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Dispensing device.

The invention provides a dispensing container, particularly a toilet block holder for delivering a chemical product to a liquid, said container [1] comprising a outer shell [2] to contain the chemical product, a hinged closure element and latch means [4] for releasably securing said closure element so as to retain said product within said shell, wherein said latch means are so configured that said latch means can be released by a force indirectly applied to said latch means. Preferably the latch means is configured such that it opens, releasing the closure element, when the container is knocked against a hard surface and said latch means can be secured again thereafter. Opening in this manner facilitates replacement of a spent block without undue handling of the container and reduces soiling of the hands.

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TECHNICAL FIELD

The present invention relates to a refillable dispensing container for dispensing chemicals into the bowl of a toilet. In particular it relates to a dispensing container which can be conveniently opened so as to facilitate refilling with said chemicals. The chemicals to be dispensed may be cleansing agents, sanitizing agents, deodorants and the like.

BACKGROUND AND PRIOR ART

Dispensing containers for dispensing a dissolvable chemical product from a solid block form into a toilet bowl are generally known. EP 413 373A (Unilever) discloses a dispensing container for delivering a chemical product to a discontinuous stream of water.

Such containers are positioned in a hanging position in the toilet bowl dependent from the rim. They frequently comprise a cage-like container with a hook for mounting the container such that the container is located under the rim of the toilet bowl. Such a container is disclosed in GB 1505808 (L'Oreal). Inside such containers there is generally found a solid block of a sparingly soluble or water-reactive cleansing agent which, during the flushing operation, is delivered to the flush water to infuse the water standing in the bowl.

Due to cost effectiveness and environmental concerns it is desirable to have a dispensing container which can be refilled. GB 1 471 040 (McDuffee) discloses a container with a top portion in a form of a cap, the cap may be removed to allow the chemical block to be renewed. Such containers are available in the market but suffer from the disadvantage that they have to be manually opened by handling the container and unfastening a latch to place a new chemical block into the container.

This task is often particularly unpleasant, as the old block can form a gelatinous mass at the bottom of the container and this mass has to be removed before the new block is placed into the container. The handling of a such a soiled device is considered unpleasant by many consumers who are disposed to discard the container and replace it completely, adding to costs and wastage of materials. Moreover, some hygiene agents can be hazardous if brought into contact with the skin and accidental skin contact is likely to occur during the refilling process.

The present invention overcomes the difficulty of opening the container by providing a dispensing container which can be opened without direct handling of the body of the container, and a method of use of such a container.

DEFINITION OF THE INVENTION

Accordingly the present invention provides a dis-

pensing container for delivering a chemical product to a liquid, said container comprising a outer shell to contain the chemical product, a hinged closure element and latch means for releasably securing said closure element so as to retain said product within said shell, wherein said latch means are so configured that said latch means can be released by a force indirectly applied to said latch means.

Opening in this manner facilitates replacement of a spent block without undue handling of the container and reduces soiling of the hands.

DETAILED DESCRIPTION OF THE INVENTION

The dispensing container preferably comprises a foraminious shell-like body formed from two halves.

Typically, the body is egg-shaped or generally cylindrical when the closure element is in a 'closed' position.

Preferably the two halves are hinged such that both halves can, when opened, be placed side by side such that the body of the container appears substantially flat. Opening of the container in such a manner enables the easy removal of any residual remains of an old block of chemical product when the container is opened to place a new block inside it.

Typically, the latch is configured such that it opens, releasing the closure element, when the container is knocked or firmly pressed against a hard surface and can be secured again thereafter.

Various configurations of latch can be envisaged. In a preferred embodiment of the invention, the latch comprises a engaging member having a nose-like projection and means for receiving the engaging member which consist of an aperture with a protruding sill. Preferably, the underside of the nose is ramp-like. This enables the container to be opened by rapping it on a hard surface and urging the ramp-like underside of the nose against one bound of the aperture thereby causing the engaging member to disengage from the aperture.

Preferably the latch is positioned directly opposite the hinge of the closure element. It is believed that this facilitates particularly easy opening of the container when it is rapped against a surface.

As the container is intended for use inside a toilet bowl, it preferably comprises means for mounting the container in the toilet bowl.

The preferred means for mounting the container in the toilet bowl comprises a hook-like member, typically a strip of resistant material folded into three, as is generally known in the art. The hook-like member can be hooked over the rim of the toilet bowl so as to position the container beneath the rim of the toilet bowl in the flush-water stream. It is also particularly preferable that the latch means are located adjacent the base of the hook-like member.

It is desirable that there is an aperture at the bot-

tom of the container such that any residual liquid may drain out from the container. In one preferred embodiment of the invention, at least two hinges are provided at the bottom of the container and the drainage aperture is located between them.

The container is preferably made of a suitable plastics material, i.e. one which does not react with the chemical components of the block.

According to a further aspect of the present invention there is provided a kit of parts comprising a container as described above, and, in combination therewith, instructions regarding a method of use of said container including the step of rapping the container against a surface.

Such a kit can further comprise one or more chemical blocks for use with said container. Preferably, each block is wrapped in a cover, such as a cellophane sheet, in such a manner that the block may be placed into the container without direct handling of the block.

A further aspect of the present invention provides a kit of parts comprising a block as described above, and, in combination therewith, instructions regarding a method of use of said block including the step of rapping a container for said block against a surface.

According to a yet further aspect of the present invention there is provided a method for refilling a toilet block container which comprises the step of rapping said container against a surface.

The abovementioned instructions will generally be in the form of indicia, preferably words and/or pictures, upon a suitable substrate.

DESCRIPTION OF THE DRAWINGS

The invention will now be described in further detail, by way of example only, with reference to the accompanying drawings in which:

Figure 1 is a perspective view of a closed container in accordance with the invention.

Figure 2 is a similar view of the container with the closure element in an 'open' position.

Figure 3 is a plan view of a part of the latch means.

Figure 4 is a cross section along the line iii-iii of figure 3.

Referring now to the figures of the accompanying drawings, these show a dispensing container [1] having a shell-like body [2] and a fastening means [3] to attach the container to a toilet bowl.

Latch [4] comprises member [5] having base [6], lug [7] and nose [8]. The underside of the nose [9] forms a ramp-like surface. Member [5] is received, by aperture [10] with an internally intruding sill [11].

The body [2] is in two halves, the two halves [15a, 16a] are joined by hinges [12a and 12b], positioned opposite the latch. Between the hinges is a gap [13].

The body of the container has holes [14] to allow

water to pass therethrough, both for ingress of water and egress of water mixed with a part of the contents of the container.

Around the periphery of one half of the device is a groove [15b] and around the other half of the device is a rim [16b], this arrangement enables the device to be tightly closed.

In-use, the container is generally closed as shown in figure 1 and suspended by hook-like fastening means [3] from the rim of a toilet bowl. A block of water-soluble or water-reactive material is entrapped within the container. During the flush cycle flush water enters through the holes [14] and leaves through these same holes or through gap [13], bearing a portion of the block therewith.

After the passage of some time it becomes necessary to replace the block. The empty container can be removed from the toilet bowl by handling fastening means [3]. By holding said fastening means and rapping the base of the body of the device on a hard surface, the force applied to the container causes the body to distort and the latch means opens. The empty device is rinsed to remove any residue and a new block, not shown, is inserted into the device. The two halves of the body of the device are then pressed together so that the rim on one half fits into the groove on the other half, the latch engages and the device is thus held shut. The device is then attached under the rim of the toilet bowl by the fastening means.

Claims

1) A dispensing container for delivering a chemical product to a liquid, said container comprising a outer shell to contain the chemical product, a hinged closure element and latch means for releasably securing said closure element so as to retain said product within said shell, wherein said latch means are so configured that said latch means can be released by a force indirectly applied to said latch means.

2) A container according to claim 1 wherein the latch means is configured such that it opens, releasing the closure element, when the container is knocked against a hard surface and wherein said latch means can be secured again thereafter.

3) A kit of parts comprising a container according to claim 1, and, in combination therewith, instructions regarding a method of use of said container including the step of rapping the container against a surface.

4) Kit according to claim 3 further comprising one or more chemical blocks for use with said container.

5) Kit of parts comprising a block as described above, and, in combination therewith, instructions regarding a method of use of said block including the step of rapping a container for said block, said container being according to claim 1 against a surface.

6) A method for refilling a toilet block container

which comprises the step of rapping said container against a surface.

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Fig. 1.

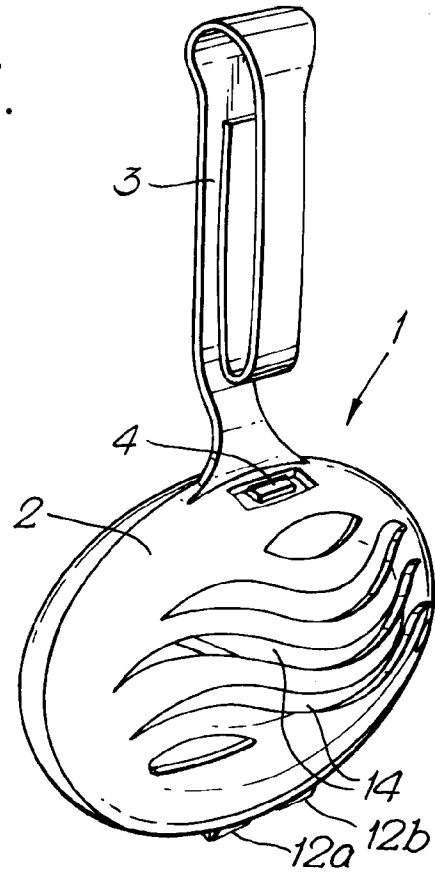


Fig. 2.

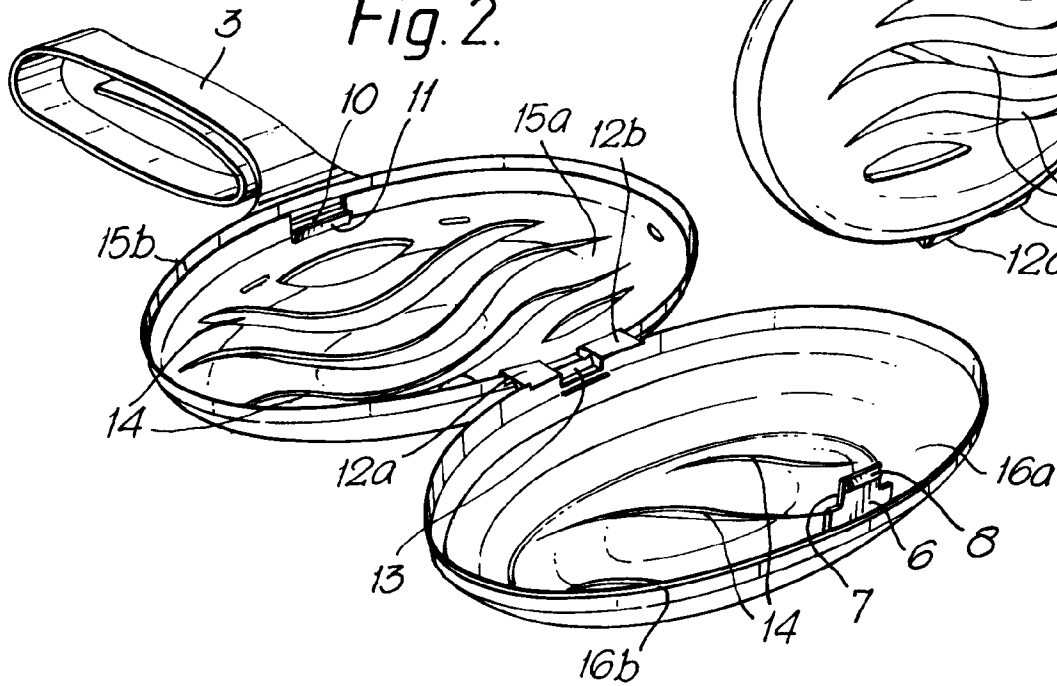


Fig. 3.

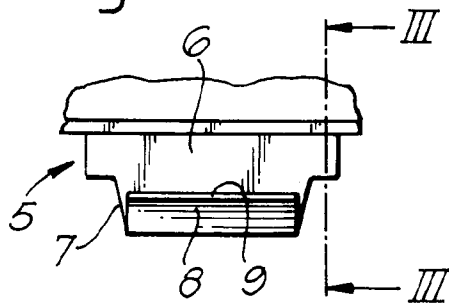
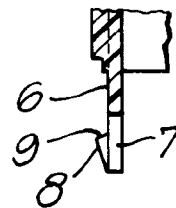


Fig. 4.





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 93 30 6499

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.5)
X,D	GB-A-1 505 808 (L'OREAL) * page 3, lines 32-37; page 4, lines 112-126; figure 1 *	1-4,6	E03D9/02
A	EP-A-0 166 374 (HENKEL K.G.) * page 4, line 8 - line 17; figure 2 *	1-4,6	
A	EP-A-0 080 943 (HENKEL FRANCE SA) * page 1, paragraph 2 - page 2, paragraph 1 *	1-4,6	
A	FR-A-2 200 414 (HENKEL & CIE. GMBH) * page 3, line 29 - line 34; figures *	1-4,6	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.5) E03D B65D A61L A47K
Place of search THE HAGUE		Date of completion of the search 29 November 1993	Examiner Van Beurden, J
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			

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