.

In order that our invention may be clearly understood, we will describe in detail a particular container for dispensing eye drops embodying our invention. Further details, advantages and objects of the invention will be apparent from the following specification and appended drawing wherein:

FIG. 1 is a perspective view of our container;
FIG. 2 is a view of the container depicted as its use is contemplated;
FIG. 3 is a top plan view of the container;
FIG. 4 is a side elevational view of the container; and
FIG. 5 is an end elevational view of the container.

Referring to FIG. 1, there is shown the container 4 preferably of a resilient plastic. The container comprises a well portion 40 for holding the liquid to be dispensed, a tip 43 for dispensing the liquid by drops and a stabilizer-bumper 1 extending approximately as high as the height of the dispensing tip 3. The stabilizer-bumper may have an indentation at the end face 2 designed to fit comfortably as shown in FIG. 2 over the nose bridge 7 or the bony structure under the eyebrow 7 or the cheek bone 7. It is desirable to not have the height of the dispensing tip substantially exceed the height of the stabilizer-bumper since this is likely to place the tip too close to the eye when the stabilizer is resting upon the nose.

The stabilizer-bumper may be molded integrally with the container and may protrude from any portion of the container so long as it has an end face which is laterally removed from the dispensing tip to the extent that the axis of the dispensing tip may be aligned vertically over the eye when the head is held back and the end face is rested on the nose, eyebrow or cheek. The extent of removal of the end face from the tip is preferably one-half the interpupillary distance.

The present container for dispensing eye drops may be modified without departing from the scope of the invention. A variety of materials may be employed to make the container, including plastic, rubber, etc. The container may be rectangular, square, circular, etc.

We claim:

1. In combination with a container for dispensing eye drops of the type having a resilient well portion, a dispensing tip extending outwardly therefrom wherefrom a liquid may be squeezed drop-by-drop, the improvement which comprises a stabilizer-bumper connected to the container having an end face removed from the container to the approximate height of the dispensing tip laterally disposed in only one direction from the tip to the extent that when the head is tilted back and
3. The end face is in contact with the bridge of the nose, the eyebrow or cheek the axis of the tip may be aligned vertically for dispensing drops downwardly into the eye.

2. The container of claim wherein the end face is indented to conform to the bridge of the nose.

3. The container of claim wherein the end face is indented to conform to the eyebrow ridge.

4. The container of claim wherein the end face is indented to conform to the cheek bone.

5. The container of claim wherein the extent of removal of the end face from the tip is approximately one-half the interpupillary distance.

References Cited

UNITED STATES PATENTS

D. 210,179 2/1968 Mahoney et al.
1,340,662 5/1920 Lobl.
3,058,466 10/1962 Routsong —— 128—233

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