(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 0 586 137 B1

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent:
07.01.1998 Bulletin 1998/02

(51) Int Cl.[6]: **E03D 9/02**

(21) Application number: **93306499.0**

(22) Date of filing: **18.08.1993**

(54) **Dispensing device**

Verteilvorrichtung

Dispositif distributeur

(84) Designated Contracting States:
CH DE ES FR GB IT LI NL SE

(30) Priority: **20.08.1992 GB 9217715**

(43) Date of publication of application:
09.03.1994 Bulletin 1994/10

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Description

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.

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 catch 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.

Accordingly in the first aspect the present invention provides in combination:

a dispensing container for delivering a chemical product to a liquid, said container comprising an 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, characterised in that said latch means are configured so that said latch means can be releasable by a force indirectly applied to said latch means; and

instructions regarding a method of use of said container, the instructions including the step of rapping the container against a surface so as to release the latch means and open the closure element.

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

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 therafter.

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 bottom 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 dies 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.

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 become 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. In combination:

   a dispensing container for delivering a chemical product to a liquid, said container (1) comprising an 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, characterised in that said latch means (4) are configured so that said latch means are releasable by a force indirectly applied to said latch means; and
   instructions regarding a method of use of said container, the instructions including the step of rapping the container against a surface so as to release the latch means and open the closure element.

2. A combination according to claim 1 wherein the latch means (4) is configured such that it opens, releasing the closure element, when the container is knocked against a hard surface and wherein said latch means (4) can be secured again thereafter.

3. A combination according to claim 1 further comprising one or more chemical blocks for use inside said container.

4. A method for refilling a toilet block container which comprises the step of rapping the container against a surface to open the container.

5. A dispensing container (1) for delivering a chemical

product to a liquid, said container comprising a distortable 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, characterised in that said latch means (4) comprises an engaging member (5) having a nose-like projection (8) with a ramped underside (9) receivable in an aperture (10) and engagable with protruding sill (11) at the aperture; wherein a force applied indirectly to the latch means causes the shell to distort and the underside of the nose (9) to disengage from the aperture, thereby releasing the latch means.

6. In combination, a dispensing container as described in claim 5 and instructions regarding a method of use of said container, the instructions including the step of rapping the container against a surface so as to release the latch means.

7. A combination according to claim 6 further comprising one or more chemical blocks for use inside the container.

Patentansprüche

1. In Kombination:

   ein Spendebehälter zur Abgabe eines Chemikalienprodukts an eine Flüssigkeit, wobei der besagte Behälter (1) umfasst: eine äußere Hülle (2) zur Aufnahme des Chemikalienprodukts, ein aufklappbares Verschlusselement und Verriegelungseinrichtungen (4), um das besagte Verschlusselement lösbar zu sichern, so dass es das besagte Produkt innerhalb der besagten Hülle zurückhält, dadurch gekennzeichnet, dass die besagten Verriegelungseinrichtungen (4) so ausgebildet sind, dass die besagten Verriegelungseinrichtungen durch eine indirekt auf die besagten Verriegelungseinrichtungen aufgebrachte Kraft lösbar sind; und
   Anweisungen betreffend ein Verfahren zur Verwendung des besagten Behälters, wobei die Anweisungen den Schritt eines Schlagens des Behälters gegen eine Oberfläche einschließen, so dass die Verriegelungseinrichtungen freigegeben werden und das Verschlusselement geöffnet wird.

2. Kombination nach Anspruch 1, bei welcher die Verriegelungseinrichtung (4) so ausgebildet ist, dass sie sich unter Freigabe des Verschlusselements öffnet, wenn der Behälter gegen eine harte Oberfläche geschlagen wird, und bei welcher die besagte Verriegelungseinrichtung (4) danach wieder gesichert werden kann.

3. Kombination nach Anspruch 1, weiter umfassend einen oder mehr Chemikalienblöcke zur Verwendung innerhalb des besagten Behälters.

4. Verfahren zum Wiederauffüllen eines Toilettenblockbehälters, welches den Schritt eines Schlagens des Behälters gegen eine Oberfläche umfasst, um den Behälter zu öffnen.

5. Spendebehälter (1) zur Abgabe eines Chemikalienprodukts an eine Flüssigkeit, wobei der besagte Behälter umfasst: eine verformbare äußere Hülle (2) zur Aufnahme des Chemikalienprodukts, ein aufklappbares Verschlusselement und eine Verriegelungseinrichtung (4), um das besagte Verschlusselement lösbar zu sichern, so dass es das besagte Produkt innerhalb der besagten Hülle zurückhält, dadurch gekennzeichnet, dass die besagte Verriegelungseinrichtung (4) ein Eingriffselement (5) umfasst, das einen nasenartigen Vorsprung (8) mit einer abgeschrägten Unterseite (9) aufweist, der in einer Öffnung (10) aufnehmbar ist und sich mit einer vorspringenden Schwelle (11) an der Öffnung in Eingriff bringen läßt; wobei eine indirekt auf die Verriegelungseinrichtung aufgebrachte Kraft bewirkt, dass sich die Hülle verformt und sich die Unterseite der Nase (9) aus der Öffnung löst, wodurch die Verriegelungseinrichtung freigegeben wird.

6. In Kombination ein Spendebehälter, wie in Anspruch 5 beschrieben, und Anweisungen betreffend ein Verfahren zur Verwendung des besagten Behälters, wobei die Anweisungen den Schritt eines Schlagens des Behälters gegen eine Oberfläche einschließen, so dass die Verriegelungseinrichtung freigegeben wird.

7. Kombination nach Anspruch 6, weiter umfassend einen oder mehr Chemikalienblöcke zur Verwendung innerhalb des Behälters.

Revendications

1. En combinaison :

   - un récipient distributeur pour libérer un produit chimique dans un liquide, ledit récipient (1) comprenant une coque externe (2) pour contenir le produit chimique, un élément de fermeture à charnière et des moyens de loquet (4) pour fixer de manière amovible ledit élément de fermeture de façon à retenir ledit produit dans ladite coque, caractérisé en ce que lesdits moyens de loquet (4) sont configurés de sorte que les moyens de loquet peuvent être libérés par une force appliquée indirectement audits moyens de loquet ; et

- des directives concernant un procédé d'utilisation dudit récipient, les directives comprenant l'étape consistant à frapper le récipient contre une surface de façon à libérer les moyens de loquet et à ouvrir l'élément de fermeture.

2. Combinaison selon la revendication 1, dans laquelle le moyen de loquet (4) est configuré de sorte qu'il s'ouvre en libérant l'élément de fermeture, lorsque le récipient est frappé contre une surface dure et dans laquelle ledit moyen de loquet (4) peut être de nouveau correctement fermé par la suite.

3. Combinaison selon la revendication 1 comprenant de plus, un ou plusieurs blocs chimiques pour une utilisation à l'intérieur dudit récipient.

4. Procédé de recharge d'un récipient de bloc des toilettes qui comprend l'étape consistant à frapper le récipient contre une surface pour ouvrir le récipient.

5. Récipient distributeur (1) destiné à libérer un produit chimique dans un liquide, ledit récipient comprenant une coque externe déformable (2) destinée à contenir le produit chimique, un élément de fermeture à charnière et un moyen de loquet (4) pour fixer de manière amovible ledit élément de fermeture de façon à retenir ledit produit dans ladite coque, caractérisé en ce que ledit moyen de loquet (4) comprend un élément d'engagement (5) possédant une partie faisant saillie en forme de nez (8) avec un dessous à rampe (9) pouvant être reçu dans une ouverture (10) et pouvant venir en prise avec un rebord saillant (11) au niveau de l'ouverture ; dans lequel une force appliquée indirectement au moyen de loquet provoque la déformation de la coque et le désengagement du dessous du nez (9) de l'ouverture, libérant ainsi le moyen de loquet.

6. En combinaison, récipient distributeur tel que décrit selon la revendication 5 et des directives concernant un procédé d'utilisation dudit récipient, les directives comprenant l'étape consistant à frapper le récipient contre une surface de façon à libérer le moyen de loquet.

7. Combinaison selon la revendication 6 comprenant de plus un ou plusieurs blocs chimiques à utiliser dans le récipient.

Fig. 1.

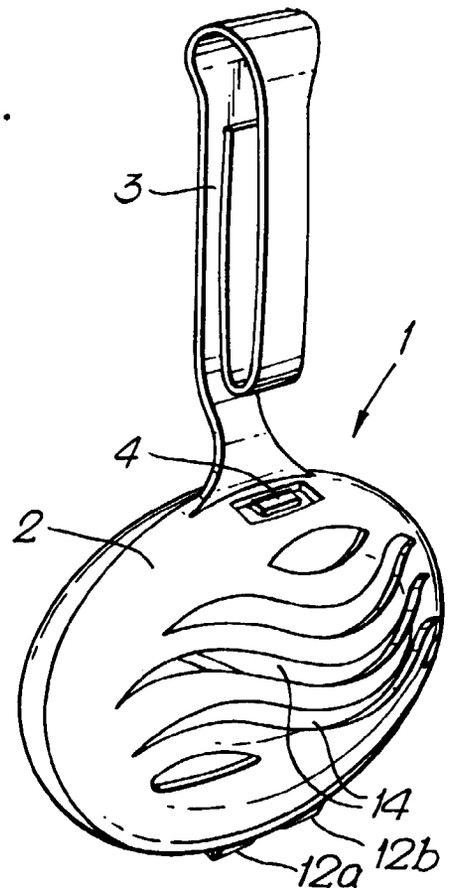


Fig. 2.

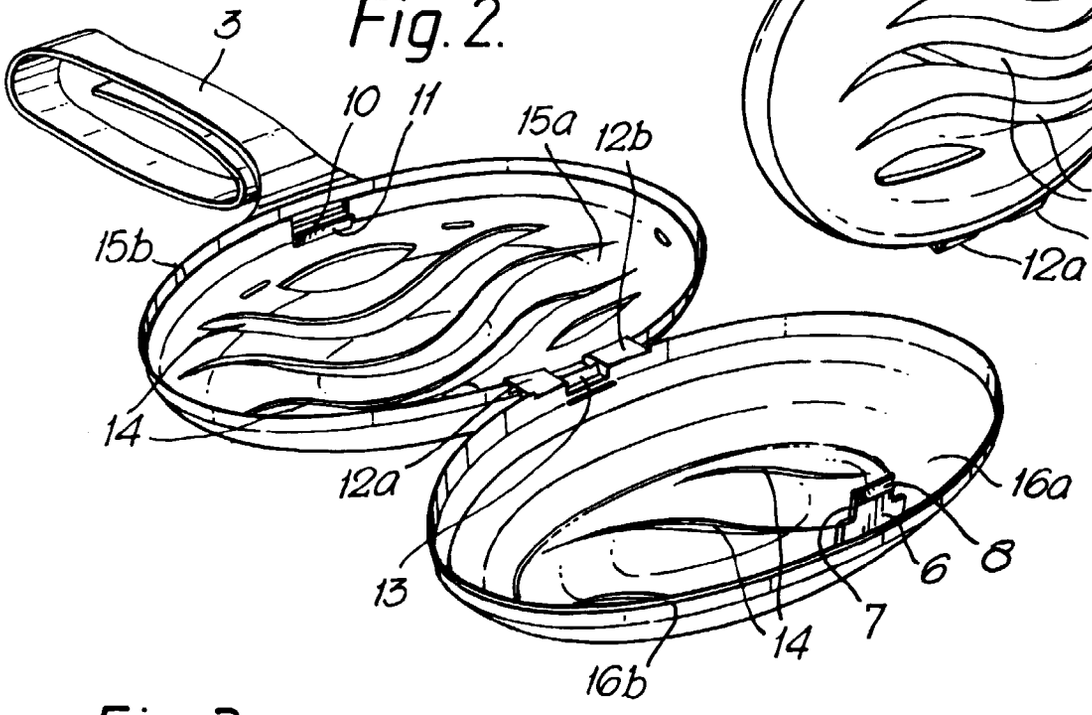


Fig. 3.

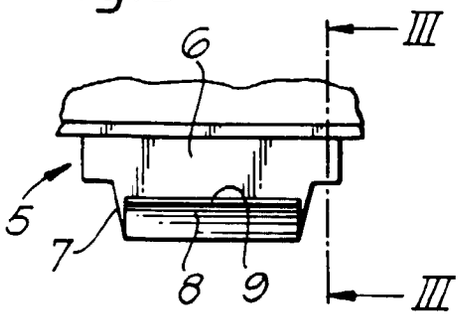


Fig. 4.

