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(54) **Bottle for cosmetic and pharmaceutical products, hair dyes and the like, having separate components**

(57) A bottle (1) for cosmetic and pharmaceutical products, hair dyes and the like having separate components, comprising a container body (2) for a first component which has a first opening (10) for accommodating a tear-open body (11) for containing a second component and a second opening (20) for dispensing the mixed product.

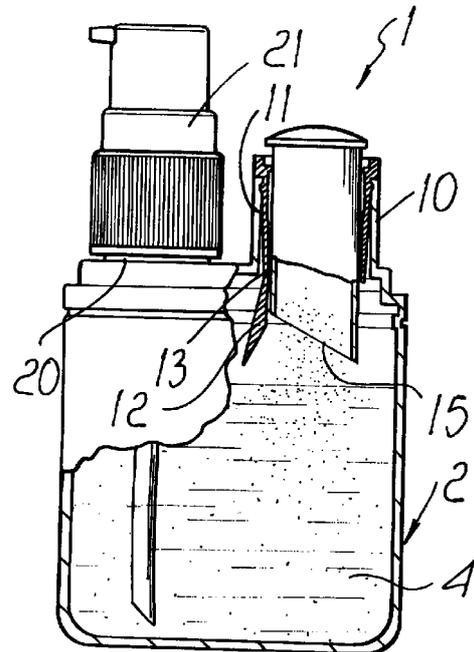


FIG. 2

EP 0 999 149 A1

Description

[0001] The present invention relates to a bottle for cosmetic and pharmaceutical products, hair dyes and the like, having separate components.

[0002] It is known that in many fields of application it is necessary to have products formed by means of two components which must be mixed together substantially when they are used.

[0003] Currently available solutions use vials for containing a first component which are closed by a plug-like element provided with a compartment having a tear-open bottom, inside which a second component is provided which, at the time of use, can be introduced in the region where the first component is provided by tearing open the bottom.

[0004] This solution is usable only for single-dose products, since in order to access the mixed product it is necessary to fully remove the plug inside which the second component was contained.

[0005] Obviously, this method is not very practical and also constitutes a severe limitation to the use of two-part products, such as for example whenever one has cosmetic or pharmaceutical products in which the active principle must be mixed shortly before use.

[0006] The aim of the present invention is to eliminate the above-mentioned drawbacks by providing a bottle for cosmetic and pharmaceutical products, hair dyes and the like having separate components in which it is possible to separate the mixing of the second component from the dispensing of the mixed product.

[0007] Within the scope of this aim, a particular object of the invention is to provide a bottle which allows to contain an amount of product which can be used in a plurality of successive occasions without thereby having to remove the plug or similar elements.

[0008] Another object of the present invention is to provide a bottle which, thanks to its particular constructive characteristics, is capable of giving the greatest assurances of reliability and safety in use.

[0009] Another object of the present invention is to provide a bottle for cosmetic and pharmaceutical products, hair dyes and the like having separate components which can be easily obtained starting from commonly commercially available elements and materials and is also competitive from a purely economical point of view.

[0010] This aim, these objects and others which will become apparent hereinafter are achieved by a bottle for cosmetic and pharmaceutical products, hair dyes and the like having separate components, according to the invention, characterized in that it comprises a container body for a first component which has a first opening for accommodating a tear-open body for containing a second component and a second opening for dispensing a mixed product obtained by mixing said first and second components.

[0011] Further characteristics and advantages of

the present invention will become apparent from the following detailed description of a bottle for cosmetic and pharmaceutical products, hair dyes and the like having separate components, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a partially sectional view of the bottle according to the invention, with the first and second components separated from each other;

Figure 2 is a schematic view of the mixing of the two components;

Figure 3 is a schematic perspective view of the bottle.

[0012] With reference to the above figures, the bottle for cosmetic and pharmaceutical products, hair dyes and the like having separate components according to the invention, generally designated by the reference numeral 1, comprises a container body 2 which is closed by a cap 3 which can be applied in a per se conventional manner.

[0013] The container body 2 contains a first component, constituted for example by a liquid or the like, which is schematically designated by the reference numeral 4.

[0014] The container body 2 forms a first opening 10 in which a tear-open body 11 is inserted; the body 11 is provided with a bottom 12 which is connected to the body 11 by means of a prefracture line 13.

[0015] A hollow cylindrical piston 14 is slideable inside the body 11 and has an obliquely-cut end 15 which is designed, by applying pressure to the hollow cylindrical piston, to tear the prefracture line 13, breaking it and causing a second component 17 contained in the body 11 to pass into the first component 4 in order to mix the product.

[0016] Advantageously, the second component 17 is constituted for example, in the case of cosmetic or pharmaceutical products or products for hair dyes and the like, by an active principle which is mixed with the liquid 4 at the time of use.

[0017] An important feature of the bottle according to the invention resides in the fact that the container body 2 forms a second opening 20 which allows to dispense the mixed product externally without thereby having to remove the body 11.

[0018] Advantageously, a dispenser 21, for example of the pushbutton type, is provided at the second opening 20.

[0019] With the described arrangement, a bottle is accordingly provided which allows to mix the second component without then having to remove the plug inside which said component was contained.

[0020] It is also possible to provide a bottle which can contain a plurality of doses, since dispensing is performed through an opening which is different from the one used for mixing.

[0021] From the above description it is evident that the bottle according to the invention achieves the intended aim and objects, and in particular it is noted that it achieves results in terms of reducing pollution effects, i.e., achieves more efficient waste management. 5

[0022] In practice, the materials used, so long as they are compatible with the specific use, as well as the contingent shapes and dimensions, may be any according to requirements. 10

[0023] The disclosures in Italian Utility Model Application No. MI98U000712 from which this application claims priority are incorporated herein by reference.

[0024] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs. 15
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Claims

1. A bottle for cosmetic and pharmaceutical products, hair dyes and the like having separate components, characterized in that it comprises a container body for a first component which has a first opening for accommodating a tear-open body for containing a second component and a second opening for dispensing a mixed product obtained by mixing said first and second components. 25
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2. The bottle according to claim 1, characterized in that said tear-open body has a bottom which is delimited by a prefracture line, a hollow cylindrical piston being slideable in said tear-open body and having an obliquely cut end in order to break said prefracture line. 35
3. The bottle according to claim 1, characterized in that said second opening is arranged to the side of said first opening. 40
4. The bottle according to claim 1, characterized in that it comprises a dispenser which is coupled at said second opening. 45

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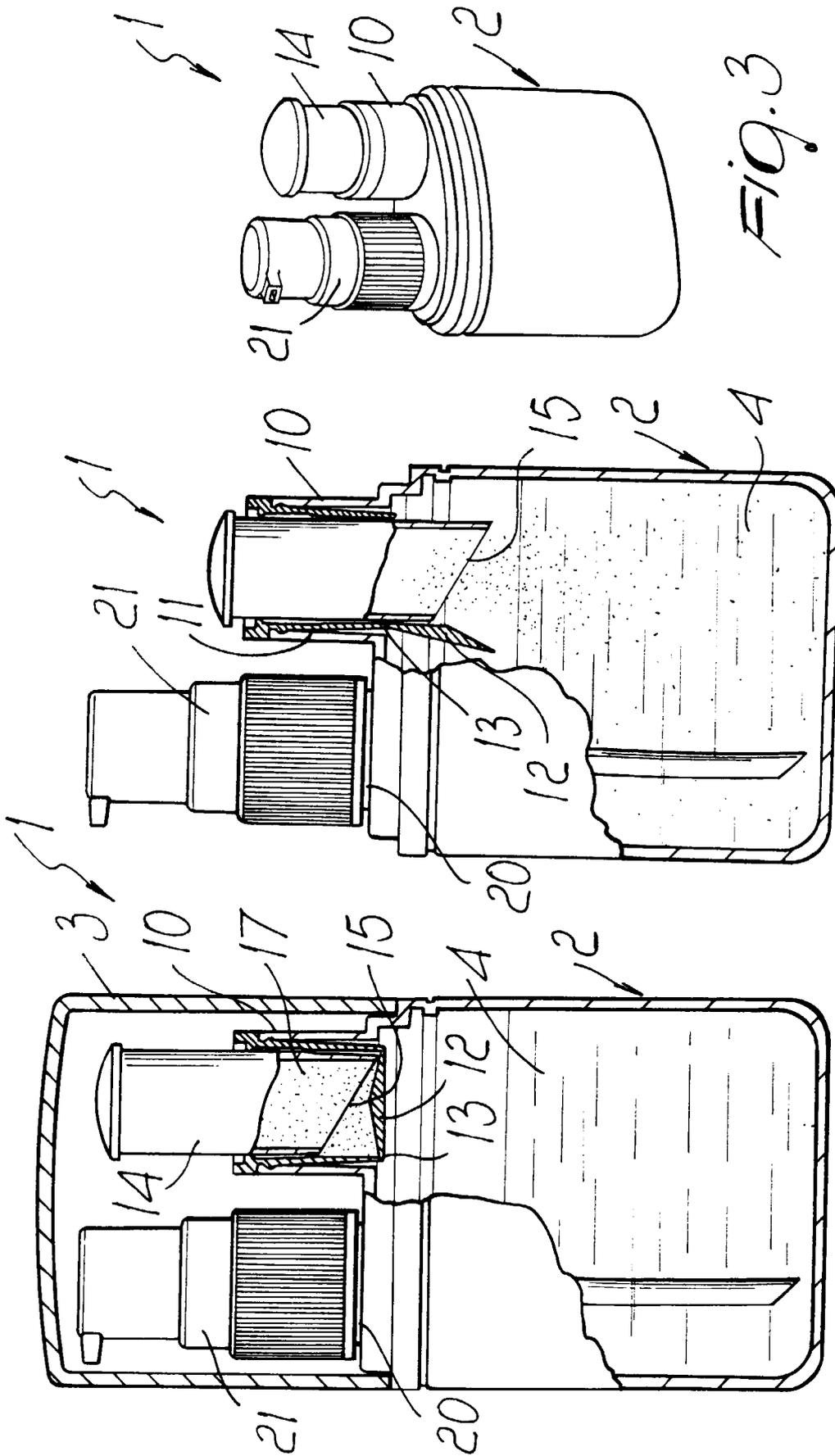


FIG. 1

FIG. 2

FIG. 3



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EUROPEAN SEARCH REPORT

Application Number
EP 99 10 1783

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 4 705 191 A (ITZEL) 10 November 1987 (1987-11-10) * the whole document *	1,3,4	B65D81/32 A45D34/00
Y	---	2	
Y	EP 0 356 758 A (CAPSULIT) 7 March 1990 (1990-03-07) * the whole document *	2	
X	US 4 832 230 A (JANOWITZ) 23 May 1989 (1989-05-23) * the whole document *	1,3,4	
A	US 4 638 927 A (MORANE) 27 January 1987 (1987-01-27) * the whole document *	1,2	
A	FR 2 569 666 A (L'OREAL) 7 March 1986 (1986-03-07) * the whole document *	1,2	
A	FR 1 514 436 A (SCHWARTZMAN) 10 May 1968 (1968-05-10)		
A	DE 297 11 898 U (MENSHEN) 4 September 1997 (1997-09-04)		TECHNICAL FIELDS SEARCHED (Int.Cl.7) B65D A45D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 3 March 2000	Examiner Riegel, R
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 99 10 1783

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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03-03-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4705191 A	10-11-1987	DE 8423325 U	14-08-1985
		AT 53555 T	15-06-1990
		AU 577881 B	06-10-1988
		AU 4574485 A	06-02-1986
		CA 1308082 A	29-09-1992
		DK 353185 A, B,	05-02-1986
		EP 0170980 A	12-02-1986
		FI 852984 A, B,	05-02-1986
		FR 2568547 A	07-02-1986
		JP 1900774 C	27-01-1995
		JP 6022716 B	30-03-1994
		JP 61042353 A	28-02-1986
		NZ 212970 A	27-11-1987
ZA 8505845 A	29-04-1987		
EP 356758 A	07-03-1990	IT 215248 Z	11-09-1990
		IT 215247 Z	11-09-1990
		US 5029718 A	09-07-1991
US 4832230 A	23-05-1989	NONE	
US 4638927 A	27-01-1987	FR 2564433 A	22-11-1985
		BE 902411 A	13-11-1985
		CA 1275077 A	09-10-1990
		CH 662327 A	30-09-1987
		DE 3516959 A	21-11-1985
		GB 2158801 A, B	20-11-1985
		IT 1208806 B	10-07-1989
		JP 61000162 A	06-01-1986
FR 2569666 A	07-03-1986	NONE	
FR 1514436 A	10-05-1968	NONE	
DE 29711898 U	04-09-1997	NONE	