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(54) Security device for a receptacle

(57) A security device is provided for use with a receptacle. The security device includes engagement means (6) for allowing engagement of the device to the receptacle in use and closure means (36) capable of closing an opening (28) of the receptacle in use. The device further includes tamper evident means (40) and, with the closure means in a closed position with respect to the opening of the receptacle in use, removal of the closure means from the opening is limited or prevented without damage and/or removal of the tamper evident means. Linking means (12) are provided between the engagement means and the closure means and the linking means allows relative movement of the closure means and the engagement means.

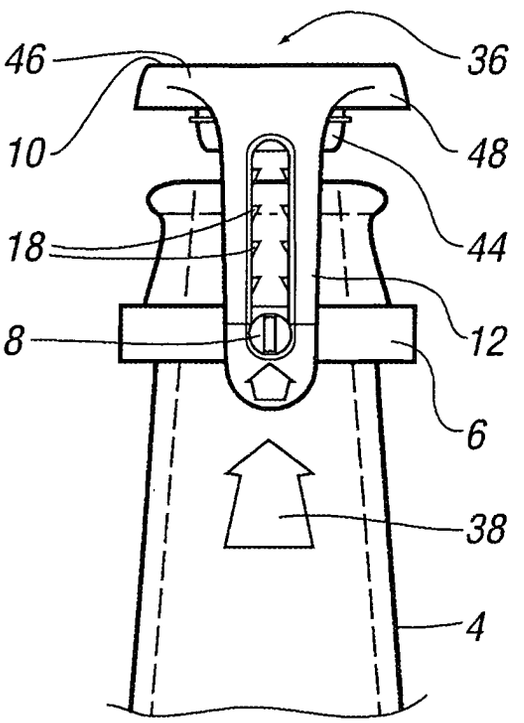

FIG. 4b

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Description

[0001] This invention relates to a security device.

[0002] Although the following description refers almost exclusively to a security device for preventing unauthorised substances from being placed in a receptacle in the form of a drinks bottle, it will be appreciated by persons skilled in the art that the present invention can be used for securely closing any type of receptacle, such as for example a child proof container for holding drugs medicines, tablets and/or the like.

[0003] In recent years the incident of "Drug Rape" or "Drug Robbery", wherein the victim is drugged prior to being attacked, is on the increase. It is estimated that there were approximately 200,000 cases of drug rape reported in 2002 in the UK alone. These attacks are thought to occur as a result of the victim leaving a drink in a bar or club unsupervised for a period of time whilst they dance, talk to friends, go to the toilet and/or the like. The attacker is able to slip a drug, such as GHB, into the victims drink without being detected. On consumption of the drug spiked drink, the victim becomes unconscious, weak, incapable of reacting to attack and/or the like. This type of crime is clearly distressing to the victim and a number of proposals have been made in order to try and combat the same.

[0004] One such proposal is based on authorised personnel, such as a police officer, having a test kit which detects the presence of a variety of drugs known to be used in drug rape or drug robbery which they can use to test drinks in bars and clubs. The problem with this is that it relies on a police officer being present in the club and testing all drinks, which is unlikely to happen due to time constraints, limited man power and cost implications. In addition, even after a drink has been tested and appears to be drug free, a drug may still be placed in a victims drink at a later time. Similar test kits could be provided for bar and club users but a user is unlikely to test their drink each time they leave their drink unattended. In order to overcome this problem it is known to provide a test device which can be placed in the user's drink and remains there until the user has finished the drink. An example of such a device is known as a "swizzle stick". The stick is placed in the user's drink and changes colour upon detection of a particular drug. However, such devices have been found to be too expensive and are not compatible for all known types of drink. A further problem with such devices is that no universal drug testing kit has yet been developed and so the test kits only detect the presence of maybe a few possible drugs. As such, other drugs may still go undetected in a users drink. Currently there is up to 25 known drugs which are believed to be used in drug related crimes and therefore test kits are unlikely to be a practical solution to the problem.

[0005] Closure means, such as drinks caps, could be supplied with drinks bottles which the user locates over the drinks bottle when they leave their drink for a period of time. However, known closure means can easily be removed from and replaced on the bottle by an attacker and the victim is unlikely to be aware that their drink has been tampered with.

[0006] It is therefore an object of the present invention to provide a security device for a receptacle which is tamper evident, thereby allowing a user to be informed of whether someone has tried to tamper with the receptacle.

[0007] It is a further object of the present invention to provide a security device which is quick and easy to use, thereby allowing users such as the elderly, frail, disabled or inebriated people to use the same.

[0008] According to a first aspect of the present invention there is provided a security device for use with a receptacle, said security device including engagement means for allowing engagement of the device to the receptacle in use and closure means capable of closing an opening of said receptacle in use, said device further including tamper evident means and, with the closure means in a closed position with respect to the opening of said receptacle in use, removal of the closure means from the opening is limited or prevented without damage and/or removal of said tamper evident means, characterised in that linking means are provided between the engagement means and the closure means and said linking means allows relative movement of said closure means and said engagement means.

[0009] With the closure means in a closed position with respect to the opening of said receptacle in use, movement between the engagement means and the closure means is limited or prevented.

[0010] The relative movement provided for by the linking means allows a user to move the closure means into an engaged position over an opening of said receptacle as and when required, such as for example, if the user intends to leave a drinks receptacle unattended for a pre-determined period of time in an environment where date rape offences often take place, such as a pub or night club. The device of the present invention is in contrast to conventional tamper evident closure means, such as found on pills or tablets, whereby the closure means are provided on a product or receptacle in the closed position during manufacture and a user has to remove or break the tamper evident means before they can access the contents of the product or receptacle for the first time. Thus, in prior art devices, there is no relative movement between the engagement means and the closure means prior to closure of said closure means.

[0011] Preferably movement between the closure means and the engagement means when the closure means is in the closed position is significantly limited relative to movement between the same when the closure means is in an open position with respect to the receptacle.

[0012] Once a user has moved the closure means to a closed position on the receptacle, removal of the clo-

sure can only typically take place by damaging the tamper evident means or causing some visual change to the tamper evident means, thereby allowing the user to easily determine when the security device has been tampered with by an unauthorised party.

[0013] Preferably the engagement means can be easily fitted over, adjacent to and/or to a portion of the receptacle defining an opening and, when fitted, removal of the engagement means from the receptacle thereafter is made difficult or prevented without causing damage to the engagement means.

[0014] Preferably the engagement means includes or is in the form of a substantially annular member. The annular member is typically located around or over a portion of the receptacle, such as for example a neck portion of a receptacle defining an opening or open end.

[0015] In one embodiment at least part of the engagement means is formed of substantially resilient material which allows the same to be push fitted over a portion of the receptacle. The portion of the receptacle to which the engagement means is push fitted to typically defines an opening thereof, a lip or rim of the receptacle, thereby preventing removal of the engagement means from the receptacle when fitted.

[0016] In one embodiment the engagement means is integrally formed with or attached directly onto a portion of the receptacle during manufacture, said portion preferably defining an opening so that the engagement means cannot be removed from the receptacle unless the receptacle and/or engagement means is cut and/or damaged.

[0017] In a further embodiment, the engagement means can be provided with one or more protrusion members on an inner surface thereof. These protrusion members can protrude inwardly of the engagement means. These protrusion members engage against the outer surface of the receptacle and are formed such that they allow movement of the engagement means relative to a portion of the receptacle in a first direction but limit or prevent movement in a second direction. The second direction is typically opposite to said first direction.

[0018] The engagement means can be provided in a shape substantially complementary to the outer shape of the portion of the receptacle with which it locates or engages with. For example, the engagement means can be substantially annular in shape for location over a generally cylindrical shaped portion of the receptacle, such as the neck of a drinks bottle.

[0019] The linking means can be pivotally, rotatably or slidably attached to the engagement means and/or closure means to allow relative movement of the closure means with respect to the engagement means. Alternatively, or in addition, the linking means can be attached to the engagement means and/or closure means in such a manner to allow flexion in any suitable direction. For example, the linking means or attachment of the linking means to the engagement means and/or closure means can be formed from resilient material.

[0020] In one embodiment the tamper evident means forms part of the linking means.

[0021] Preferably the linking means, when actuated, allows movement of said closure means relative to the receptacle and/or engagement means in a first direction and limits or prevents movement of said closure means in a second and preferably opposite direction. Preferably movement in the second direction may only take place if at least a part of said linking means or tamper evident means is removed or broken. The first direction can be movement of the closure means to a closed position with respect to the opening of said receptacle and the second direction can be movement of the closure means to an open position with respect to the opening.

[0022] The linking means can be attached directly to the closure means and/or engagement means. In a preferred embodiment at least part of the linking means is integrally formed with the closure means and/or engagement means.

[0023] Preferably the linking means is in the form of at least one arm member. The arm member typically extends between the closure means and the engagement means. In one example, the arm member is slidably mounted on a portion of the engagement means such that the arm member moves relative to the engagement means in a first direction but movement in a second opposite direction is prevented or limited.

[0024] In one embodiment a channel is defined in the arm member and an engagement means portion is slidably mounted therein. One or more teeth or protrusion members can project inwardly of the channel, said teeth or protrusion members arranged so as to allow movement of the engagement means portion in a first direction but not in a second direction.

[0025] Preferably the teeth or protrusion members include a surface which tapers outwardly in a direction from the engagement means towards the closure means, thereby creating a shoulder portion or stopper adjacent the channel at the free end of the taper. The engagement means portion is able to move through the channel in the direction of the diverging taper but is prevented from moving in the opposite direction due to the shoulder portion.

[0026] Preferably the tamper evident means includes one or more frangible portions which, when broken, indicates tampering therewith. In one embodiment the frangible portions are provided on said linking means, arm member and/or engagement means to allow at least a part of the arm member and/or engagement means to be removed, thereby allowing at least the closure means to be removed from the receptacle. If a user finds that any of the frangible portions have been broken, they know that their drink may have been tampered with.

[0027] The portion of the engagement means which is slidably located in said channel of said arm member is typically a protruding member. The head of the protruding member is typically of larger dimensions that the

neck of the protruding member, thereby preventing the head from being disengaged from the channel.

[0028] In a further or alternative embodiment, tamper evident means are provided on said closure means. The tamper evident means can include any or any combination of one or more frangible portions, weakened portions and/or the like. Removal or breaking said tamper evident means typically allows at least part of the closure means to be removed from a remaining part of said closure means, thereby allowing said closure means to be removed from the opening of said receptacle.

[0029] Preferably the closure means includes at least a base portion and a top portion. Tamper evident means are typically provided between said base and top portions, such that removal or breaking of said tamper evident means allows separation of said top portion from said base portion.

[0030] Preferably the linking means links the base portion of the closure means to the engagement means. Thus, the base portion is movable with respect to the engagement means. The linking means can be in the form of an arm member or any other suitable linkage arrangement and can mounted or moved with respect to the engagement means and base portion as described hereinbefore.

[0031] The base portion of the closure means can be provided in a similar or substantially complementary form to said engagement means.

[0032] In this embodiment, when a user moves the closure means into a closed position with respect to the opening of the receptacle, the base portion of the closure means is typically moved into engagement with a part of the receptacle defining the opening. Further preferably the base portion is engaged over or above the engagement means. Thus, in one example, the base portion is adjacent to, substantially parallel to and axially aligned with said engagement means.

[0033] Preferably the closure means are provided with sealing means to allow sealing engagement of the closure means with the receptacle in use.

[0034] In one embodiment the closure means is in the form of a cap and can include an inner and/or an outer peripheral skirt member extending from the cap. The inner and/or outer skirt members can engage with the inner and/or outer surfaces of the receptacle adjacent the open end in use.

[0035] Complementary engagement means can be provided on said inner and/or outer skirt member and said receptacle to allow engagement therebetween if required.

[0036] In use in one example, the security device is located onto a portion of the receptacle defining an opening by engaging the engagement means with the receptacle. The closure means of the device is aligned with the opening when closure of the opening via the security device is required. This closure can be temporary, wherein the user simply covers the opening of the receptacle with the closure means. Alternatively, the closure can be moved to a tamper evident position.

[0037] In one embodiment this tamper evident position is achieved by bringing the base portion of the closure means into engagement with the receptacle, typically above the engagement means already joined to the receptacle. Thereafter, tamper evident means on the closure means need to be removed to separate the base portion from an upper portion of the closure means.

[0038] In an alternative embodiment the tamper evident position is achieved by pushing the closure means and engagement means towards each other, such that a portion of the engagement means moves relative to the linking means to an engaged position. This engaged position is typically where the engagement means becomes locked relative to the closure means and further movement relative to each other is prevented. The linking means prevents separation of the base member from the closure means until one or more frangible portions are broken on the engagement means or linking means.

[0039] Preferably the receptacle is in the form of a drinks bottle. The drinks bottle can be made from any material, such as plastic, rubber and/or glass.

[0040] According to a second aspect of the present invention there is provided a method of using a security device.

[0041] According to a further aspect of the present invention there is provided a receptacle with a security device attached thereto.

[0042] According to a yet further aspect of the present invention there is provided a tamper evidence closure means for use in a drinks bottle.

[0043] Advantages of the present invention are that the security device is quick and easy to use. It is inexpensive to manufacture and therefore the device can be supplied with each receptacle or a user could purchase a number of the devices for use as and when required. The device can be located on the receptacle by a user once the original closure cap has been removed. Alternatively, the device can be provided on the receptacle at the point of manufacture or prior to purchase either in addition to or as an alternative to an original closure cap. A user can actuate the security device when they leave their drink or receptacle unattended and can easily remove the device upon their return.

[0044] The shape, colour, size and/or design of the security device can be customized according to the retailer and/or the size and shape of the receptacle to which it is to be fitted in use.

[0045] Embodiments of the present invention will now be described with reference to the accompanying figures, wherein:

Figure 1 is an exploded view of the security device in one embodiment of the present invention;

Figure 2 is a front view of the security device shown in figure 1;

Figure 3 is a side view of the security device shown in figure 1;

Figures 4a-4c is a front view of the security device in figure 1 in various positions of use on a drinks bottle;

Figure 5 is a perspective view of a security device according to a further embodiment of the present invention;

Figure 6 is a perspective sectional view of the security device in figure 5; and

Figures 7a-7c show a cross sectional view, side view and plan view of a variation of the device in figure 5.

[0046] Referring to figures 1-4c, there is illustrated a security device 2 which provides a tamper evident closure means for use on a receptacle in the form of a drinks bottle 4.

[0047] The security device includes engagement means in the form of annular member 6. A protrusion portion 8 is provided on member 6 which protrudes outwardly therefrom. The device further includes closure means in the form of a cap 10. Linking means in the form of an elongated arm 12 extends from cap 10 and is integrally formed therewith. Arm 12 has a channel 14 defined therein. Protrusion portion 8 is located at a first end 16 of channel 14 prior to use of the device 2. The head or free end of the protrusion is typically of larger dimensions than the neck of the protrusion and the diameter of the channel, thereby preventing the head from being disengaged from arm 12.

[0048] Movement limitation means in the form of a plurality of teeth 18 are provided at spaced apart intervals along the length of channel 14 and protrude inwardly thereof. The teeth are substantially wedge shaped and include a tapered surface 20 which diverges outwardly towards cap 10 and forms a shoulder portion 22 facing cap 10. The shape of the teeth ensure that protrusion portion 8 can slide in channel 14 in one direction from end 16 towards cap 10 but cannot slide in the opposite direction from cap 10 to end 16.

[0049] Tamper evident means in the form of a plurality of frangible portions 24 are provided along the length of arm 12 on opposite sides on channel 14 (only one portion 24 being shown in the figures for the purposes of clarity). The frangible portions 24 are typically located adjacent and above each shoulder portion 22 and are provided transversely of arm 12. The frangible portions 24 provide points of weakness on arm 12 so that the arm can be easily broken at said portions to separate the arm 12 and thus cap 10 from annular member 6. Frangible portions can be provided on member 6 as an alternative or in addition to portions 24 is required.

[0050] The device 2 is typically utilised by a user in a night club or pub when the user wishes to leave an open drink unattended for a period of time, such as if the user wishes to dance on the dance floor where glass bottles of drink are normally not allowed to be taken. The user in one example purchases the device 2 at the same time as purchasing a glass drinks bottle 4 and locates device 2 on bottle 4.

[0051] The drinks bottle 4 has a neck portion 26 which has an open end 28 defined at a top 30 thereof. A closure cap is normally provided over the open end of the bottle and is removed to allow a user to drink from open end 18. The neck portion 26 has a lip 32 provided a spaced distance from top 30 which creates a shoulder portion 34. The user push fits annular member 6 over top 30 until member 6, as shown in figures 4a and 4b.

[0052] Annular member 6 can typically move to a small degree along neck portion 26 but this movement is limited by shoulder portion 34 and the taper of neck portion 26 which typically diverges outwardly from top 30 to the base of the bottle. The ability of annular member 6 to move relative to neck portion 26 allows the device 2 to be used with different sized and designs of bottle, such that the device is a universal device and is not limited to any particular drinks manufacturer or drinks bottle.

[0053] In order to help prevent removal of annular member 6 from neck portion 26, a plurality of substantially resilient or flexible teeth (not shown) can be provided on an inner surface and protrude inwardly of member 6. The resilience of these teeth allow movement of member 6 in one direction along neck portion 26 but limit or prevent movement of member 6 in an opposite direction (i.e. towards top 30 of neck portion 26).

[0054] With protrusion portion 8 of engagement means 6 located at end 16 of channel 14 of arm member 12, said arm member 12 and cap 10 are typically pivotally movable relative to protrusion portion 8. This allows arm member 12 and cap 10 to be moved from an angled position, as shown in figure 4a, to a substantially vertical position, as shown in figure 4b. As such, a user can easily move cap 10 to a position where it is located over open end 28 but without protrusion portion 8 being moved along channel 14.

[0055] When a user wishes to secure the cap 10 onto open end 28 in a tamper evident position, the user aligns cap 10 with open end 28 and moves/pushes cap 10 and annular member 6 together, as shown by arrows 36, 38 in figure 4b. This pushing action causes member 6 to move towards shoulder portion 34 of neck portion 26 until it abuts thereagainst. Further movement of member 6 towards open end 28 is limited by shoulder portion 34 and thus arm member 12 is then forced to move relative to protrusion portion 8 following further pushing action. More particularly, protrusion portion 8 moves along channel 14 towards cap 10 and is forced past teeth 18 until cap 10 is firmly located in open end 28, as shown in figure 4c. Teeth 18 are formed of sufficiently flexible or resilient material to allow this to happen.

[0056] With the cap 10 secured into position in open end 28, arm member 12 and annular member 6 are locked in position on bottle 4. In order to remove cap 10 from the bottle 4, a user has to break arm member 12 along a frangible portion 24 adjacent and just below protrusion portion 8. As such, if a user returns to their drink to find arm member 12 broken, they will know that their drink has been tampered with and know not to consume the drink in bottle 4. The user breaks arm member 12 along the appropriate frangible portion by moving end 40 of arm 12 upwardly and away from bottle 4, as shown by arrow 42.

[0057] Cap 10 typically includes an inner portion 44 which is located through open end 28 of bottle 4 and an outer portion 46 which has a peripheral skirt 48 forming side walls of cap 10, the inner surfaces of which engage with the outer peripheral edge 50 of top 30. Thus edge 50 of bottle 4 is typically located between the outer wall of inner portion 44 and the inner wall of skirt 48 to lock cap 10 in place.

[0058] It will be appreciated that cap 10 could also comprise inner portion 44 only or outer portion 46 only and would work equally well at closing open end 28 of bottle 4 in either embodiment.

[0059] Cap 10 can form a liquid tight seal with open end 28 of bottle 4 or can form a non-liquid tight seal and act simply as a barrier to foreign objects being placed in the bottle. In order to increase engagement of inner portion 44 with the inner surface of neck portion 26, a lip 48 can be provided around the periphery of portion 44. Other suitable sealing means can be provided if required.

[0060] The inner surface of skirt 48 can be provided with complementary engagement means with the outer surface of bottle 4 if required. For example, screw threaded engagement means could be provided.

[0061] Any number of teeth 18 or one way movement means can be provided on arm 12 as required and can be integrally formed with arm 12 or attached thereto. In addition, other mechanisms or shaped teeth can be provided on the arm member which allow one way movement of the arm member relative to annular member 6.

[0062] In one embodiment the protrusion portion 8 can be formed from at least a first part 50 and a second part 52. These parts can be formed of substantially resilient material and are biased away from each other, a small gap 54 being formed therebetween. Arm member 12 can be provided as a separate component to annular member 6 and can be push fitted or snap fitted onto the same. Thus, end 16 of channel 14 can be located over parts 50, 52 and said parts can be forced into channel 14. The parts 50,52 are forced together reducing the total diameter of the same to allow their location in channel 14, whereafter parts 50, 52 are biased outwardly to prevent easy removal of the parts from channel 14.

[0063] Referring to figures 5-7c, further examples of security devices 102, 104 are illustrated. The same reference numerals are used to denote the same features as in the above described embodiment.

[0064] Thus, security devices 102, 104 include an annular member 6 for engagement over the neck of a drinks bottle. Linkage means in the form of elongate arm member 106 joins member 6 to cap 10. Arm member 106 allows movement of cap 10 with respect to annular member 6, thereby allowing cap 10 to be moved to a closed position with respect to an opening of said receptacle.

[0065] Cap 10 includes a base portion 108, an upper portion 110 and tamper evident means in the form of a tear off strip 112. The tear off strip is joined to base portion 108 and upper portion 110 via frangible means. Gripping means in the form of a protruding tab 114 is provided at one end of strip 112 to allow a user to grip the same, thereby making it easier for strip 112 to be removed.

[0066] In use of security devices 102, 104, annular member 6 is engaged over the neck of a drinks bottle as described previously. When a user wishes to leave their drink unattended for a pre-determined period of time, the user moves base portion 108 of cap 10 into engagement over the neck of the drinks bottle as with annular member 6. Arm member 106 allows this manipulation and allows base portion 108 to be moved adjacent to member 6 on the receptacle. In this position, upper portion 110 simply acts as a cover over the open end of the drinks bottle. Removal of strip 112 allows upper portion 110 to be removed from base portion 108, thereby allowing access to the drink in the bottle. If a user, returns to their drink to find the upper portion separated from the lower portion, they will know their drink has been tampered with.

[0067] Base portion 108 is provided with similar anti-removal features as with annular member 6, thereby preventing removal of base portion 108 from the receptacle once it has been engaged therewith.

[0068] In figure 6, cap 10 includes an inner portion 44 for location through the opening of the drinks bottle. The inner portion can include threaded portions or other engagement means thereon for engagement with complementary engagement means on the inner or outer surface of the drinks bottle defining the opening. In an alternative embodiment shown in figures 7a-7c, inner portion is removed and cap 10 simply provides a cover over the opening of the drinks receptacle.

[0069] It will be appreciated that any or any combination of the features described in any of the embodiments can be used alone or in combination with each other and still fall within the scope of the present invention.

[0070] The security device can be formed from any suitable material, such as metal, rubber or plastic. In a preferred example, the device is injection moulded from polypropylene. In one embodiment the material from which the device is made can include fluorescent or UV sensitive material, thereby allowing the device to be visible in reduced lighting or in UV lighting, such as in a night club or pub.

[0071] It will be appreciated that two or more arm members can be provided for engagement with two or more protrusion portions on said base member.

Claims

1. A security device for use with a receptacle, said security device including engagement means for allowing engagement of the device to the receptacle in use and closure means capable of closing an opening of said receptacle in use, said device further including tamper evident means and, with the closure means in a closed position with respect to the opening of said receptacle in use, removal of the closure means from the opening is limited or prevented without damage and/or removal of said tamper evident means, **characterised in that** linking means are provided between the engagement means and the closure means and said linking means allows relative movement of said closure means and said engagement means.

2. A security device according to claim 1 **characterised in that** with the closure means in a closed position with respect to the opening of said receptacle in use, movement between the engagement means and the closure means is limited or prevented.

3. A security device according to claim 2 **characterised in that** the movement is limited relative to when the closure means is in an open position with respect to the opening of the receptacle and/or the engagement means are in a disengaged position with respect to the receptacle.

4. A security device according to claim 1 **characterised in that** the engagement means are engaged over, adjacent and/or to a portion of the receptacle defining the opening.

5. A security device according to claim 1 **characterised in that** with the engagement means engaged to the receptacle in use, removal of the engagement means from the receptacle thereafter is prevented without damaging the engagement means.

6. A security device according to claim 1 **characterised in that** the engagement means includes or is in the form of a substantially annular member.

7. A security device according to claim 1 **characterised in that** at least part of the engagement means is formed from a substantially resilient material which allows the engagement means to be push fitted over a portion of the receptacle in use.

8. A security device according to claim 1 **characterised in that** the engagement means is integrally formed with or attached to the receptacle during manufacture of the receptacle.

9. A security device according to claim 1 **characterised in that** the engagement means includes one or more protrusion members on an inner surface thereof.

10. A security device according to claim 9 **characterised in that** the one or more protrusion members allow movement of the engagement means relative to a portion of the receptacle in use in a first direction but prevent or limit movement of the engagement means relative to said receptacle portion in a second direction.

11. A security device according to claim 1 **characterised in that** the engagement means are provided of a substantially complementary shape to the portion of the receptacle to which they are to be engaged to in use.

12. A security device according to claim 1 **characterised in that** the tamper evident means forms part of the linking means.

13. A security device according to claim 1 **characterised in that** the linking means allows relative movement of the closure means to the receptacle and/or the engagement means in a first direction and limits or prevents movement of the closure means in a second direction.

14. A security device according to claim 13 **characterised in that** the second direction is substantially opposite to the first direction.

15. A security device according to claim 1 **characterised in that** the linking means is in the form of at least one arm member.

16. A security device according to claim 15 **characterised in that** a channel is defined in the at least one arm member and a portion of the engagement means is slidably mounted in said channel.

17. A security device according to claim 16 **characterised in that** one or more teeth or protrusion members are provided to project inwardly of said channel, said teeth or protrusion members arranged so as to allow movement of the engagement means portion in a first direction but limit or prevent movement in a second direction.

18. A security device according to claim 17 **characterised in that** the one or more teeth or protrusion members include a surface which tapers outwardly

in a direction from the engagement means towards the closure means.

19. A security device according to claim 1 **characterised in that** the tamper evident means includes one or more frangible or weakened portions.

20. A security device according to claim 1 **characterised in that** the one or more frangible portions are arranged so that on breaking of the frangible portions, at least part of the closure means can be removed from the opening of the receptacle in use.

21. A security device according to any preceding claim **characterised in that** the one or more frangible portions are arranged on the linking means, arm member and/or engagement means.

22. A security device according to any preceding claim **characterised in that** frangible portions are provided adjacent to and above and/or below each of said teeth or protrusion members on said device and are provided transversally of said arm member.

23. A security device according to any preceding claim **characterised in that** the one or more frangible portions are provided on the closure means.

24. A security device according to claim 1 **characterised in that** the closure means includes a base portion and a top portion and the tamper evident means are provided between the base and top portion.

25. A security device according to claim 24 **characterised in that** the linking means links the base portion to the engagement means.

26. A security device according to any preceding claim **characterised in that** the base portion of the closure means is substantially complementary in form to said engagement means.

27. A security device according to any preceding claim **characterised in that** when the closure means is moved to a closed position with respect to the receptacle in use, the base portion of the closure means is moved into engagement with a part of the receptacle defining an opening of the receptacle.

28. A security device according to claim 27 **characterised in that** the base portion engages over or adjacent the engagement means.

29. A security device according to claim 1 **characterised in that** the closure means includes sealing means to allow sealing engagement of the closure means with the receptacle in use.

30. A receptacle with a security device according to claim 1 attached thereto.

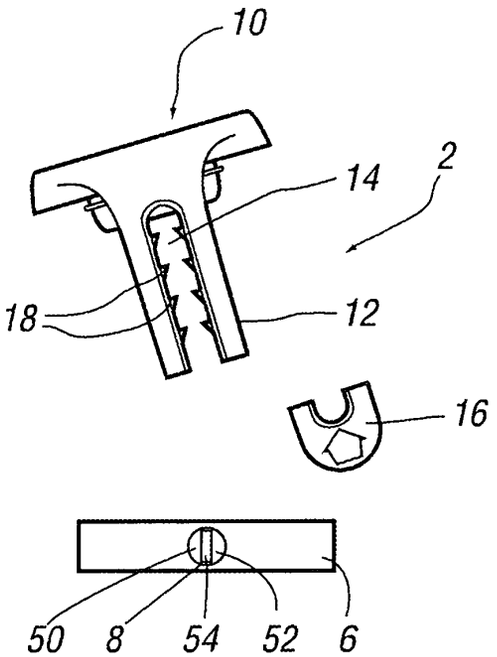

FIG. 1

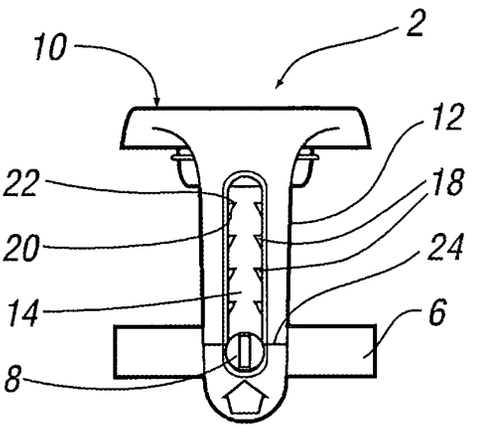

FIG. 2

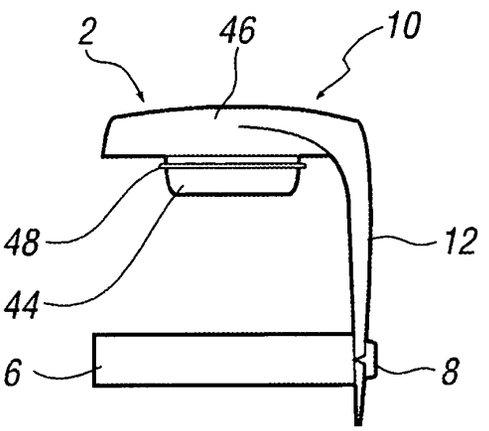

FIG. 3

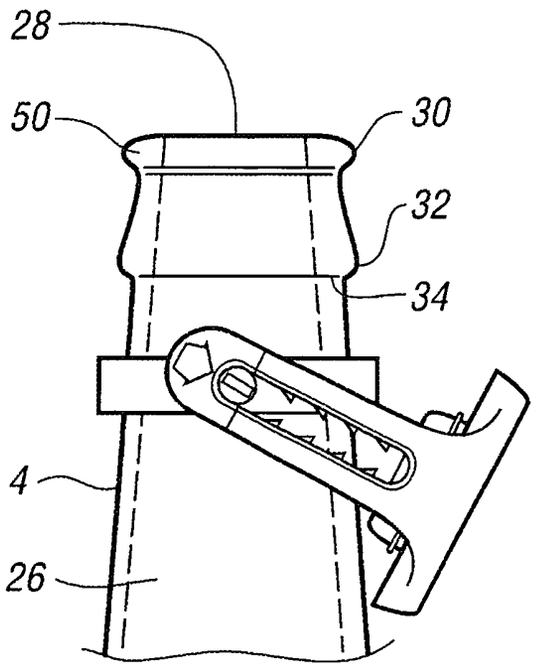

FIG. 4a

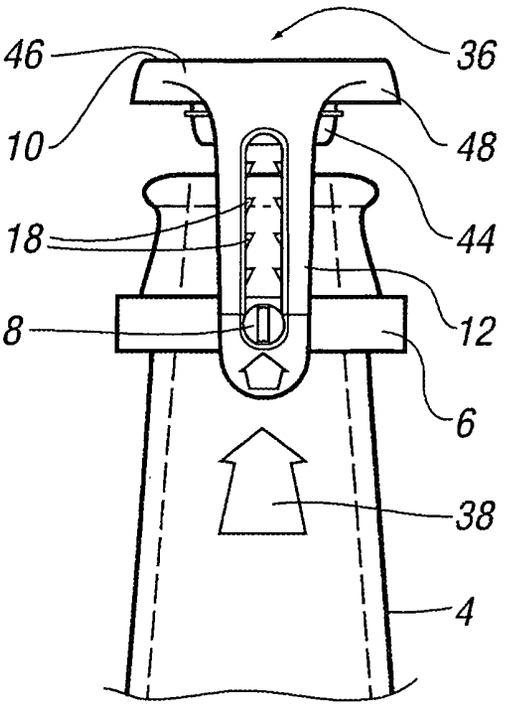

FIG. 4b

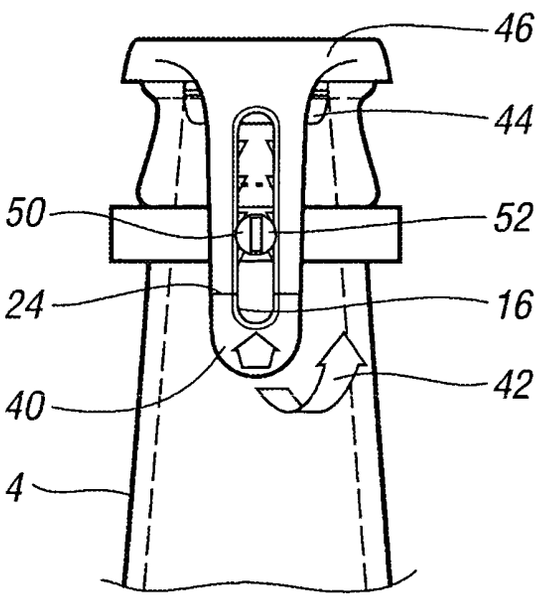

FIG. 4c

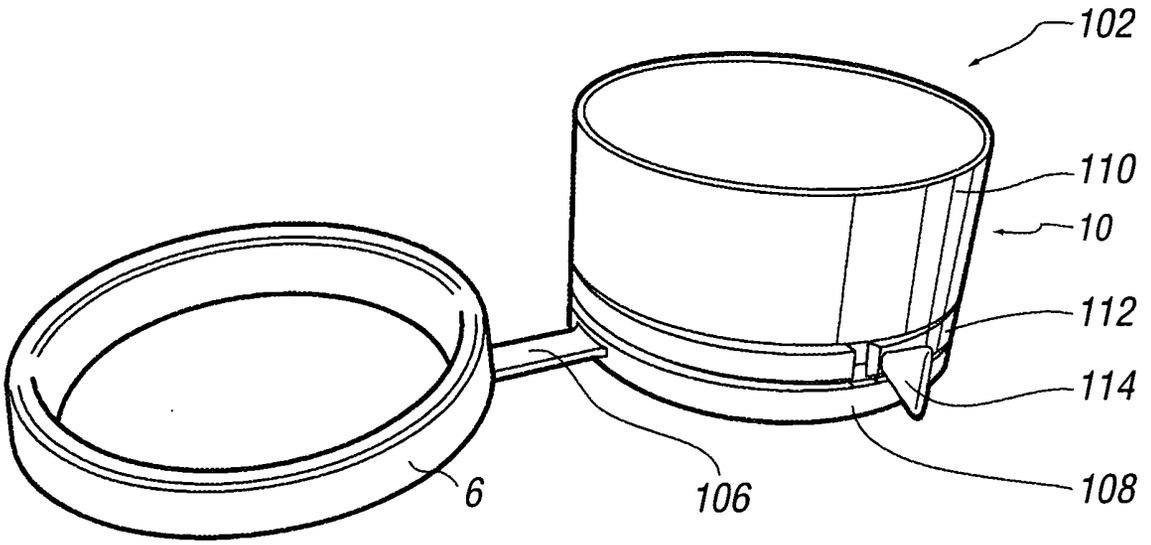

FIG. 5

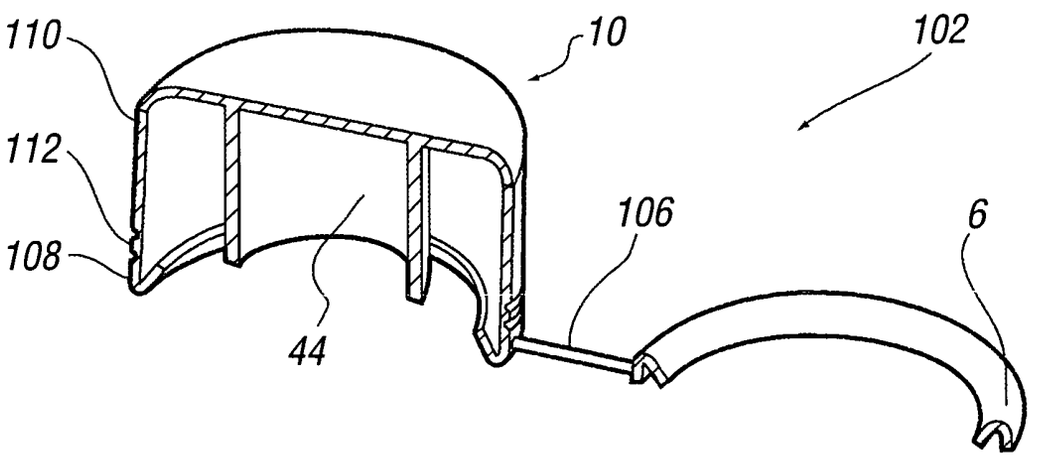

FIG. 6

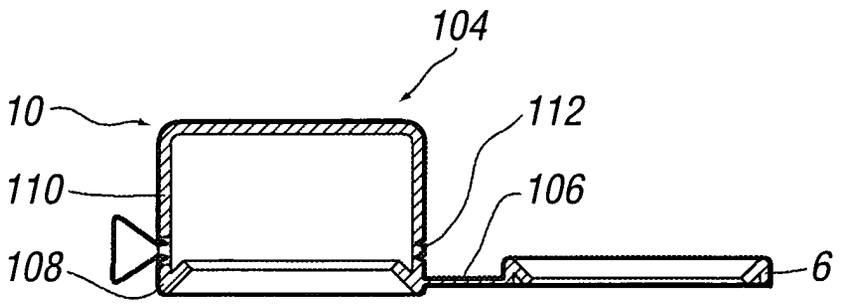

FIG. 7a

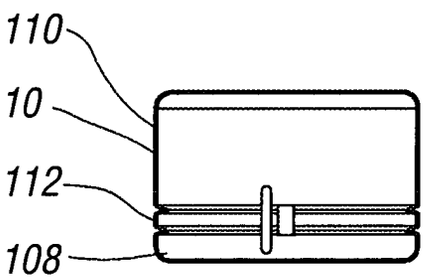

FIG. 7b

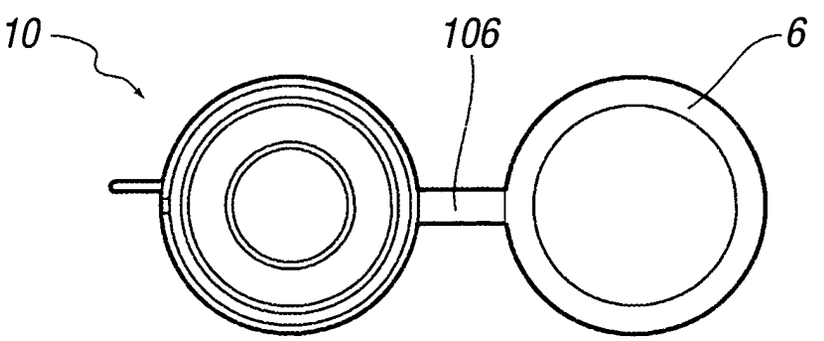

FIG. 7c