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(71) Applicant: **LABORATOIRES MERCK, SHARP & DOHME-CHIBRET**
3, Avenue Hoche
F-75008 Paris(FR)

(72) Inventor: **Pejouan, Bernard Louis Paul**
5 Bis, rue de Seine
F-78110 Le Vesinet(FR)

(74) Representative: **Martin, Jean-Jacques et al,**
Cabinet REGIMBEAU 26, Avenue Kléber
F-75116 Paris(FR)

(54) Assembly for packaging and dispensing an ophthalmic solution.

(57) The invention relates to an assembly for packaging and dispensing an ophthalmic solution, wherein it comprises a recipient (20) generally in the form of an eye bath, open in its upper part to allow application thereof on the periocular region; means (50) for hermetically closing this recipient; a cloth (40) made of a material which can be impregnated with the solution; means (30) for supporting the cloth inside the closed recipient, adapted to prevent said cloth from coming into contact with the solution when the closed recipient stands with its upper part facing upwards.

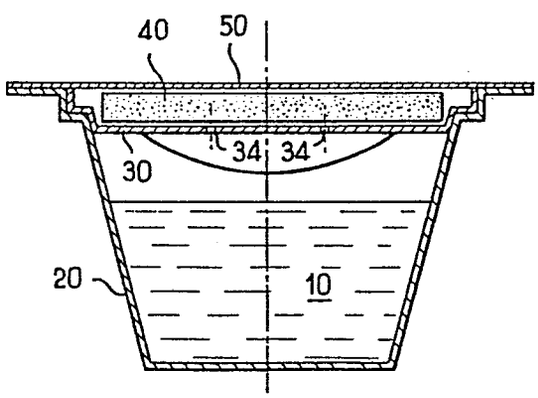

FIG_1

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ASSEMBLY FOR PACKAGING AND DISPENSING AN OPHTHALMIC SOLUTION

The present invention relates to an assembly for packaging and dispensing an ophthalmic solution.

Up to the present time, two types of packagings have been proposed to this end.

In a first type, the solution is contained in a supple flexible bottle provided with an end piece enabling the eye to be washed by spraying. Consequently, there is a potential risk of the end piece injuring the eye, and, as the solution is sprayed, it tends to flow down the face.

In the other type of packaging, the solution is contained in a glass or plastic bottle and a separate eye bath is provided which is to be screwed on the neck of the bottle and enable an eye wash to

be made. In this case, except for the first use, the eye bath is neither sterile nor protected, which may mean that foreign bodies enter the eye. After the eye bath has been used, the patient must rinse it, and this is not always done.

In addition, in both types of packaging, the washing solution must comprise anti-microbial conserving agents which, in certain cases, may provoke irritations. However, these anti-microbial agents are indispensable for conserving the product after the bottle has been opened.

It is an object of the invention to propose a novel type of packaging which enables all these drawbacks to be overcome.

It proposes an assembly allowing the ophthalmic solution to be both packaged and dispensed, without it being necessary to provide an additional accessory for the eye wash.

In addition, this assembly comprises an element for previously cleaning the contour of the eye, which is sterile, impregnated with the ophthalmic solution and incorporated in the packaging.

Finally, the assembly is provided for one use only, thus enabling a solution without conserving agent to be provided and making available a solution and objects which are always perfectly sterile.

More precisely, the assembly according to the invention comprises:

. a recipient generally in the form of an eye bath, open in its upper part to allow application thereof on the periocular region,

. means for hermetically closing this recipient,

. a cloth made of a material which can be impregnated with the solution,

. means for supporting the cloth inside the closed recipient, adapted to prevent said cloth from coming into contact with the solution when the closed recipient stands with its upper part facing upwards.

The support means preferably form a partition defining, with the closure means, a compartment containing the cloth, this compartment being isolated from the part of the recipient containing the solution, with the exception of calibrated perforations made through the partition, allowing the cloth to be impregnated by the ophthalmic solution contained in the recipient.

In an alternative embodiment, the said compartment is, on the contrary, entirely isolated from that part of the recipient containing the solution (namely the ophthalmic treating solution). The cloth may then be impregnated with a specific ophthalmic cleaning solution which is different from the ophthalmic treating solution.

The partition is advantageously formed by a dish fitted in the top part of the recipient, this dish comprising two recesses on either side of a central raised edge, so as to facilitate gripping, disconnection and extraction of the dish.

The closure means may be formed by a peel- or tear-off film sealed on the edge of the recipient.

The invention will be more readily understood on reading the following description with reference to the accompanying drawings, in which :

Fig. 1 is a view in section of the assembly according to the invention, the elements being assembled

together,

Fig. 2 is an exploded view, homologous of Fig. 1, showing the different elements constituting the assembly,

Fig. 3 is a plan view of the dish,

Fig. 4 indicates how the eye bath is applied with a view to an eye wash.

Referring now to the drawings, Figs. 1 and 2 show the assembly according to the invention in section, the sterile solution 10 being contained in a recipient 20 of appropriate form, i.e. generally in the forme of an eye bath with a peripheral edge 21 allowing application on the periocular region.

The recipient may for example be made of transparent plastics material, containing about 10 ml of solution, corresponding to a unitary dose for one use only.

This recipient receives in its upper part a dish 30 of which the outer edge 31 has a section corresponding to the inner edge 22 of the eye bath at its top, to enable the dish to be force fitted in the upper part of the eye bath.

To facilitate gripping, disconnection and extraction of the dish, two recesses 32 are advantageously provided on either side of a central raised edge 33 (Fig. 3) or any other means forming a grip for the user's thumb and fore-finger.

The dish 30 is provided to receive and support a cloth 40 above the solution 10, preventing this cloth from coming into contact with the solution when the closed recipient stands with its upper part facing upwards.

This cloth is made of a material which can

be impregnated with the solution. Impregnation takes place via calibrated orifices 34 provided in the dish.

In analternative embodiment, the cloth may be provided to be entirely isolated from the solution (elimination of the calibrated orifices). This enables it to be impregnated, before the closing film is sealed, by a specific ophthalmic cleaning solution which is different from the ophthalmic treating solution contained in the body of the eye bath.

Finally, hermetic closure of the assembly is ensured by a film 50 of plastics material or aluminium, sealed on the edge 21 of the eye bath.

The cloth is impregnated just after the eyebath is filled and the closing film is sealed : the assembly is placed upside down, so that the solution progressively impregnates the cloth via calibrated orifices 34. As a function of its absorbent power, the cloth will retain the quantity of solution necessary for periocular cleaning, even if the assembly is subsequently returned to its normal position, i.e. with its upper part facing upwards.

At the moment of use, the patient separates the film from the recipient, this giving access to the cloth.

He then cleans the periocular region with this cloth, so as to eliminate any contaminating agent which might be introduced into the eye during the eye wash.

He then removes the dish, and thus has an eye bath filled with sterile ophthalmic solution at his disposal.

Finally, he applies this eye bath (Fig. 4) in conventional manner, discarding it after use.

CLAIMS

1. An assembly for packaging and dispensing an ophthalmic solution, wherein it comprises:

. a recipient generally in the form of an eye bath, open in its upper part to allow application thereof on the periocular region,

. means for hermetically closing this recipient,

. a cloth made of a material which can be impregnated with the solution,

. means for supporting the cloth inside the closed recipient, adapted to prevent said cloth from coming into contact with the solution when the closed recipient stands with its upper part facing upwards.

2. The assembly of Claim 1, wherein the support means form a partition defining, with the closure means, a compartment containing the cloth, this compartment being isolated from the part of the recipient containing the solution, with the exception of calibrated perforations made through the partition, allowing the cloth to be impregnated by the ophthalmic solution contained in the recipient.

3. The assembly of Claim 1, wherein the closure means comprise a peel- or tear-off film sealed on the edge of the recipient.

4. The assembly of Claim 2, wherein the partition is formed by a dish fitted in the top part of the recipient.

5. The assembly of Claim 4, wherein the dish comprises two recesses on either side of a central raised edge, so as to facilitate gripping, disconnection and extraction of the dish.

6. The assembly of Claim 1, wherein the support means form a partition defining, with the closure means, a compartment entirely isolated from that part of the recipient containing the solution, the cloth then being impregnated with a specific ophthalmic cleaning solution which is different from the ophthalmic solution contained in the recipient.

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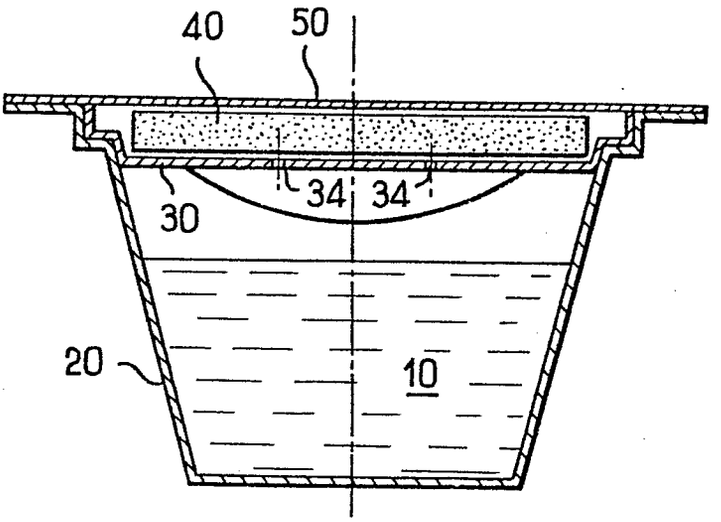

FIG_1

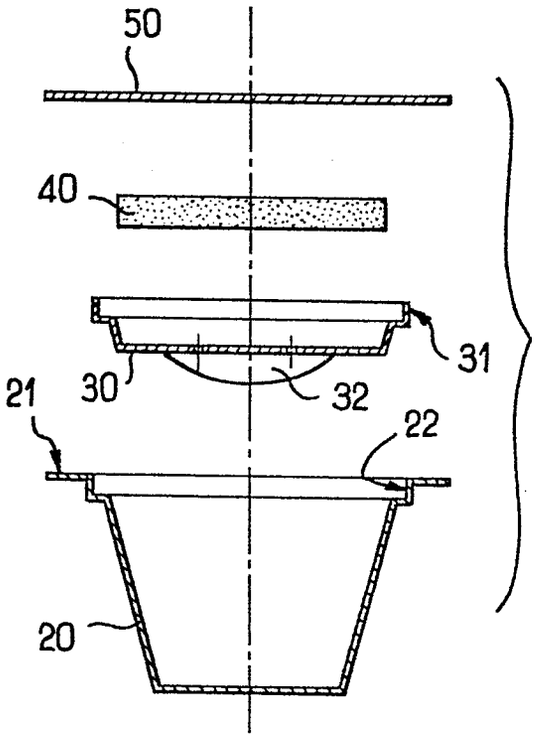

FIG_2

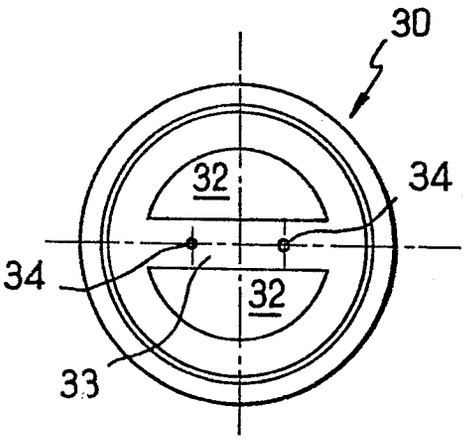

FIG_3

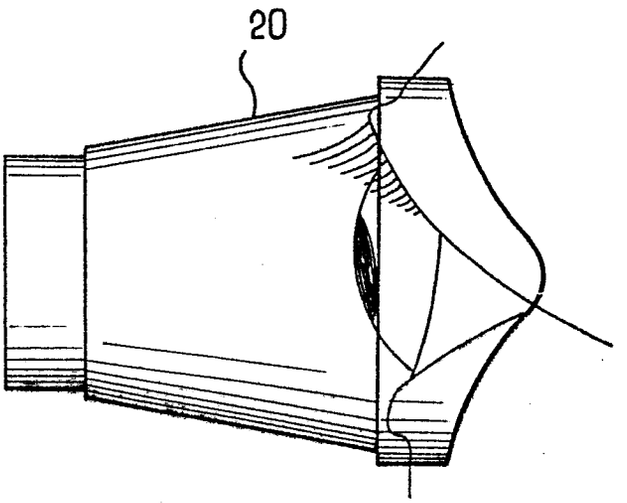

FIG_4