A Disposable Water Bottle

Technical Field

[0001] The present invention relates to a disposable water bottle. For example, a disposable water bottle for containing water and beverage.

Background

[0002] Disposable plastic water bottles are abundantly used around the world to provide economical, convenient and reliable packaging for water and beverages. A common material used for the bottled water is Polyethylene Terephthalate (PET) for the body, while common material use for the caps are Low Density Polyethylene (LDPE) and High Density Polyethylene (HDPE). While each material is fully recyclable on its own, when recycled together, they cross-contaminate which leads to a loss of material properties after recycling. This is known as downcycling, which reduces the commercial value of the resultant material, dilutes commercial interest to recycle and in many cases, these bottles are simply dumped into landfills or incinerated - both outcomes create long-term environmental issues.

[0003] It has been known that alternative material made from biodegradable plastic, e.g. Polylactic Acid (PLA) and Polyhydroxyalkanoates (PHA), allows its valorisation into useful end product such as compost, fertilizer and biogas. This is a circular economy approach and offers an alternative to the recycling of plastics. While the biodegradable material is a suitable replacement for the body of the bottle, it is not suitable to replace the cap due to slip and anti-static reasons. As such, these bottles on the market comes only with a plastic cap despite having a biodegradable body, which again requires segregation to prevent cross-contamination. This poses additional segregation steps and costs to recycle the bottle, which dissuades companies from doing so.

[0004] Therefore, it is necessary to consider a complementing bottle cap that is biodegradable and made of sheet paper material which can be valorised in the same manner as the biodegradable body. The enclosure method for the cap has to keep the bottle

watertight, without the screw method of today's plastic cap due to its inherent differences in physical attribute.

Summary

[0005] According to various embodiments, the present invention relates to a disposable water bottle including a container having a body adapted to contain water and a mouth adapted to allow water into the body therethrough and a retaining portion disposed on the body, a cap including a cover adapted to cover the mouth of the container, and an engaging portion, such that the retaining portion may be adapted to retain the engaging portion such that when the retaining portion retains the engaging portion, the cover covers the mouth of the container.

[0006] According to various embodiments, the cover may include a perimeter edge, a top side and a bottom side opposite the top side, such that the bottom side may be adapted to contact the mouth of the bottle, such that the engaging portion may extend from the bottom side.

[0007] According to various embodiments, the cap may include a grip wall for a user to grip onto the cap, such that the grip wall may extend from the top side and along the perimeter edge of the cover.

[0008] According to various embodiments, the cap may include a perimeter wall extending from and along the perimeter edge of the cover extending from the bottom side, such that the grip wall may be connected to the perimeter wall to form a single wall.

[0009] According to various embodiments, the retaining portion may include a channel may include a slot for receiving the engaging portion therein.

[0010] According to various embodiments, the slot faces upwardly in the same direction as the mouth.

[0011] According to various embodiments, the channel extends from the container and form a continuous loop around the container.

[0012] According to various embodiments, the channel may include a protruding portion protruding towards the body such that the slot may be formed between the protruding portion and the body of the container.

[0013] According to various embodiments, the engaging portion may include a width and the width of the slot may be narrower than the width of the engaging portion, such that the width of the slot may be widened from an original configuration to a widened configuration as the engaging portion is forced into the channel and returns to the original configuration when the engaging portion is within the channel.

[0014] According to various embodiments, the retaining portion may be spaced from the mouth at a pre-determined height to provide a spout along the body.

[0015] According to various embodiments, the engaging portion may include a ring formed around the cover.

[0016] According to various embodiments, the cover may include a perimeter edge, such that the cap may include a perimeter wall extending from and along the perimeter edge of the cover, a top side and a bottom side opposite the top side such that the perimeter wall may extend upwardly from the top side of the cover to the engaging portion, such that the perimeter wall may include a lower edge connected to the cover and an upper edge opposite the lower edge, such that the engaging portion is disposed along the upper edge of the perimeter wall.

[0017] According to various embodiments, the retaining portion may be disposed along the perimeter edge of the mouth.

[0018] According to various embodiments, the cap may include a seal tab configured to seal the cap to the container.

[0019] According to various embodiments, the seal tab may include a strip extending from the cap and attachable to the container, such that the seal tab may be adapted to be broken

into two portions when the bottle is uncapped, such that the first portion may be attached to the cap and the second portion may be attached to the container.

[0020] According to various embodiments, the seal tab may include a panel extending outwardly from the cap, such that the seal tab extends in a vertical direction from the cap to the container and adapted to be broken into two portions when the bottle is uncapped, such that a first portion may be attached to the cap and a second portion may be attached to the container.

[0021] According to various embodiments, the retaining portion may include a slit therebetween to allow the seal tab to extend therebetween such that the seal tab may be lodged within the slit.

[0022] According to various embodiments, the seal tab may include a strip having a proximal end extending from the cap and a distal end opposite the proximal end and a collar connected to the distal end such that the collar may be adapted to be attachable to the container, such that the seal tab may be adapted to be broken into a first portion and a second portion when the bottle is uncapped, such that the first portion may be attached to the cap and the second portion may be attached to the collar.

[0023] According to various embodiments, the retaining portion may include a circular sectional profiled ring, such that the engaging portion may include a channel comprising a slot for receiving the retaining portion therein and extends along a perimeter edge of the cover to form a continuous loop around the cover.

[0024] According to various embodiments, the cap may include a compressible sealing element adapted to be compressed by the container when the cap is capped onto the mouth of the container and seal the container.

Description of Drawings

[0025] Fig. 1 shows a perspective view of an exemplary embodiment of a disposable water bottle.

[0026] Fig. 2A shows a sectional view of the bottle in Fig. 1 uncapped.

[0027] Fig. 2B shows a sectional view of the bottle in Fig. 1 capped by the cap.

[0028] Fig. 3 shows a perspective view of another exemplary embodiment of the disposable water bottle.

[0029] Fig. 4A shows a sectional view of the bottle in Fig. 3 uncapped.

[0030] Fig. 4B shows a sectional view of the bottle in Fig. 3 capped by the cap.

[0031] Fig. 5A shows a sectional view of another exemplary embodiment of the disposable water bottle uncapped.

[0032] Fig. 5B shows a sectional view of the bottle in Fig. 5A capped with the cap.

[0033] Fig. 6A shows a perspective view of another embodiment of the disposable water bottle capped with a cap.

[0034] Fig. 6B shows a perspective view of the disposable water bottle in Fig. 6A uncapped.

[0035] Fig. 6C shows a perspective view of another embodiment of the disposable water bottle capped with a cap.

[0036] Fig. 6D shows a perspective view of the disposable water bottle in Fig. 6C uncapped.

[0037] Fig. 7A shows a perspective view of another embodiment of the seal tab of disposable water bottle.

[0038] Fig. 7B shows a perspective view of the disposable water bottle in Fig. 7A.

[0039] Fig. 7C shows a perspective view of the disposable water bottle in Fig. 7A uncapped.

[0040] Fig. 7D shows a perspective view of another embodiment of the seal tab of disposable water bottle.

[0041] Fig. 7E shows a perspective view of the disposable water bottle in Fig. 7D.

[0042] Fig. 7F shows a perspective view of the disposable water bottle in Fig. 7A uncapped.

[0043] Fig. 8A shows a perspective view of another embodiment of the disposable water bottle.

[0044] Fig. 8B shows a perspective view of the disposable water bottle in Fig. 8B.

[0045] Fig. 8C shows a perspective view of the disposable water bottle in Fig. 8A uncapped.

[0046] Fig. 9A shows a sectional view of the disposable water bottle in Fig. 1.

[0047] Fig. 9B shows a sectional view of the cap of the bottle in Fig. 9A being compressed.

[0048] Fig. 10A shows a sectional view of another embodiment of the disposable water bottle uncapped.

[0049] Fig. 10B shows a sectional view of the disposable water bottle capped with the cap.

Detailed Description

[0050] In the following examples, reference will be made to the figures, in which identical features are designated with like numerals.

[0051] Fig. 1 shows a perspective view of an exemplary embodiment of a disposable water bottle 100. Bottle 100 has a container 110 and a cap 120 adapted to cap the container 110. Container 110 may be made of biodegradable material, e.g. Polylactic Acid (PLA), Polyhydroxyalkanoates (PHA), Polyhydroxybutyrate (PHB). Cap 120 may be made of a biodegradable material, e.g. a fibrous organic material, paper, etc. Cap may include printed labels made of biodegradable material, e.g. paper, etc.

[0052] By making the whole disposable water bottle 100 using biodegradable material, it is possible to decompose the whole disposable water bottle 100 without segregating the cap 120 from the container 110. In this way, it enables the whole disposable water bottle 100 to be suitable for composting without additional step and costs to segregate the cap 120 from the bottle 100.

[0053] Fig. 2A shows a sectional view of the bottle 100 in Fig. 1 uncapped. Cap 120 includes a cover 122 adapted to cover a mouth 112 of the container 110, and an engaging portion 124 adapted to engage the container 110. Container 110 may include a body 110B adapted to contain water, and the mouth 112 adapted to allow water into the body 110B therethrough. Container 110 may include a retaining portion 114 disposed on the body 110B and adapted to retain the engaging portion 124 such that when the retaining portion 114 retains the engaging portion 124, the cover 122 covers the mouth 112 of the container 110.

[0054] Fig. 2B shows a sectional view of the bottle 100 in Fig. 1 capped by the cap 120. As shown in Fig. 2B, when the engaging portion 124 of the cap 120 is being retained in the retaining portion 114, the cover 122 of the cap 120 covers the mouth 112 of the container 110. In this way, the cap 120 prevents water from escaping from the container 110.

[0055] Referring to Fig. 2A, the cover 122 may include a perimeter edge 122P, a top side 122T and a bottom side 122B opposite the top side 122T, such that the bottom side 122B is adapted to contact the mouth 112 of the bottle 100. Engaging portion 124 may extend from

the cover 122. Engaging portion 124 may extend from the cover 122 and along the perimeter edge 122P of the cover 122. Engaging portion 124 may extend from the bottom side 122B. As shown in Fig. 1, the cover 122 may be a circle, a square, rectangular, octagonal, etc. Accordingly, the engaging portion 124 may be a ring formed around the circular cover 122 or a square formed around the square cover 122. The shape of the cover 122 may correspond to the shape of the mouth 112. Engaging portion 124 may include a width. Cap 120 may include a grip wall 126 for a user to grip onto the cap 120. Grip wall 126 may extend from the cover 122 and along the perimeter edge 122P of the cover 122. Grip wall 126 may extend from the top side 122T. Grip wall 126 is adapted to allow a user to grip onto the cap 120 to allow the user to lift the cap 120 from the container 110.

[0056] Retaining portion 114 may include a channel 114C having a slot 114S for receiving the engaging portion 124 therein. Slot 114S may face upwardly in the same direction as the mouth 112. Channel 114C may extend from the container 110 and form a continuous loop around the container 110. Channel 114C may also be segmented such that a plurality of channel 114Cs may extend from the container 110 and may be spaced apart from each other along the same plane. Channel 114C may be disposed on the external surface of the body 110B such that the engaging portion 124 may surround the body 110B of the container 110. The width of the slot 114S may be narrower than the width of the engaging portion 124. Channel 114C may be resilient such that the width of the slot 114S may be widened as the engaging portion 124 is forced into the channel 114C and returns to its original configuration when the engaging portion 124 is within the channel 114C. Engaging portion 124 may be resiliently squeezed when entering the slot 114S and returns to its original configuration after entering the channel 114C. Channel 114C may include a protruding portion 114P protruding towards the body 110B such that the slot 114S may be formed between the protruding portion 114P and the body 110B of the container 110. In other words, the engaging portion 124 may be snap-fitted into the channel 114C. Protruding portion 114P may be a continuous loop along the channel 114C or segmented into a plurality of protruding portions 114P spaced apart from each other along the channel 114C. Channel 114C may be adjacent the mouth 112 or below the mouth 112. Body 110B may include a neck 110N connected to the mouth 112 such that the water may enter the body 110B through the mouth 112 and the neck 110N. Retaining portion 114 may be formed on the neck 110N.

[0057] Fig. 3 shows a perspective view of another exemplary embodiment of the disposable water bottle 200. Bottle 200 includes a container 210 and a cap 220 adapted to cap the container 210.

[0058] Fig. 4A shows a sectional view of the bottle 200 in Fig. 3 uncapped. Cap 220 in Fig. 4A is similar to the cap 120 in Fig. 2A. For example, the cap 220 may include the cover 222 adapted to cover the mouth 212 of the container 210, and the engaging portion 224 adapted to engage the container 210. As shown in Fig. 4A, the cap 220 may include a perimeter wall 228 extending from and along the perimeter edge 222P of the cover 222. Grip wall 226 may be connected to the perimeter wall 228 to form a single wall. Engaging portion 224 may be a roll up of the perimeter wall 228 to form a circular profiled ring along the rim of the perimeter wall 228. Referring to Fig. 2A, the retaining portion 114 may be formed by having a perimeter wall 228 with a height sufficient to be rolled up to form it. Perimeter wall 228 may be vertical forming a vertical cylinder or slanted at an angle forming a frustoconical cylinder. Perimeter wall 228 may extend from the bottom side 222B of the cover 222.

[0059] Container 210 in Fig. 4A is similar to the container 110 in Fig. 2A. For example, the container 210 may include the body 210B adapted to contain water, the mouth 212 adapted to allow water into the body 210B therethrough, and the retaining portion 214 disposed on the body 210B and adapted to retain the engaging portion 224 such that when the retaining portion 214 retains the engaging portion 224, the cover 222 covers the mouth 212 of the container 210. Retaining portion 214 may be spaced from the mouth 212 at a pre-determined height to provide a spout 210S along the body 210B. Perimeter wall 228 may have a wall height between the cover 222 and the rim of thereof that corresponds to the pre-determined height. Spout 210S enables a more comfortable drinking experience from the bottle 200. Retaining portion 214 may be disposed along the neck 210N of the container 210.

[0060] Fig. 4B shows a sectional view of the bottle 200 in Fig. 3 capped by the cap 220. As shown in Fig. 4B, when the engaging portion 224 is being snap-fitted into the retaining portion 214, as the wall height corresponds to the pre-determined height of the spout 210S, the cover 222 contacts the mouth 212 at its bottom side 222B to seal the water within the container 210.

[0061] Fig. 5A shows a sectional view of another exemplary embodiment of the disposable water bottle 300 uncapped. Bottle 300 includes a container 310 having a mouth 312 and a cap 320 adapted to cap the mouth 312 of the container 310. Cap 320 may include a cover 322 adapted to cover the mouth 312 of the container 310, and an engaging portion 324 adapted to engage the container 310. Cover 322 may include a perimeter edge 322P and the cap 320 may include a perimeter wall 328 extending from and along the perimeter edge 322P of the cover 322. Cap 320 may include a top side 322T and a bottom side 322B opposite the top side 322T such that the perimeter wall 328 may extend upwardly from the top side 322T of the cover 322 to the engaging portion 324. Perimeter wall 328 may include a lower edge 328L connected to the cover 322 and an upper edge 328U opposite the lower edge 328L. Engaging portion 324 may be disposed along the upper edge 328U of the perimeter wall 328. Engaging portion 324 may have a circular cross-sectional profile. Engaging portion 324 may be a roll down of the perimeter wall 328 to form a circular sectional profiled ring along the upper edge 328U of the perimeter wall 328. Referring to Fig. 5A, the container 310 may include a retaining portion 314 adapted to retain the engaging portion 324 therein. Retaining portion 314 may be disposed along the perimeter edge 322P of the mouth 312. Perimeter wall 328 may have an outer width that corresponds to or wider than the inner width of the mouth 312 such that the cap 320 may be adapted to fit or have an interference fit into the mouth 312 of the container 310 to seal the container 310. Cap 320 may be inserted into the mouth 312 until the engaging portion 324 engages the retaining portion 314 of the container 310. Cap 320 may include a handle 320H attached to the top side 322T of the cover 322 or an inner surface of the perimeter wall 328 across the cover 322 to allow the cap 320 to be lifted via the handle 320H.

[0062] Fig. 5B shows a sectional view of the bottle 300 in Fig. 5A capped with the cap 320. As shown in Fig. 5B, when the engaging portion 324 of the cap 320 engages the retaining portion 314 of the container 310, the perimeter wall 328 of the cap 320 fits the mouth 312 such that the cap 320 prevents water from exiting the container 310. Retaining portion 314 may include a C-shaped profiled channel.

[0063] Fig. 6A shows a perspective view of another embodiment of the disposable water bottle 400 capped with a cap 420. Cap 420 may include a seal tab 430 configured to seal the

cap 420 to the container 410. Seal tab 430 may include a strip extending from the cap 420 and attachable to the container 410. Seal tab 430 may be adapted to be broken into two portions when the bottle 400 is uncapped. Seal tab 430 may include a perforated line 430L along its length such that the seal tab 430 may be separated into two portions at the perforated line 430L when the bottle 400 is uncapped.

[0064] Fig. 6B shows a perspective view of the disposable water bottle 400 in Fig. 6A uncapped. As shown in Fig. 6B, the seal tab 430 may be separated into a first portion 430F and a second portion 430S at the perforated line 430L (not shown in Fig. 6B) when the bottle 400 is uncapped. First portion 430F may be attached to the cap 420 and the second portion 430S may be attached to the container 410. Seal tab 430 may extend from the perimeter wall 428 or the cover 422 of the cap 420. Retaining portion 414 may include a gap 414G therebetween to allow the seal tap to extend therebetween.

[0065] Fig. 6C shows a perspective view of another embodiment of the disposable water bottle 400A capped with a cap 420. Cap 420 in Fig. 6C is similar to the cap 420 in Fig. 6A except that the seal tab 430 extends upwardly from the cap 420 and folded to extend downwardly and attachable to the container 410.

[0066] Fig. 6D shows a perspective view of the disposable water bottle 400A in Fig. 6C uncapped. Similar to Fig. 6B, the seal tab 430 may be separated into a first portion 430F and a second at the perforated line 430L (not shown in Fig. 6B) when the bottle 400 is uncapped. First portion 430F may be attached to the cap 420 and the second portion 430S may be attached to the container 410. Seal tab 430 may extend from the perimeter wall 428 or the cover 422 of the cap 420. Retaining portion 414 may include a gap therebetween to allow the seal tab 430 to extend therebetween.

[0067] Fig. 7A shows a perspective view of another embodiment of the seal tab 530 of disposable water bottle 500. Seal tab 530 may include a panel extending outwardly from the cap 520. Seal tab 530 may extend in a vertical direction from the cap 520 to the container 510 and adapted to be broken into two portions when the bottle 500 is uncapped. Seal tab 530 may include a perforated line 530L dividing the seal tab 530 into a first portion 530F attached

to the cap 520 and a second portion 530S attached to the container 510 such that the seal tab 530 may be separated into the first portion 530F and the second portion 530S at the perforated line 530L when the bottle 500 is uncapped. Perforated line 530L may extend across the seal tab 530 in the vertical direction as shown in Fig. 7A.

[0068] Fig. 7B shows a perspective view of the disposable water bottle 500 in Fig. 7A. To uncap the bottle 500, the second portion 530S may be torn from the first portion 530F along the perforated line 530L to weaken the seal tab 530 along the perforated line 530L.

[0069] Fig. 7C shows a perspective view of the disposable water bottle 500 in Fig. 7A uncapped. After the second portion 530S is separated from the first portion 530F along the perforated line 530L (not shown in Fig. 7C), the bottle 500 may be uncapped such that the first portion 530F may be attached to the cap 520 and the second portion 530S may be attached to the container 510. Seal tab 530 may extend from the perimeter wall 528 of the cap 520. Retaining portion 514 may include a slit 514G therebetween to allow the seal tab 530 to extend therebetween such that the seal tab 530 may be lodged within the slit 514G.

[0070] Fig. 7D shows a perspective view of another embodiment of the seal tab 530 of disposable water bottle 500A. Perforated line 530L may extend across the seal tab 530 in a direction perpendicular to the vertical direction as shown in Fig. 7A, e.g. lateral direction, or any direction that allows the seal tab 530 to be separated.

[0071] Fig. 7E shows a perspective view of the disposable water bottle 500A in Fig. 7D. To uncap the bottle 500A, the second portion 530S may be torn from the first portion 530F along the perforated line 530L to weaken the seal tab 530 along the perforated line 530L.

[0072] Fig. 7F shows a perspective view of the disposable water bottle 500A in Fig. 7A uncapped. After the second portion 530S is separated from the first portion 530F along the perforated line 530L (not shown in Fig. 7F), the bottle 500 may be uncapped such that the first portion 530F may be attached to the cap 520 and the second portion 530S may be attached to the container 510. Seal tab 530 may extend from the perimeter wall 528 of the cap

520. Retaining portion 514 may include a slit 514G therebetween to allow the seal tab 530 to extend therebetween such that the seal tab 530 may be lodged within the slit 514G.

[0073] Fig. 8A shows a perspective view of another embodiment of the disposable water bottle 600. Cap 620 may include a seal tab 630 configured to seal the cap 620 to the container 610. Seal tab 630 may include a strip 632 having a proximal end 632P extending from the cap 620 and a distal end 632D opposite the proximal end 632P and a collar 632C connected to the distal end 632D such that the collar 632C is adapted to be attachable to the container 610.

[0074] Fig. 8B shows a perspective view of the disposable water bottle 600 in Fig. 8B. As shown in Fig. 8B, the collar 632C may be adapted to loop around the body 610B and below the retaining portion 614 such that the collar 632C is held under the retaining portion 614. Seal tab 630 may be adapted to be broken into a first portion 630F and a second portion 630S when the bottle 600 is uncapped. Seal tab 630 may include a perforated line 630L along its length such that the seal tab 630 may be separated into the first portion 630F and the second portion 630S at the perforated line 630L when the bottle 600 is uncapped.

[0075] Fig. 8C shows a perspective view of the disposable water bottle 600 in Fig. 8A uncapped. As shown in Fig. 8C, the seal tab 630 may be separated into a first portion 630F and a second at the perforated line 630L (not shown in Fig. 8C) when the bottle 600 is uncapped. First portion 630F may be attached to the cap 620 and the second portion 630S may be attached to the collar 632C. Seal tab 630 may extend from the perimeter wall 628 or the cover 622 of the cap 620. Retaining portion 614 may include a gap therebetween to allow the seal tab 630 to extend therebetween.

[0076] Fig. 9A shows a sectional view of the disposable water bottle 100 in Fig. 1. Cap 120 may include a compressible sealing element 140 adapted to be compressed by the container 110 when the cap 120 is capped onto the mouth 112 of the container 110 and seal the container 110. Sealing element 140 may be disposed on the bottom side 122B of the cover 122. Sealing element 140 may be disposed within the engaging portion 124. Sealing element 140 may be disposed between the perimeter wall 228 (not shown in Fig. 9A) for

embodiments shown in Fig. 4A. Sealing element 140 may be applicable to all abovementioned embodiments.

[0077] Fig. 9B shows a sectional view of the cap 120 of the bottle 100 in Fig. 9A being compressed. As shown in Fig. 9B, when the cap 120 is being capped onto the container 110, the mouth 112 of the container 110 compresses the sealing element 140, thus providing a watertight seal between the cap 120 and container 110.

[0078] Fig. 10A shows a sectional view of another embodiment of the disposable water bottle 700 uncapped. Bottle 700 includes a container 710 having a mouth 712 and a cap 720 adapted to cap the mouth 712 of the container 710. Container 710 may include a body 710B adapted to contain water, and the mouth 712 adapted to allow water into the body 710B therethrough. Container 710 may include a retaining portion 714 disposed on the body 710B. Retaining portion 714 may be disposed at the mouth 712 of the container 710. Retaining portion 714 may include a circular sectional profiled ring having a wider width than the wall of the body 710B of the container 710. Cap 720 may include a cover 722 adapted to cover 722 the mouth 712 of the container 710, and an engaging portion 724 adapted to engage the container 710. Cover 722 may include a perimeter edge 722P. Engaging portion 724 may include a channel 724C having a slot 724S for receiving the retaining portion 714 therein and extends along the perimeter edge 722P of the cover 722 to form a continuous loop around the cover 722. Channel 724C may also be segmented such that a plurality of channels 724C may extend from the cover 722 and may be spaced apart from each other along the same plane. Slot 724S may face downwardly towards the container 710. Retaining portion 714 may be adapted to retain the engaging portion 724 such that when the retaining portion 714 retains the engaging portion 724, the cover 722 covers the mouth 712 of the container 710. Cap 720 may include a sealing element (not shown in Fig. 10A) as mentioned above.

[0079] Fig. 10B shows a sectional view of the disposable water bottle 700 capped with the cap 720. The width of the slot 724S may be narrower than the width of the retaining portion 714. Channel 724C may be resilient such that the width of the slot 724S may be widened as the retaining portion 714 is forced into the channel 724C and returns to its original configuration when the retaining portion 714 is within the channel 724C. Retaining portion

714 may be resiliently squeezed when entering the slot 724S and returns to its original configuration after entering the channel 724C. Channel 724C may include a pair of walls 724W and a protruding portion 714P protruding from one of the pair of walls 724W such that the slot 724S may be formed between the protruding portion 714P and one of the pair of walls 724W opposite thereto. In other words, the retaining portion 714 may be snap-fitted into the channel 724C.

[0080] A skilled person would appreciate that the features described in one example may not be restricted to that example and may be combined with any one of the other examples.

[0081] The present invention relates to a disposable water bottle generally as herein described, with reference to and/or illustrated in the accompanying drawings.