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(12) # EUROPEAN PATENT SPECIFICATION

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(54) **Portable toilet having a holding tank spout.**

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Description

This invention relates to portable toilets and is particularly concerned with a new and improved arrangement for emptying the contents of the holding tank of a portable toilet.

A number of commonly assigned patents disclose portable toilets of the type which comprise a holding tank section and a seat section separably mounted on the holding tank section. The seat section comprises a bowl with a bottom outlet which registers with an opening in the top wall of the holding tank. When the two sections are mounted together the bowl outlet is in sealed relationship with the opening in the top wall of the holding tank. A valve in the holding tank is disposed at the opening and when the valve is operated the contents of the bowl drop into the holding tank. The accumulated contents of the holding tank are dumped from time to time at suitable sanitary disposal stations.

One usual practice (as shown in Specifications US—A—4,215,445 and EP—A—0,010,962) has been to provide a threaded boss circumscribing an outlet opening from a discharge spout and a threaded cap threaded onto the boss to close the opening. When the contents are to be dumped, the cap is unscrewed and the waste materials poured out.

The present invention is directed to a new and improved arrangement of the spout for dumping the contents of the holding tank, and one of its advantages is that the dumping procedure is more convenient and can be accomplished with less concern for back-splashing of the waste discharge.

Further advantages accrue in the disclosed embodiment of the invention in which the improved arrangement comprises a rotatably mounted discharge spout on the exterior of the holding tank one end of which fits into an aperture in the top wall of the holding tank and the other end of which is closed by a removable cap. The aperture is located at one corner of the top wall of the holding tank and the end of the discharge spout which fits into the aperture comprises a key. A mating key is provided on the aperture, and the keys are constructed such that the spout can be inserted into and removed from the aperture only in one rotational position. The spout may be rotated about the axis of the aperture away from the said one position over a range of positions in which the inter-engaged keys prevent separation of the spout from the holding tank. The holding tank comprises side walls which meet at the corner of the top wall containing the aperture, these side walls being generally at a right angle to each other. The aperture key is arranged such that the spout can be inserted into and removed from it with the spout overlying the top wall and disposed generally parallel to one of these two side walls. The spout may be rotated from this installation and removal position approximately three-quarters of a full circle so as to overlie the top wall in a position which is generally parallel with the other side wall. This latter position constitutes a storage position for the spout. The preferred embodiment is disclosed as a portable toilet of the type comprising a seat section which is separably mounted on the holding tank section. The two sections are constructed such that they cooperatively define a cavity forming a housing for the spout when the spout is in the storage position. In this way the spout is essentially concealed from view when the two sections are mounted together.

In order to dump the contents of the holding tank the two sections are separated and the spout is rotated away from its storage position to a position pointing away from the holding tank. The cap is removed, and the tank is tipped so that the waste contents are discharged from the far end of the spout.

In order to promote a smooth flowing discharge which is substantially immune from objectionable characteristics such as belching, a vent valve is provided on the wall of the holding tank for venting the interior head space during dumping. The disclosed embodiment of vent valve comprises a normally closed spring biased element with an actuator positioned adjacent to a gripping portion of the toilet so that when the toilet is gripped for dumping it is particularly convenient for the person to operate the vent valve actuator concurrent with the grasping and tipping of the holding tank. After the dumping procedure has been completed, the cap is screwed onto the spout, and the spout is returned to its storage position.

The foregoing features, advantages and benefits of the invention along with additional ones, will be seen in the ensuing description and claims which should be considered in conjunction with the accompanying drawings.

The drawings disclose a preferred embodiment of the invention according to the best mode contemplated at the present time in carrying out the invention.

Fig. 1 is a perspective view having a portion broken away of an embodiment of a portable toilet comprising principles of the present invention.

Fig. 2 is an enlarged vertical sectional view taken substantially in the direction of arrows 2—2 in Fig. 1.

Fig. 3 is a horizontal sectional view, on a reduced scale, taken in the direction of arrows 3—3 in Fig. 2.

Fig. 4 is a partly exploded perspective view, on an enlarged scale, of one portion of Fig. 1.

Fig. 5 is a top plan view of one element shown by itself.

Fig. 6 is a right side view of Fig. 5.

Fig. 7 is a front view of Fig. 5.

Fig. 8 is a view taken in the direction of arrows 8—8 in Fig. 7 and enlarged.

Fig. 9 is a perspective view illustrating the dumping procedure.

Fig. 1 illustrates a portable toilet 10 embodying

principles of the invention. The toilet comprises a seat section 12 which separably mounts on a holding tank section 14 in a conventional manner. Fig. 1 shows the two sections separated. The seat section 12 comprises a bowl 16 and an overlying seat 18 and cover 20 which are hingedly mounted on this section. A flush water storage tank or chamber (not viewable) is provided within the interior of seat section 12 and it may be filled with fresh water via a fill port 22 which is covered by a removable cap 24. A pumping mechanism 26 is also provided for pumping fresh water from the water storage chamber into bowl 16 for use. The bowl comprises a bottom outlet (not viewable) which registers with an inlet opening 28 in the top wall of holding tank 14. Opening 28 is closed by a slide valve 30 mounted within the interior of the holding tank. The slide valve is operated by a handle 32 which is disposed at the front wall of the holding tank section. In order to open valve 30 the operating handle is moved in the direction of arrow 34. As valve 30 slides open, the contents of bowl 16 drop into the holding tank. Thereafter the operating handle is moved in the opposite direction to close valve 30. In this way holding tank 14 accumulates waste contents for later disposal at a suitable sanitary disposal station. Because of the separable mounting of the two sections 12 and 14 the holding tank section 14 can be removed for dumping.

Dumping of the holding tank contents is accomplished through a discharge spout 36 on holding tank 14. Spout 36 is a hollow tubular element having a right angle bend. One end is operatively engaged with the holding tank while the opposite end is closed by a removable cap 38. Details of the spout construction can be best seen in Figs. 4 through 8.

The end of the spout on which cap 38 is disposed is provided with an integrally formed screw thread 40. Cap 38 has a similar thread which allows the cap to be screwed onto the end of the spout to close it. When the contents are to be dumped the cap is unscrewed and removed. Preferably a circular sealing gasket 42 is lodged within cap 38 so as to provide a seal between the end wall of the cap and the edge 44 of the spout at the discharge opening when the cap is fully tightened on the spout.

The opposite end of the spout is of a generally circular shape but it comprises a multi-lobed key 46. Specifically the key 46 comprises six circumferentially spaced lobes which are identified by the reference numerals 46a, 46b, 46c, 46d, 46e, and 46f. It also comprises a circular groove 48 adjacent to key 46 for an O-ring gasket seal 50.

The holding tank wall is provided with a circular walled aperture 52 within which the keyed end of spout 36 is disposed. A complementary mating key 54 (shown in phantom in Fig. 8) is disposed on the wall of aperture 52. Key 54 allows the spout to be fully inserted into aperture 52 only when the two keys are in circumferential registry. The arrangement of key 54 in relation to the holding tank is such that circumferential registry of the two keys 46, 54 occurs with the spout in the position shown in Fig. 4.

It will be observed that the holding tank has a generally rectangular shape and that the aperture 52 is provided in the top wall at one corner. Thus the installation position of the spout is such that the spout overlies the top wall and is generally parallel to the far shorter side wall as viewed in Fig. 4. The construction of aperture 52 and key 54 is such that when the spout is fully inserted into the aperture the key 46 is disposed just beyond the key 54. At this point the O-ring gasket 50 is engaged with the wall of the aperture so that a leakproof joint is thereby provided. Next the spout is rotated in the direction of arrows 56. As key 46 leaves its circumferential registry with key 54, certain portions of the individual lobes of the keys are always in interlocking engagement which prevents the spout from coming out of the aperture. The dimensional relationships are such that this is true over all positions of a full circular revolution of the spout about the aperture. However, the illustrated construction is such that the operative range is less. When the spout has been rotated three quarters of a revolution from its insertion position, it occupies another position which once again overlies the top wall but is now parallel to the nearer longer side of the holding tank as viewed in Fig. 4. This is also the position which is illustrated in Fig. 1, and it constitutes a storage position for the spout.

In the storage position of the spout the two sections 12 and 14 may be mounted together. The two sections cooperatively define at their confronting surfaces a cavity which forms a storage housing for the spout when the spout is in the stored position. The illustrated construction is such that one portion of the storage housing may be considered as comprising the area identified by the reference numeral 58 in holding tank section 14 while the remainder is defined in section 12 by the portion designated by the reference numeral 60. The cavity forming the housing is integrally molded with the molded plastic sections 12 and 14. As can be seen in Fig. 4 a depression 62 is fashioned in the top wall of the holding tank. When spout 36, with cap 38 attached, is rotated to the storage position the lower edge portion of the cap lodges in the depression 62 and in this way the depression defines a locator for the storage position of the spout.

For dumping, seat section 12 is separated and removed from holding tank section 14 and the holding section is taken to an appropriate sanitary disposal station. The spout is swung away from its storage position and cap 38 is removed. The spout will typically be pointed away from the holding tank and will not normally come close to the installation-removal position. In other words rotation to the installation-removal position would be contary to the objective of dumping the tank, and therefore accidental separation of the spout from the holding tank is essentially impossible. Moreover, when the spout is in other than

its storage position, the two sections 12, 14 cannot be mounted together. Fig. 9 illustrates a typical dumping procedure and in that procedure the spout has been rotated from its storage position only about 180°. This would probably be the most amount of rotation, and other typical positions would be somewhat less.

In order to promote a reasonably smooth discharge flow of the waste contents through the spout it has been found beneficial to include a venting means for directly venting the head space of the holding tank to atmosphere during dumping. Venting lessens greatly the tendency for belching or burping of discharging waste materials.

The disclosed embodiment comprises a vent valve 64 disposed on the top wall of the holding tank somewhat opposite aperture 52. Details of the vent valve can be seen in Figs. 2 and 3. The top wall of the holding tank is fashioned with an integral circular boss 66 the lower portion of which projects into the interior of the holding tank. The boss has a top wall 68 with a recess 69 formed centrally therein. Recess 69 at the bottom, comprises a circular hole 70 concentric with the boss. Four arcuate vent openings 72 are in wall 68 extending around recess 69 on a common circle. Openings 72 provide, via the interior bore of boss 66, venting of the tank interior to atmosphere. A valving element 74 comprises a bifurcated shank 76 which fits closely within hole 70. A circular actuator button 78 is at the top of shank 76 and a helical spring 80 is disposed around shank 76 and between the bottom wall of recess 69 and actuator button 78. The spring 80 biases the valving element 74 in the upward direction so as to urge a suitable closure portion 82 against the lower circular edge of boss 66 so as to close the interior bore of the boss and hence the vent openings 72. The illustrated construction for the closure portion comprises a rigid circular portion 84 which is affixed to the lower end of shank 76 within the holding tank and which supports an annular gasket 86 which seals against the lower circular edge of boss 66 when the valve is closed.

The broken line position shown in Fig. 2 thus represents the closed position to which the valving element which is normally spring biased. In this position the closure portion prevents waste materials and vapors from passing through the vent openings 72. The solid line position illustrates the actuated position which is used during dumping to vent the interior head space of the holding tank. It should be observed that a stop 87 is provided on button 78 for limiting downward displacement so that the button does not close off the vent openings when the valve is depressed. Thus, actuation of the valve always allows air to pass through openings 72 into the holding tank to prevent the creation of the partial vacuums which might give rise to belching and burping during dumping.

It will be further observed that the location of the vent valve 64 is adjacent to the operating handle 32. As can be appreciated from consideration of Fig. 9 the operating handle also forms a portion of a grip which may be grasped by a person dumping the holding tank. The configuration is such that the person's fingers fit conveniently onto the handle with the actuator button being poised to be pushed by his thumb to the venting position. An upstanding lip 88 extends partially around (slightly more than a semi-circle) the outside of the top wall 68 of boss 66. The upper edge of lip 88 is above button 78 when the valve is closed and it forms a protector against inadvertent actuation of the valve. It also assists in preventing thumb slippage while the button is being depressed. Thus function and convenience are greatly promoted by the arrangement.

Because the vent is located generally opposite the discharge spout it will inherently be exposed to the head space of the tank during dumping, the tank being designed to leave a head space when its liquid waste content is completely full. Accordingly, liquid waste will not accidently pass through the openings 72.

The particular constructional details of the seat and holding tank sections, the vent valve and the spout may be accomplished with conventional materials and techniques. In accordance with the typical manufacturing procedures the tanks sections are fabricated from two injection molded halves having mating perimeters. The mating perimeters are mated and sealed to form the enclosure. The spout may also advantageously be fabricated from plastic and it may be manufactured by any suitable plastic forming technique such as injection molding or blow molding. The vent valve components are also plastic, with the exception of spring 80, and the element 86 being a suitable elastomeric material. The assembly of the vent valve to the holding tank may be accomplished by fabricating the venting element as separate pieces which are assembled together once they are in the correct position. The illustrated construction of bifurcated shank 76 includes catches at the distal end and the element 84 includes slots. The attachment involves the end of shank 76 snapping onto element 84 at the inside the top wall of the tank so that the catches lodge in the slots. Other alternative attachment procedures could also be used.

The invention promotes conveniences in dumping because the point at which the waste contents exit the spout is more remotely located from the person than would be the case with prior types. The use of the venting valve promotes smoother discharge flow and hence there is a significant reduction in an individual's concern about waste contents splashing back. The construction is also advantageous in that the spout is stored interiorly of the unit and does not protrude, except at dumping. The unit retains overall compactness yet possesses improved function.

Claims

1. A portable toilet comprising a holding tank (14) having a discharge outlet (36) on the exterior

of the holding tank through which contents of the holding tank are emptied and closure means (38) for opening and closing the discharge outlet, characterised in that the discharge outlet comprises an elbow spout (36) rotatably mounted as a separate piece in an aperture (52) in the wall (58) of the holding tank (14) for rotation over a range of positions.

2. A portable toilet as claimed in claim 1, characterised in that said closure means comprises a removable cap (38) at the end of the spout (36) where the contents of the holding tank (14) are discharged from the spout.

3. A portable toilet as claimed in claim 1 or 2, characterised in that means are provided for maintaining a sealed relationship between the discharge spout (36) and the aperture (52) during rotation of the discharge spout over said range of positions.

4. A portable toilet as claimed in claim 1, 2 or 3, characterised in that the aperture (52) is keyed (at 54) and the spout has one end correspondingly keyed (at 46) so as to be fully insertable into and removable from the aperture only at one rotational position of the spout and the keys (46, 54) are constructed such that when the one end of the spout is fully inserted into the aperture and the spout rotated to other than said one position it cannot be separated from the holding tank.

5. A portable toilet as claimed in claim 4, characterised by a sealing gasket (50) extending around the spout (36) immediately adjacent its key (46) and having a sealing engagement with a corresponding portion of the aperture (52) for all rotational positions over said range of positions.

6. A portable toilet as claimed in any preceding claim, characterised in that the aperture (52) is provided in the top wall of the holding tank (14) and is rotatable to a position pointing away from the holding tank (14) for discharging the contents of the holding tank.

7. A portable toilet as claimed in any preceding claim, characterised by venting means (64) for venting the interior head space of the holding tank (14) when the contents are being discharged via the spout (36).

8. A portable toilet as claimed in claim 7, characterised in that said aperture (52) is disposed at a corner of the top wall and said venting means (64) is disposed in the top wall at a location opposite that of said aperture.

9. A portable toilet as claimed in claim 7 or 8, characterised in that the venting means comprises a manually operated vent valve (64) which is spring (80) biased to a normally closed position and includes an actuator (78) disposed adjacent a gripping point (32) of the holding tank for actuation by a user who is emptying the holding tank.

10. A portable toilet as claimed in any preceding claim, characterised by a seat section (12) separably mounted on the holding tank section, said seat section comprising a bowl (16) and said holding tank section comprising a valve (30) which is operable to allow contents of the bowl to be deposited into the holding tank, said seat and holding tank sections cooperatively defining between their confronting surfaces a cavity adapted to receive said spout (36) for storage with said spout being positionable from its storage position to a discharge position on the holding tank section for emptying the contents of the holding tank after the seat section has been removed from the holding tank.

11. A portable toilet as claimed in claim 4 or 5, characterised in that the holding tank (14) comprises a top wall (58) and the aperture (52) is disposed at one corner of the top wall of the holding tank, the holding tank also having side walls extending away from said one corner at approximately a right angle, and in that the arrangement of the keys of the aperture and of the spout is constructed such that the one end of the spout can be fully inserted into the aperture with the spout overlying the top wall and being generally parallel to one of said side walls and can be swung clear of the holding tank on the order of three-quarters of a circle to another position overlying the top wall and generally parallel to the other side wall.

12. A portable toilet as claimed in claim 11, characterised in that said closure means for opening and closing the spout comprises a cap (38) on the discharge end of the spout and the top wall (58) of the holding tank (14) comprises a recess (62) which is engaged by a portion of the edge of the cap (38) to define a locator for the spout establishing said another position.

13. A portable toilet as claimed in claim 12, characterised in that said another position constitutes a storage position for the spout and wherein said portable toilet further includes a seat section (12) disposed on the holding tank (14) with the two sections defining a storage cavity within which the spout is housed when in the storage position.

Patentansprüche

1. Tragbare Toilette mit einem Aufnahmebehälter (14), der an seiner Außenseite einen Entleerungsauslaß (36), durch den der Inhalt des Aufnahmebehälters zu entleeren ist, hat, und mit einer den Entleerungsauslaß öffnenden sowie verschließenden Schließeinrichtung (38), dadurch gekennzeichnet, daß der Entleerungsauslaß eine drehbar als ein eigenes Teil in einer Öffnung (52) in der Wand (58) des Aufnahmebehälters (14) gehaltene Winkeltülle (36) umfaßt, die über einen Bereich von Positionen drehbar ist.

2. Tragbare Toilette nach Anspruch 1, dadurch gekennzeichnet, daß die Schließeinrichtung eine am Ende der Tülle (36), an dem der Inhalt des Aufnahmebehälters (14) von der Tülle austritt, befindliche entfernbare Kappe (38) umfaßt.

3. Tragbare Toilette nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß eine Einrichtung vorhanden ist, die eine abgedichtete Lagebeziehung zwischen er Ausgußtülle (36) und der Öffnung (52) während einer Drehung der Ausgußtülle aufrechterhält.

4. Tragbare Toilette nach Anspruch 1, 2 oder 3, dadurch gekennzeichnet, daß die Öffnung (52) Keilnasen (bei 54) aufweist und die Ausgußtülle ein in entsprechender Weise mit Keilnasen (bei 46) versehenes Ende hat, so daß dieses Ende nur in einer einzigen Drehposition völlig in die Öffnung einsetzbar sowie aus dieser entfernbar ist, und daß die Keilnasen (46, 54) derart ausgebildet sind, daß im völlig in die Öffnung eingesetzten Zustand des einen Endes der Ausgußtülle und bei einer Drehung der Ausgußtülle in eine andere als die eine Position die Ausgußtülle nicht vom Aufnahmebehälter trennbar ist.

5. Tragbare Toilette nach Anspruch 4, gekennzeichnet durch eine um die Ausgußtülle (36) in unmittelbarer Nachbarschaft ihrer Keilnasen (46) verlaufende Dichtungsmanschette (50), die in dichtender Anlage mit einem entsprechenden Teil der Öffnung (52) bei allen Drehlagen über den Bereich von Drehpositionen ist.

6. Tragbare Toilette nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Öffnung (52) in der oberen Wand des Aufnahmebehälters (14) angeordnet und in eine vom Aufnahmebehälter (14) hinweg zeigende Position zum Entleeren des Inhalts des Aufnahmebehälters drehbar ist.

7. Tragbare Toilette nach einem der vorhergehenden Ansprüche, gekennzeichnet durch eine Entlüftungseinrichtung (64) zum Entlüften des inneren oberen Raumes des Aufnahmebehälters (14) bei Ausgießen des Inhalts mittels der Ausgußtülle (36).

8. Tragbare Toilette nach Anspruch 7, dadurch gekennzeichnet, daß die Öffnung (52) an einer Ecke der oberen Wand und die Entlüftungseinrichtung (64) in der oberen Wand an einer zur Öffnung entgegengesetzten Stelle angeordnet sind.

9. Tragbare Toilette nach Anspruch 7 oder 8, dadurch gekennzeichnet, daß die Entlüftungseinrichtung ein handbetätigtes Entlüftungsventil (64), das von einer Feder (80) zu einer normalerweise geschlossenen Stellung hin belastet ist, und ein Betätigungselement (78) umfaßt, das nahe einer Griffstelle (32) des Aufnahmebehälters zur Betätigung durch einen den Aufnahmebehälter entleerenden Benutzer angeordnet ist.

10. Tragbare Toilette nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß am Aufnahmebehälterteil ein eine Schüssel (16) umfassendes Sitzteil (12) abtrennbar gehalten ist und daß das Aufnahmebehälterteil ein Ventil (30) umfaßt, das zur Abführung des Inhalts der Schüssel in den Aufnahmebehälter betätigbar ist, wobei das Sitz- und das Aufnahmebehälterteil im Zusammenwirken zwischen ihren einander zugewandten Flächen einen Hohlraum zur Aufbewahrung der Ausgußtülle (36) begrenzen und die Ausgußtülle aus ihrer Aufbewahrungslage in eine Ausgußlage am Aufnahmebehälterteil zur Entleerung des Inhalts des Aufnahmebehälters positionierbar ist, nachdem das Sitzteil vom Aufnahmebehälter entfernt worden ist.

11. Tragbare Toilette nach Anspruch 4 oder 5, dadurch gekennzeichnet, daß der Aufnahmebehälter (14) eine obere Wand (58) umfaßt und die Öffnung (52) an einer Ecke der oberen Wand des Aufnahmebehälters angeordnet ist, wobei der Aufnahmebehälter auch von der einen Ecke hinweg sich unter annähernd rechten Winkel erstreckende Seitenwände hat, und daß die Anordnung der Keilnasen der Öffnung sowie der Ausgußtülle derart konstruktiv ausgebildet ist, daß das eine Ende der Ausgußtülle völlig in die Öffnung einsetzbar ist, wobei die Tülle über der oberen Wand liegt sowie allgemein parallel zu einer der Seitenwande verläuft und vom Aufnahmebehälter hinweg in der Größenordnung von Dreivierteln eines Kreises in eine andere Stellung, in der sie über der oberen Wand und im allgemeinen parallel zur anderen Seitenwand liegt, geschwenkt werden kann.

12. Tragbare Toilette nach Anspruch 11, dadurch gekennzeichnet, daß die die Ausgußtülle öffnende sowie verschließende Schließeinrichtung eine Kappe (38) am Austrittsende der Ausgußtülle umfaßt und die obere Wand (58) des Aufnahmebehälters (14) eine Einsenkung (62), mit der ein Teil der Kante der Kappe (38) zur Bestimmung einer die andere Position für die Ausgußtülle festsetzenden Positionierstelle in Eingriff kommt, aufweist.

13. Tragbare Toilette nach Anspruch 12, dadurch gekennzeichnet, daß die andere Position eine Aufbewahrungslage für die Ausgußtülle bildet und daß die tragbare Toilette des weiteren ein Sitzteil (12), das am Aufnahmebehälter (14) angeordnet ist, umfaßt, wobei diese beiden Teile einen Aufbewahrungsraum bestimmen, in dem die Ausgußtülle in ihrer Aufbewahrungslage aufgenommen wird.

Revendications

1. Cabinet d'aisances portable comprenant un réservoir (14) de retenue possédant une sortie de déversement (36) à l'extérieur du réservoir, à travers laquelle le contenu du réservoir est vidé, et un moyen de fermeture (38) pour ouvrir et fermer la sortie de déversement, caractérisé en ce que la sortie de déversement comprend un bec à genou (36) monté de façon rotative en tant que pièce séparée dans une ouverture (52) dans la paroi (58) du réservoir (14) pour une rotation en passant par une série de positions.

2. Cabinet d'aisances portable selon la revendication 1, caractérisé en ce que ledit moyen de fermeture comprend un capuchon amovible (38) à l'extrémité du bec (36) où le contenu du réservoir (14) est déversé par le bec.

3. Cabinet d'aisances portable selon la revendication 1 ou 2, caractérisé en ce que des moyens sont prévus pour maintenir une relation étanche entre le bec de déversement (36) et l'ouverture (52) pendant la rotation du bec de déversement à travers ladite série de positions.

4. Cabinet d'aisances portable selon la revendication 1, 2 ou 3, caractérisé en ce que l'ouverture (52) possède des languettes d'arrêt (en 54) et que

le bec possède une extrémité ayant également des languettes d'arrêt (en 46) de manière à ne pouvoir être entièrement inséré dans l'ouverture et retiré de celle-ci que dans une position de rotation du bec, et que les languettes (46, 54) sont réalisées de telle sorte que, lorsque l'une des extremités du bec est entièrement insérée dans l'ouverture et lorsque le bec a tourné jusqu'à une position autre que ladite position, il'ne peut pas être séparé du réservoir.

5. Cabinet d'aisances portable selon la revendication 4, caractérisé par un joint d'étanchéité (50) s'étendant autour du bec (36) de façon immédiatement adjacente aux languettes (46) de celui-ci et étant en connexion étanche avec une portion correspondante de l'ouverture (52) pour toutes les positions de rotation de ladite série de positions.

6. Cabinet d'aisances portable selon l'une quelconque des revendications précédentes, caractérisé en ce que l'ouverture (52) est prévue dans la paroi supérieure du réservoir (14) et peut tourner jusqu'à une position détournée du réservoir (14) pour déverser le contenu du réservoir.

7. Cabinet d'aisances portable selon l'une quelconque des revendications précédentes, caractérisé par un moyen de prise d'air (64) pour admettre de l'air dans la chambre intérieure du réservoir (14) lorsque le contenu est déversé par le bec (36).

8. Cabinet d'aisances portable selon la revendication 7, caractérisé en ce que ladite ouverture (52) est disposée dans un coin de la paroi supérieure et que ledit moyen de prise d'air (64) est disposé dans la paroi supérieure à un endroit situé à l'opposé de celui de ladite ouverture.

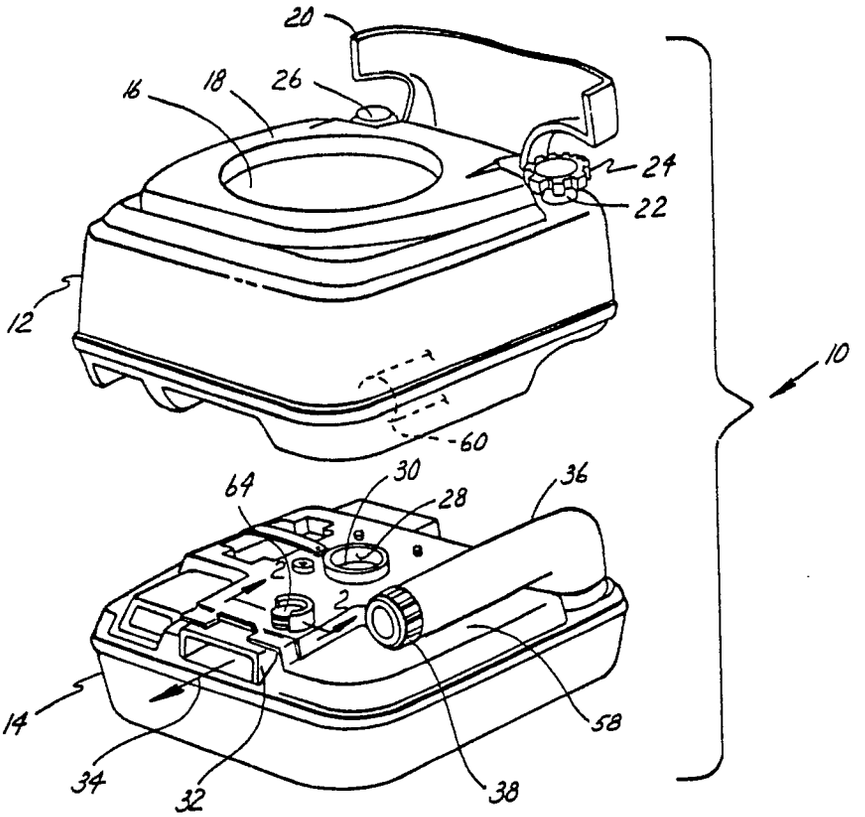
9. Cabinet d'aisances portable selon la revendication 7 ou 8, caractérisé en ce que le moyen de prise d'air comprend une vanne d'admission d'air (64) actionnée manuellement et sollicitée par un ressort (80) vers une position normalement fermée et comprend un moyen d'actionnement (78) disposé de façon adjacente à une poignée (32) du réservoir pour être actionné par un utilisateur qui vide le réservoir.

10. Cabinet d'aisances portable selon l'une quelconque des revendications précédentes, caractérisé par une section de siège (12) montée séparément sur la section de réservoir, ladite section de siège comprenant une cuvette (16) et ladite section de réservoir comprenant une vanne (30) qui peut fonctionner pour permettre de déposer le contenu de la cuvette dans le réservoir, lesdites sections de siège et de réservoir définissant de manière coopérante entre leurs surfaces se faisant face une cavité adaptée pour recevoir ledit bec (36) pour le ranger, ledit bec pouvant être positionné de sa position rangée dans une position de déversement sur la section de réservoir pour vider le contenu du réservoir après que la section de siège a été retirée du réservoir.

11. Cabinet d'aisances portable selon la revendication 4 ou 5, caractérisé en ce que le réservoir (14) comprend une paroi supérieure (58) et que l'ouverture (52) est disposée dans un coin de la paroi supérieure du réservoir, le réservoir possédant également des parois latérales s'étendant par rapport audit coin approximativement à angle droit, et que l'agencement des languettes de l'ouverture et du bec réalisé de manière qu'une extrémité du bec puisse être entièrement insérée dans l'ouverture, le bec se trouvant au-dessus de la paroi supérieure et étant généralement parallèle à une desdites parois latérales, et puisse être retirée du réservoir par rotation sur trois quarts d'un cercle jusqu'à une autre position se trouvant au-dessus de la paroi supérieure et généralement parallèle à l'autre paroi latérale.

12. Cabinet d'aisances portable selon la revendication 11, caractérisé en ce que ledit moyen de fermeture pour ouvrir et fermer le bec comprend un capuchon (38) sur l'extrémité de déversement du bec et que la paroi supérieure (58) du réservoir (14) comprend un évidement (62) dans lequel est engagée une portion du bord du capuchon définir un repère pour le bec, établissant ladite autre position.

13. Cabinet d'aisances portable selon la revendication 12, caractérisé en ce que ladite autre position constitue une position de rangement pour le bec et que ledit cabinet d'aisances portable comprend par ailleurs une section de siège (12) disposée sur le réservoir (14), les deux sections définissant une cavité de rangement dans laquelle le bec est logé lorsqu'il est en position de rangement.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38

Fig. 1

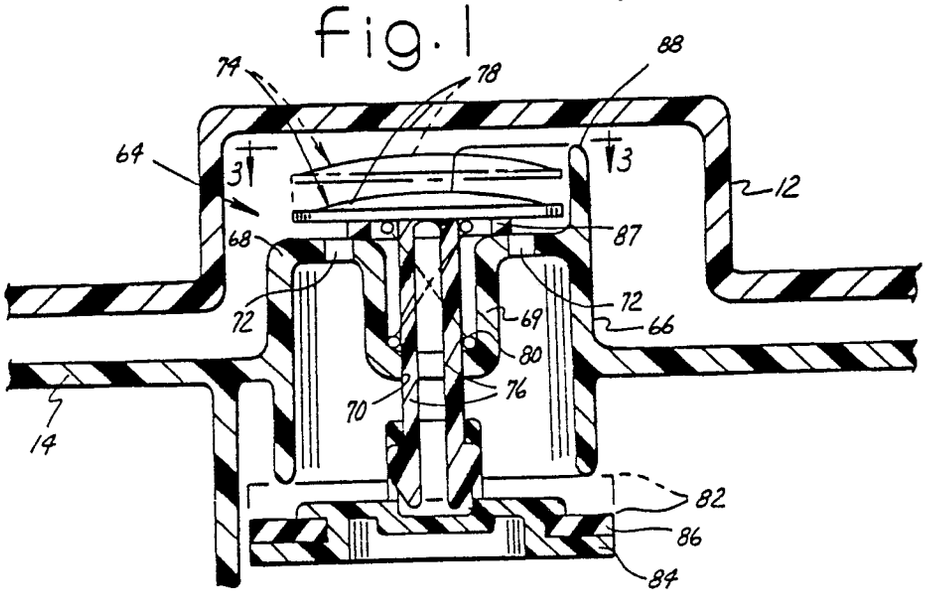
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Fig. 2

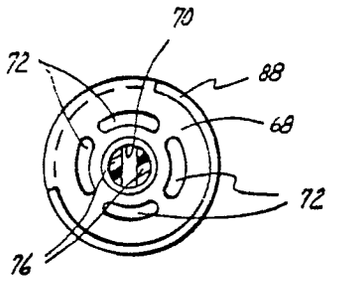
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Fig 3

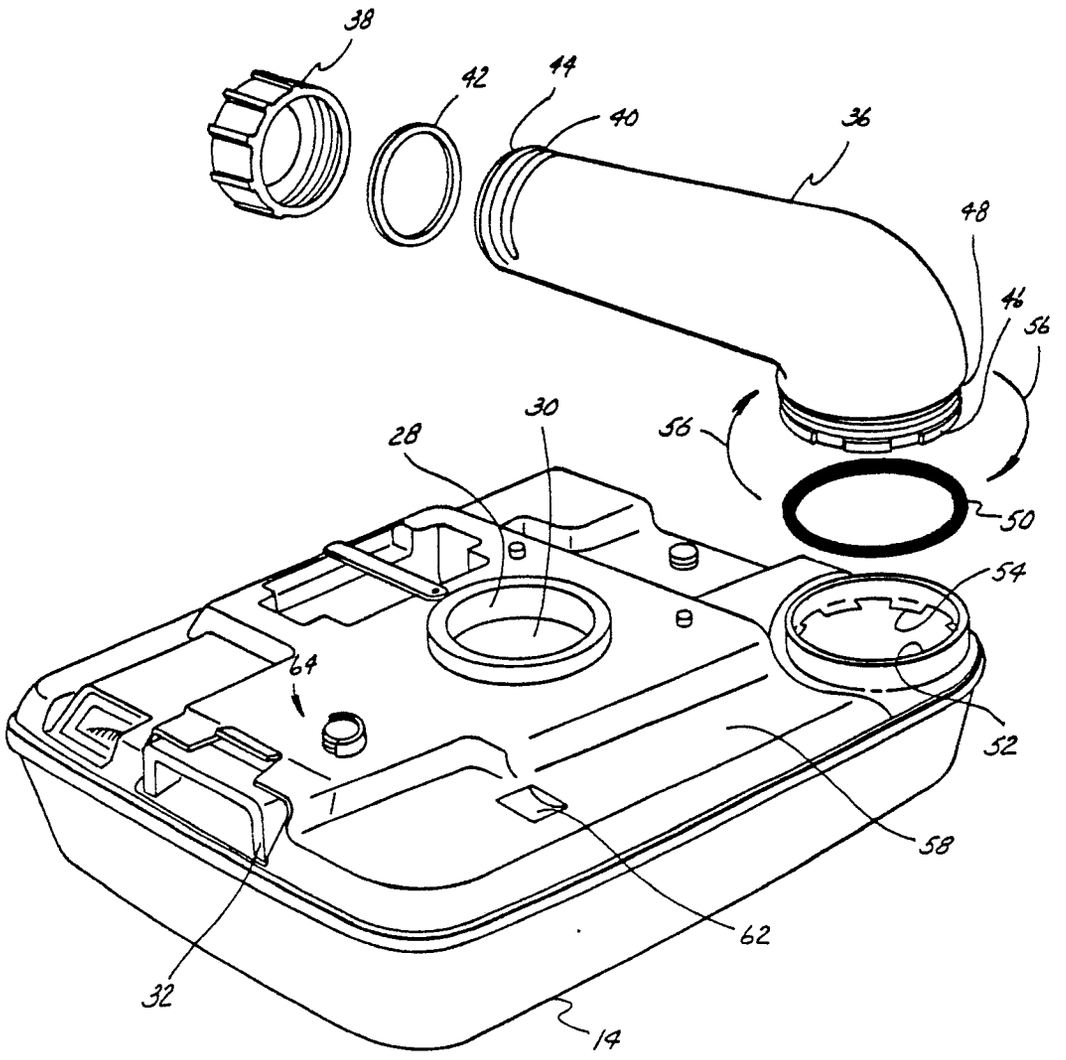
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Fig. 4

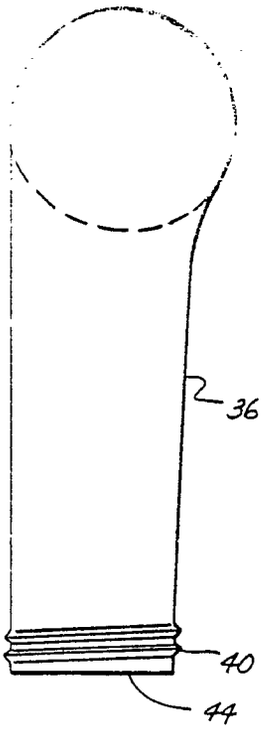

Fig. 5

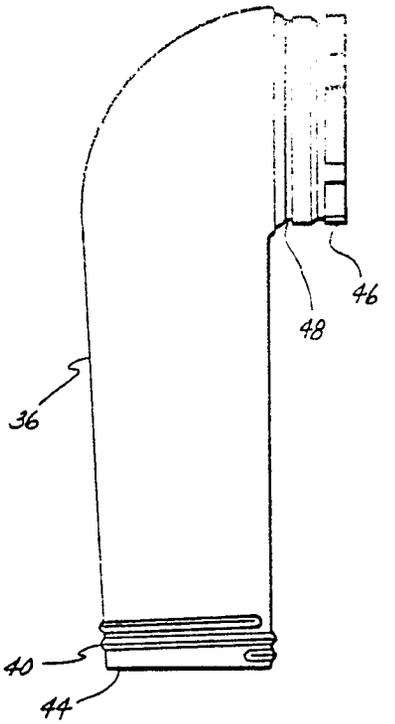

Fig. 6

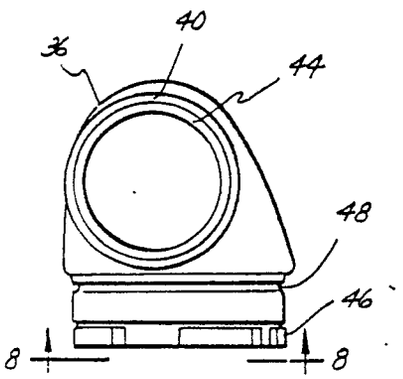

Fig. 7

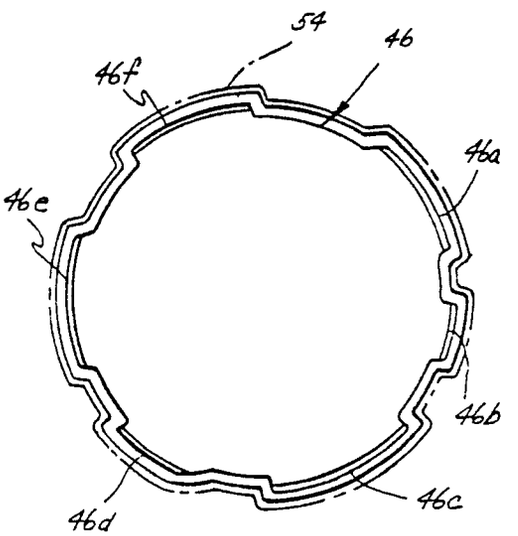

Fig. 8

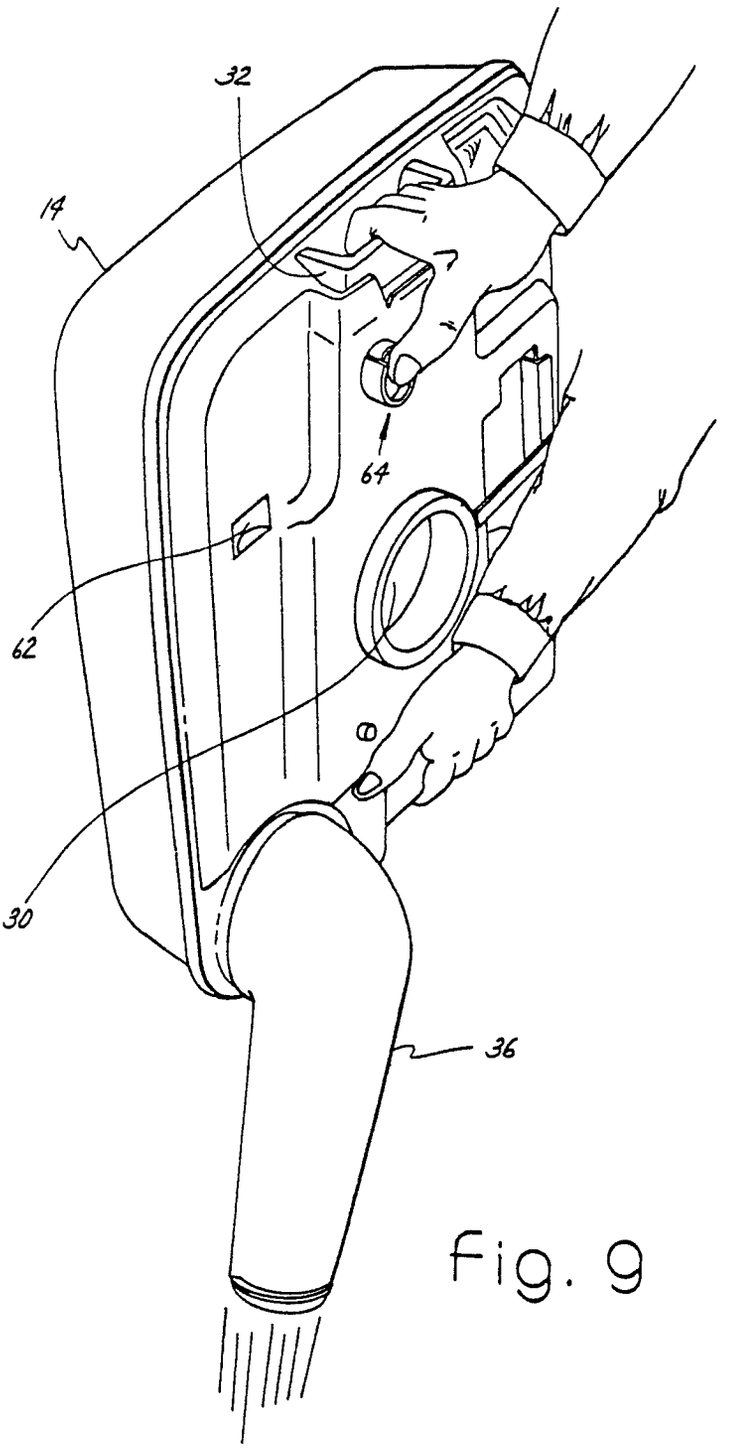

Fig. 9