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(54) **CONTAINER FOR MEDICINES**

(57) The object of the invention is a container, in particular intended for medicines made of two substances, separated from each other, and which require combining just before their use.

The container, in particular for medicines, according to the invention, is preferably made in the form of a bottle (1), whose threaded neck (2) is closed with a threaded cap (3), made of an internally threaded cylinder (4) closed with a cover (5). The container is characterised in that the cover (5) has a circular cut-out in which another cylindrical container (6) is placed, enclosed from the bottom with a film (7), and which on the outer surface has two rings (8, 9) between which the cover (5) of the cap (3) is placed, while a punch (11) is attached to the top wall (10) of the cylindrical container (6) from the inside.

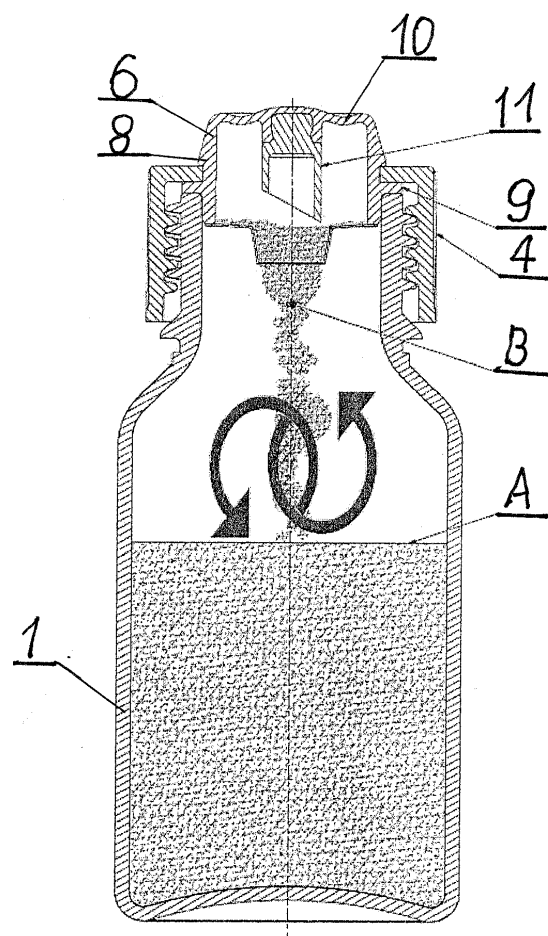


Fig 2

Description

[0001] The object of the invention is a container, in particular intended for medicines made of two substances, separated from each other, and which require combining just before their use.

[0002] There is a known container, in particular for medicines, presented in patent description no. EP/PL 2704962. The object of that invention is the closure of a container comprising:

- a reservoir, which in turn comprises a rupturable bottom part, said reservoir being applicable to a mouth of a container destined to contain a first product;
- a cutter, at least partially positionable inside the reservoir and positionable in the front part of the rupturable bottom part for opening said rupturable bottom part; said closure taking on at least a first and a second configuration; in the first configuration, the rupturable bottom part being intact, and at least the reservoir and the cutter identifying, in combination, a first chamber, suitable for containing a second product; in the second configuration said rupturable bottom part being open such as to enable the mixing of the first and the second product;
- moisture absorbing means, which in the first configuration of the closure are in contact with the inside of the first chamber;
- the cutter comprises a hollow body, which in turn comprises a cutting edge and a pin; said cutting edge being machined at the end of the pin, and in the first configuration being placed before said rupturable bottom part; said closure being characterised in that the moisture absorbing means at least partially define an inner recess inside the hollow body and the pin and an at least partially covered inner surface of said hollow body, the recess in the first configuration constituting a part of the first chamber and said absorbing means being shaped:

as a hollow bushing; or

as a hollow beaker in proximity of the cutting edge and lining the inner bottom part and the inner wall of the hollow body.

[0003] The container, in particular for medicines, according to the invention, preferably has the form of a bottle, whose threaded neck is closed with a threaded cap, made of an internally threaded cylinder closed with a cover. The container is characterised in that the cover has a circular cut-out in which another cylindrical container is placed, enclosed from the bottom with a film, and which on the outer surface has two rings between which the cover of the cap is placed, while a punch is attached to the top wall of the cylindrical container from the inside. The top ring of the cylindrical container has a conical surface. The top wall of the cylindrical container is flexible. The punch has the form of a cylinder, whose bottom

part is obliquely cut.

[0004] The container, in particular for medicines, according to the invention, provides the ability to combine both medicines when it is necessary to use them jointly.

5 This ability is very easy to achieve, since all it takes is to press the top wall of the cylindrical container, due to which the punch destroys the film and the contents of the cylindrical container are moved to the a bottle. At the same time, the position of the cylindrical container is stable, since it is clamped on the cover of the cap, which is placed between two flanges of the cylindrical container, while its bottom flange is pressed against the neck of the container. As a result of such a structure, the cylindrical container is fixedly attached to the container and it is insensitive to any shocks, due to which the combination of both medicines is only possible as a result of a user's actions.

[0005] The container, in particular for medicines, according to the invention, is described in more detail in an embodiment and in the drawing, in which fig. 1 presents a cross-section of the container in a state filled with both medicines, fig. 2 presents a cross-section of the container in a state of combining both medicines, and fig. 3 presents a cross-section of the cap along with the cylindrical container.

25 **[0006]** As presented in fig. 1 to fig. 3, the container for medicines according to the invention has the form of a bottle 1, whose threaded neck 2 is closed with a threaded cap 3. The cap 3 is made of an internally threaded cylinder 4 closed with a cover 5. The cover 5 has a circular cut-out, in which another cylindrical container 6 is placed, closed from the bottom with a film 7. On its outer surface, the cylindrical container 6 has two rings 8 and 9, between which the cover 5 of the cap 3 is placed. The punch 11 is attached to the top wall 10 of the cylindrical container 6 from the inside. The top ring 8 of the cylindrical container 6 has a conical surface, due to which it is easier to insert the cylindrical container 6 into the circular cut-out formed in the cover 5. The top wall 10 of the cylindrical container 6 is flexible, due to which it is possible to bend it, and therefore to move the punch 11 in a direction towards the film 7. The punch 11 has the form of a cylinder, whose bottom part is obliquely cut, forming a sharp edge, which punches through the film 7 in order to move medicine B contained in the cylindrical container 6 to medicine A contained in the bottle 1.

Claims

- 50 1. A container, in particular for medicines, preferably in the form of a bottle, whose threaded neck is closed with a threaded cap, made of an internally threaded cylinder closed with a cover, **characterised in that** the cover (5) has a circular cut-out in which another cylindrical container (6) is placed, enclosed from the bottom with a film (7), and which on the outer surface has two rings (8, 9) between which the cover (5) of the cap (3) is placed, while a punch (11) is attached

to the top wall (10) of the cylindrical container (6) from the inside.

2. The container according to claim 1, **characterised in that** the top ring (8) of the cylindrical container (6) has a conical surface. 5
3. The container according to claim 1, **characterised in that** the top wall (10) of the cylindrical container (6) is flexible. 10
4. The container according to claim 1, **characterised in that** the punch (11) has the form of a cylinder whose bottom part is obliquely cut. 15

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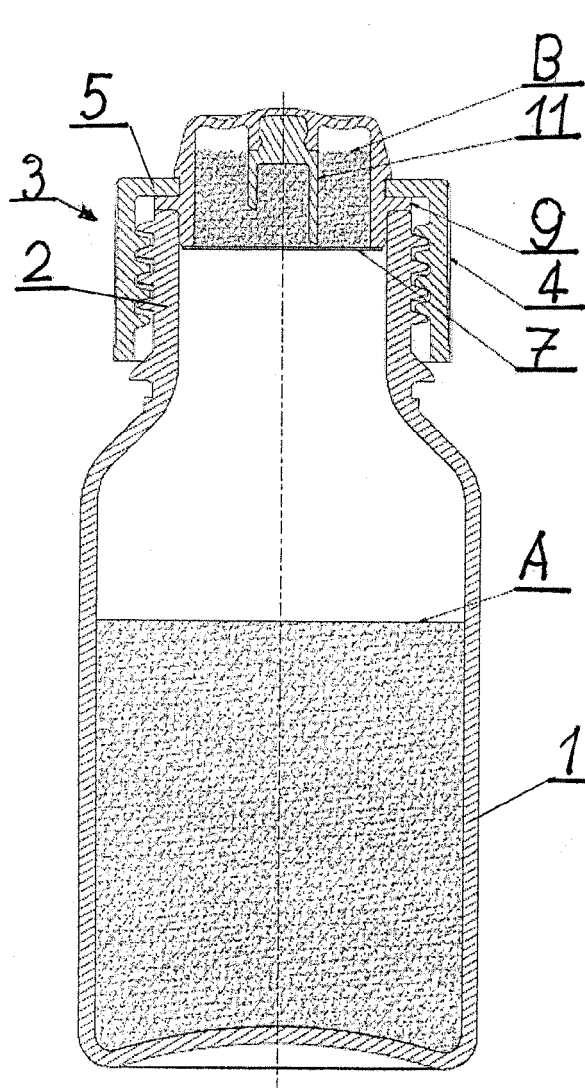


Fig 1

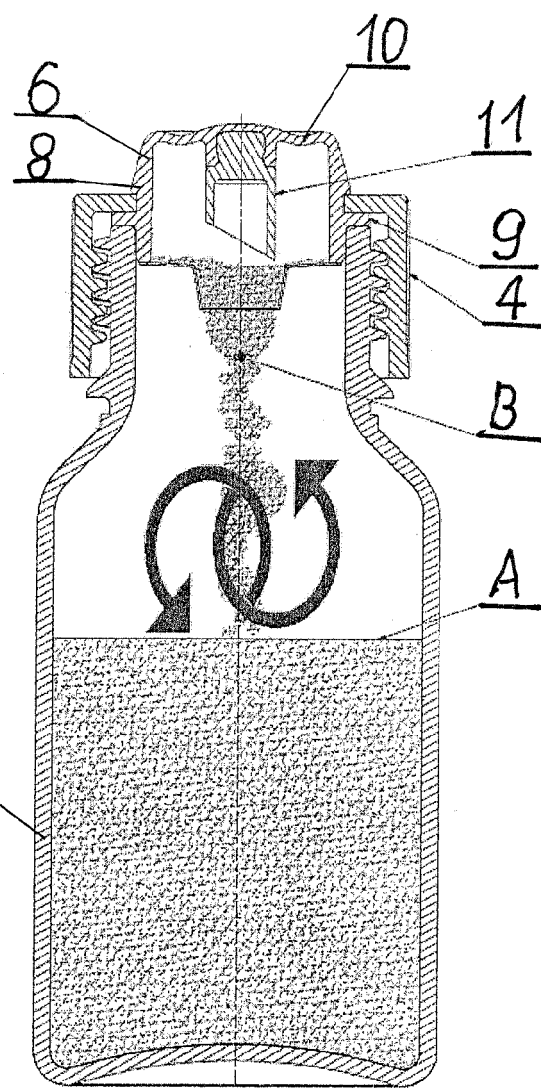


Fig 2

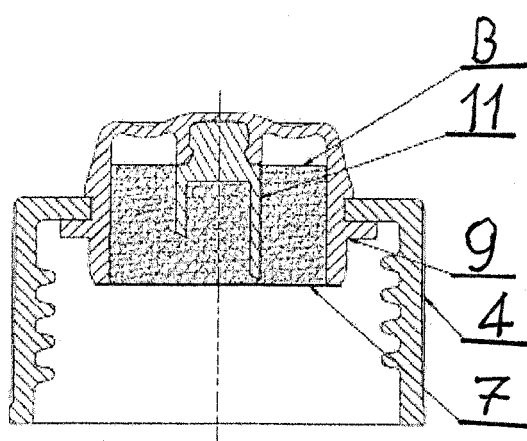


Fig 3



EUROPEAN SEARCH REPORT

Application Number
EP 20 02 0643

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EPO FORM 1503 03.82 (P04C01)

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	CN 106 742 667 A (FUHE HUAXING PHARMACEUTICAL SHARES CO LTD) 31 May 2017 (2017-05-31) * paragraph [0024] - paragraph [0064]; figures 1-3 *	1-4	INV. B65D81/32
X	DE 695 15 885 T2 (ALCON CUSI S A [ES]) 17 August 2000 (2000-08-17) * page 8, line 30 - page 14, line 18; figures 1-11 *	1,2,4	
A	WO 99/44901 A1 (SOUTHCORP AUSTRALIA PTY LTD [AU]; WITTIG PERRY RAYMOND [AU] ET AL.) 10 September 1999 (1999-09-10) * page 6, line 10 - page 13, line 25; figures 13-15 *	3	
A	EP 2 647 584 A2 (LEE SEONG JAE [KR]; LEE SU JAE [KR]) 9 October 2013 (2013-10-09) * paragraph [0113] - paragraph [0193]; figures 108,109 *	1-4	
			TECHNICAL FIELDS SEARCHED (IPC)
			B65D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 12 May 2021	Examiner Lämmel, Gunnar
CATEGORY OF CITED DOCUMENTS 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 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			

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

EP 20 02 0643

5 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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12-05-2021

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
CN 106742667 A	31-05-2017	NONE	
DE 69515885 T2	17-08-2000	AT 190946 T AU 711119 B2 CA 2166224 A1 CN 1195515 A DE 69515885 T2 DK 0778221 T3 EP 0778221 A1 ES 2128220 A1 FI 956328 A GR 3033650 T3 HK 1011961 A1 IN 192810 B JP 4058119 B2 JP H09154918 A PT 778221 E RU 2157682 C2 US 5782345 A	15-04-2000 07-10-1999 05-06-1997 14-10-1998 17-08-2000 13-11-2000 11-06-1997 01-05-1999 05-06-1997 31-10-2000 23-07-1999 22-05-2004 05-03-2008 17-06-1997 29-09-2000 20-10-2000 21-07-1998
WO 9944901 A1	10-09-1999	NONE	
EP 2647584 A2	09-10-2013	AU 2011337425 A1 BR 112013013671 A2 CN 103391886 A EP 2647584 A2 JP 2014501671 A JP 2017193381 A JP 2019147629 A KR 20120058706 A MX 357252 B US 2014110282 A1 WO 2012074301 A2	18-07-2013 26-09-2017 13-11-2013 09-10-2013 23-01-2014 26-10-2017 05-09-2019 08-06-2012 03-07-2018 24-04-2014 07-06-2012

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- PL 2704962 [0002]