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(54) **WASTE MODULE**

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(57) **ABSTRACT**

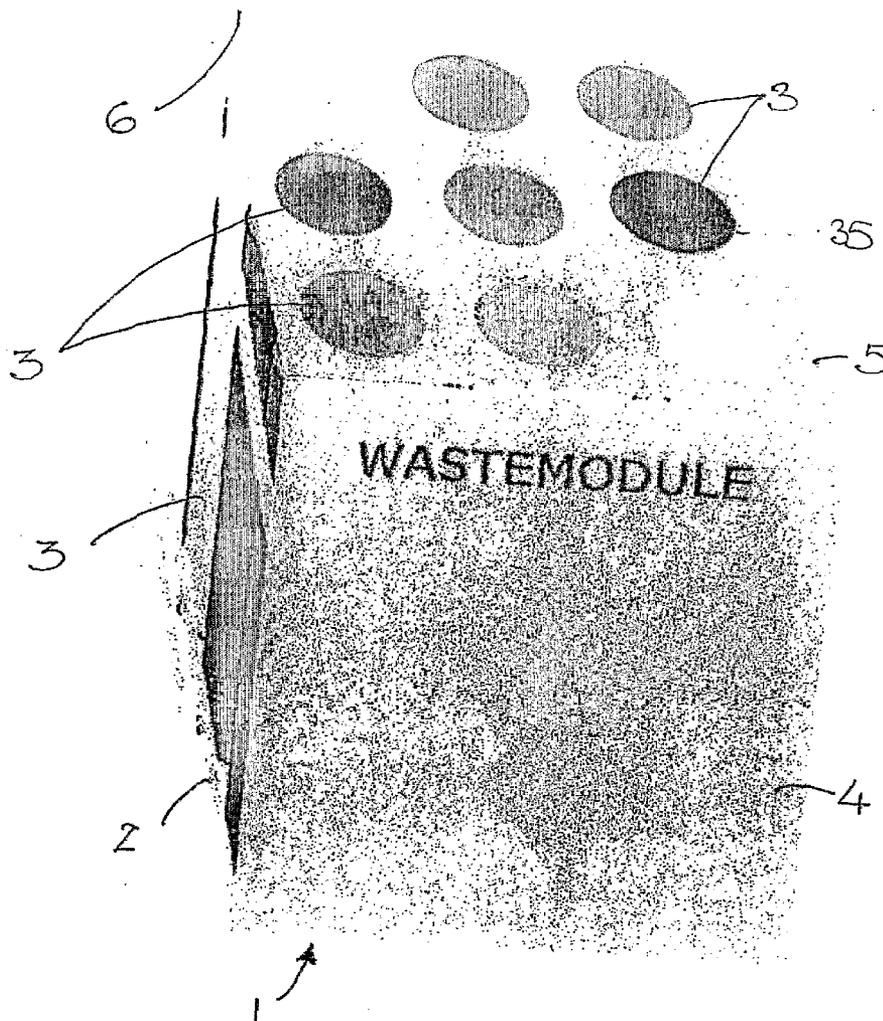
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The present invention relates to a waste module (1) containing a plurality of waste containers (3) adapted to receive various different types of waste. Each waste container (93) is removable from the waste module (1) and has a removable lid (9) and a removable base (7). The removable lid (9) and the removable base (7) include a screw mechanism for securing the removable lid (9) and removable base (7) to the waste container (93). The outer surface (8) of the waste container (3) has screw engaging portions for engaging the screw mechanisms on the lid (9) and base (7).

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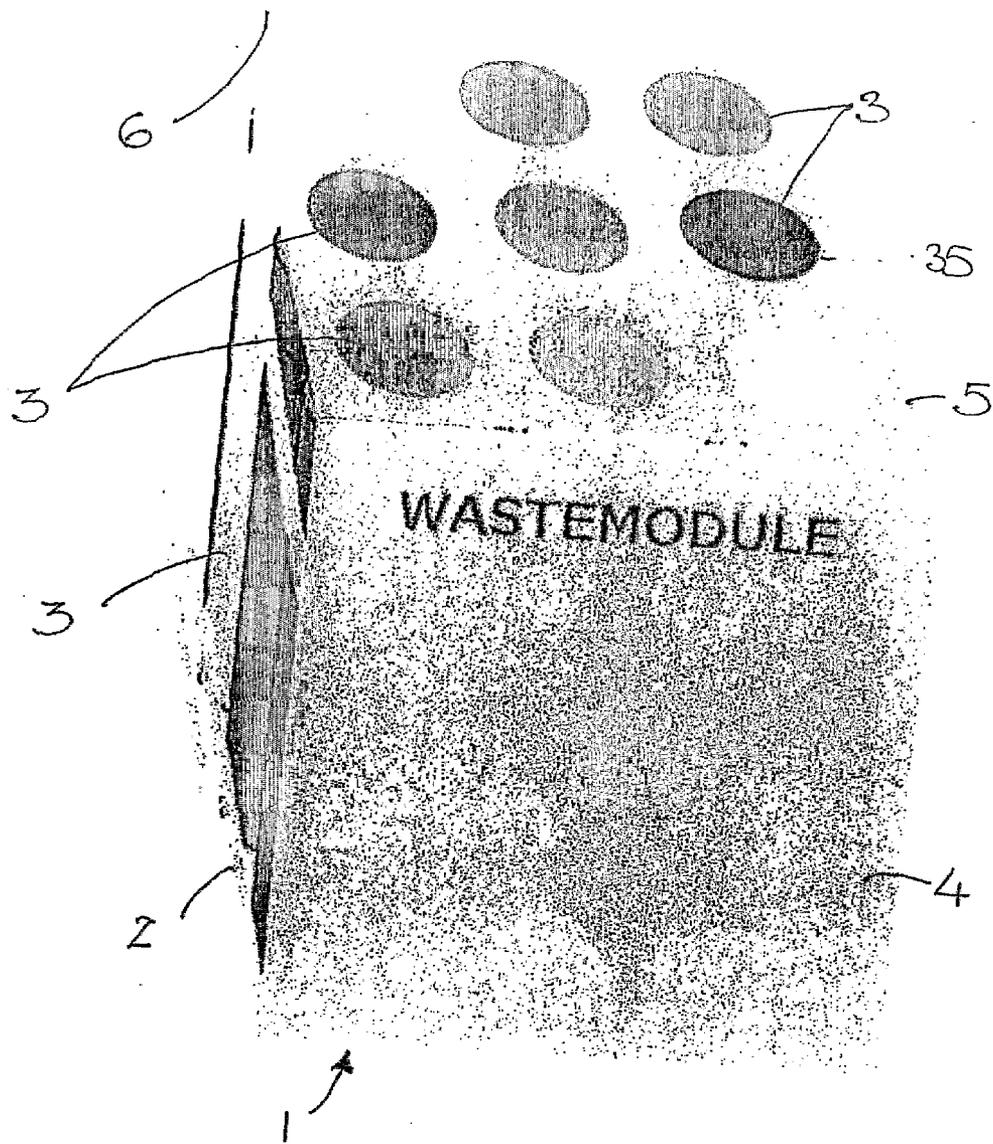


FIG. 1
C

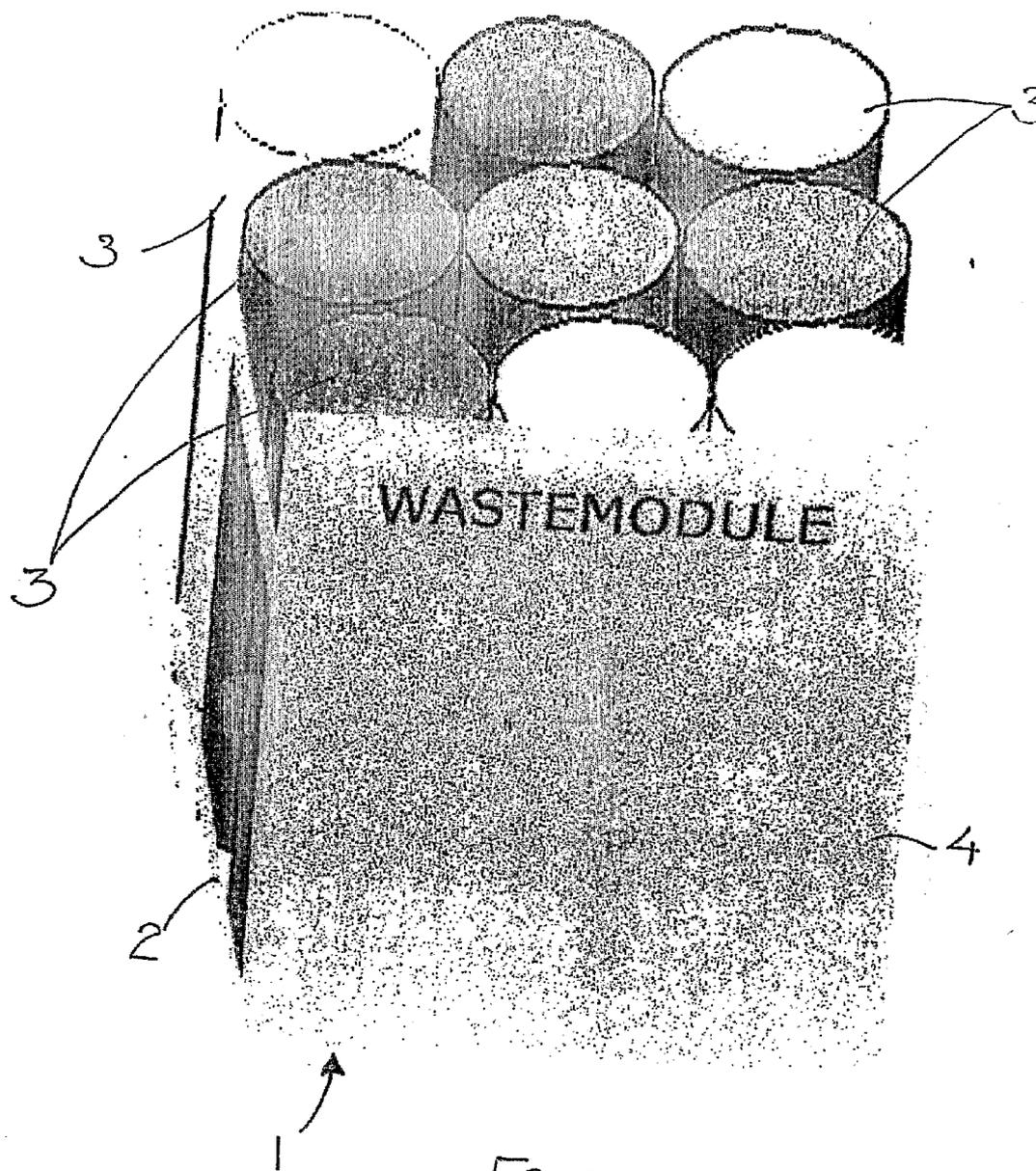


FIG. 2
C

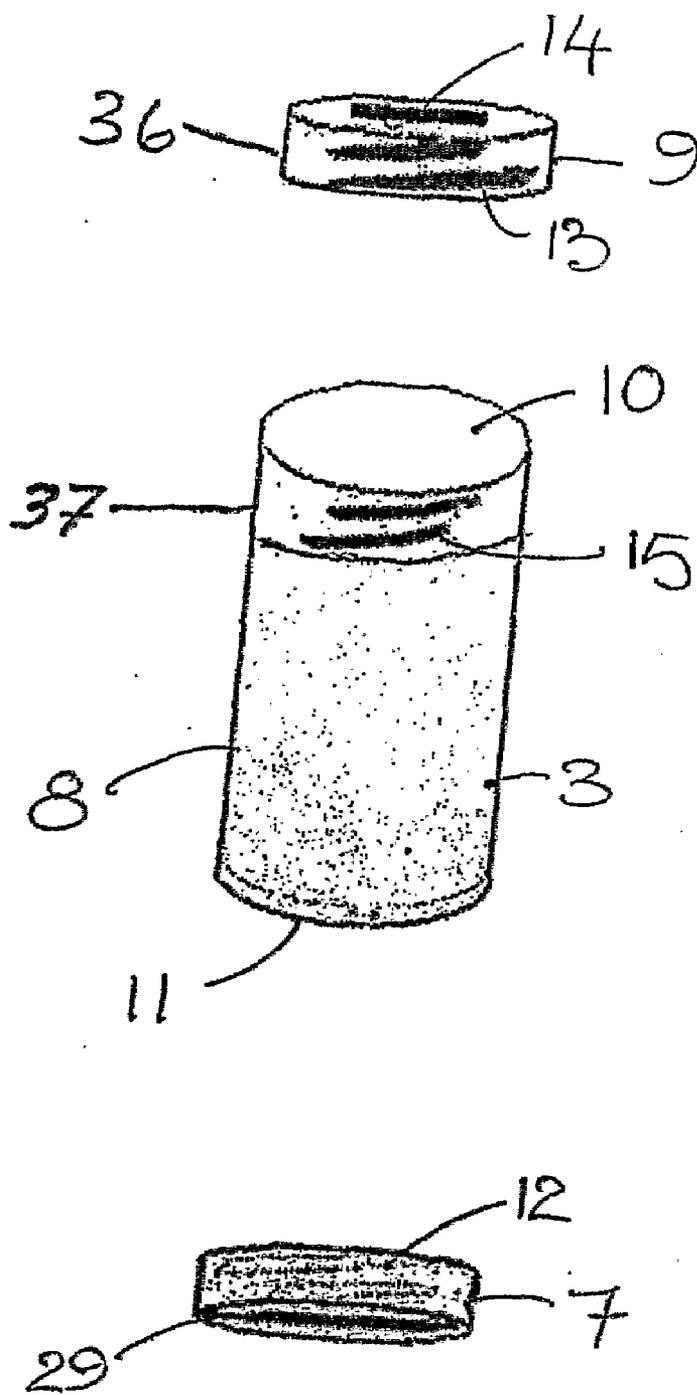
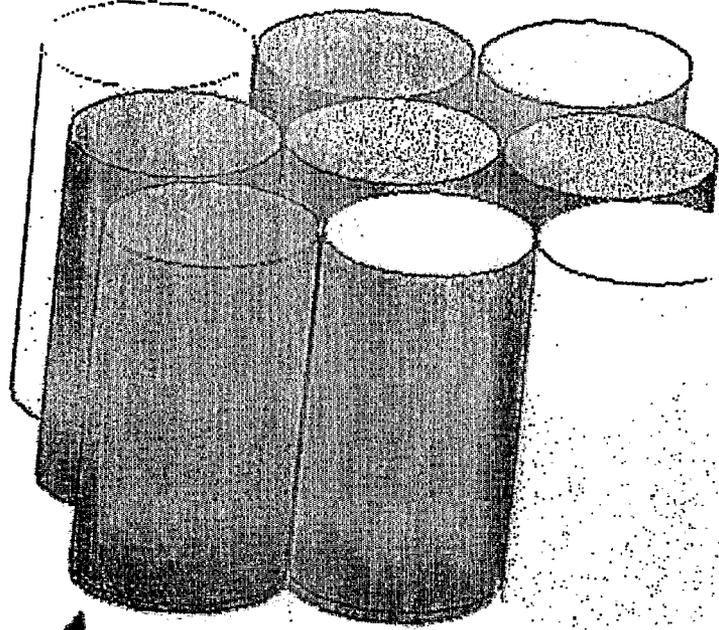
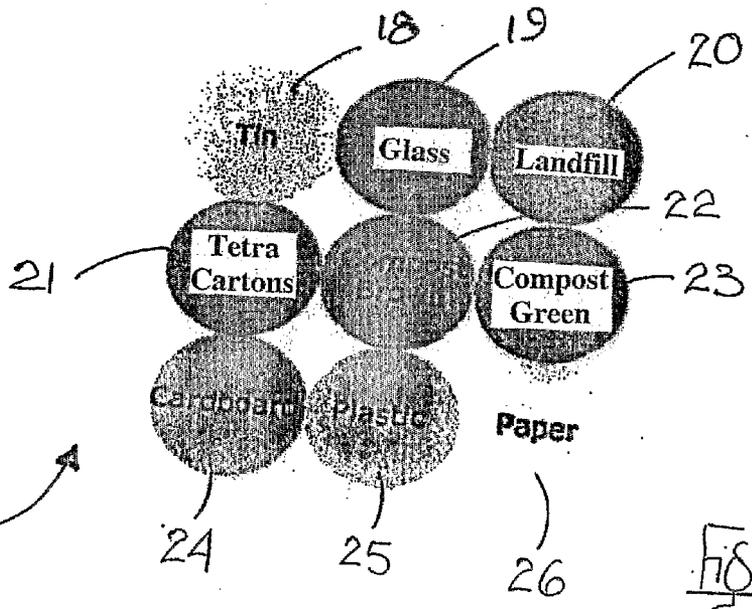


FIG. 3
C



16

FIG. 4



17

FIG. 5

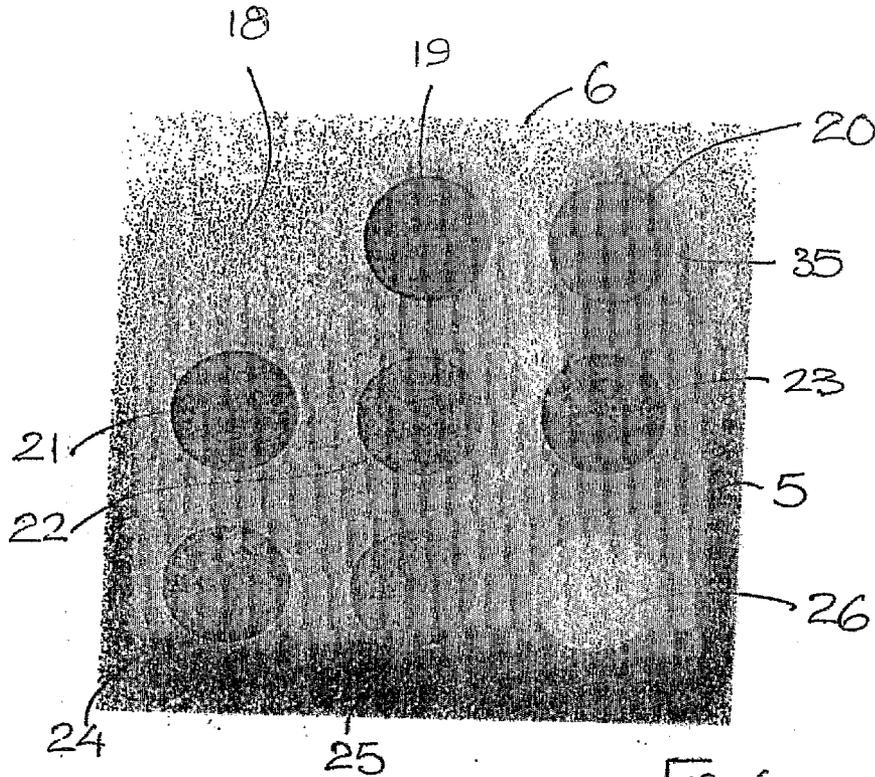


FIG. 6
C

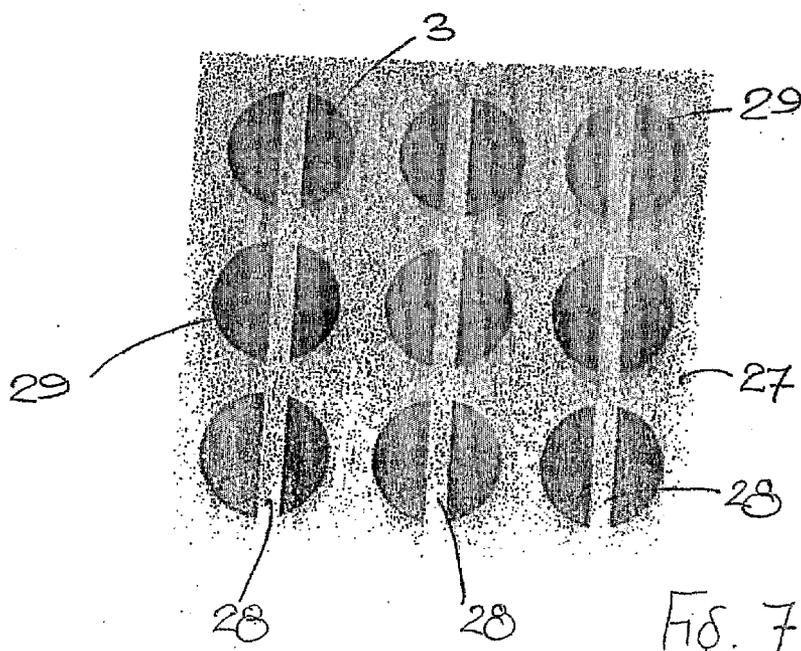
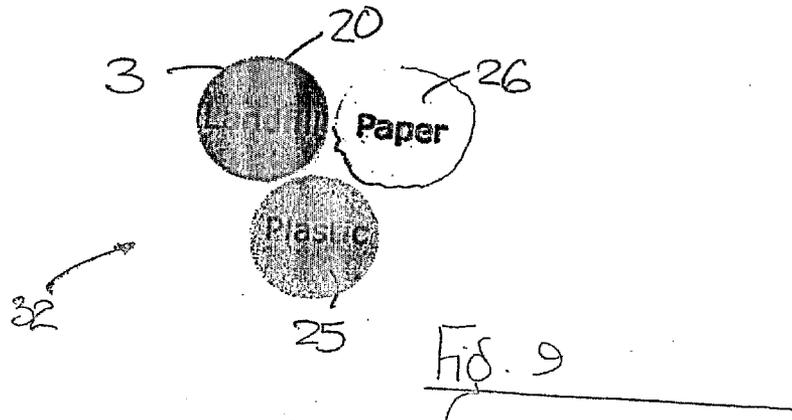
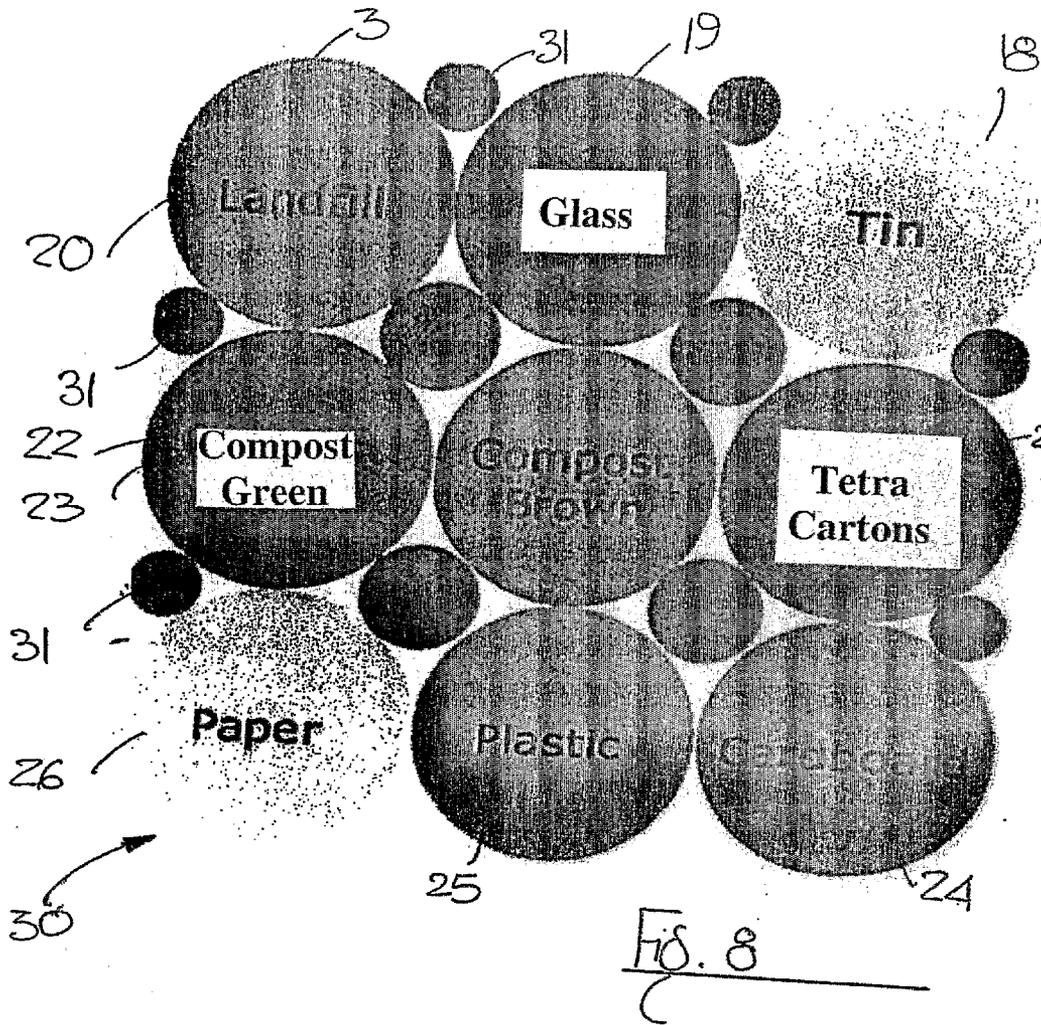
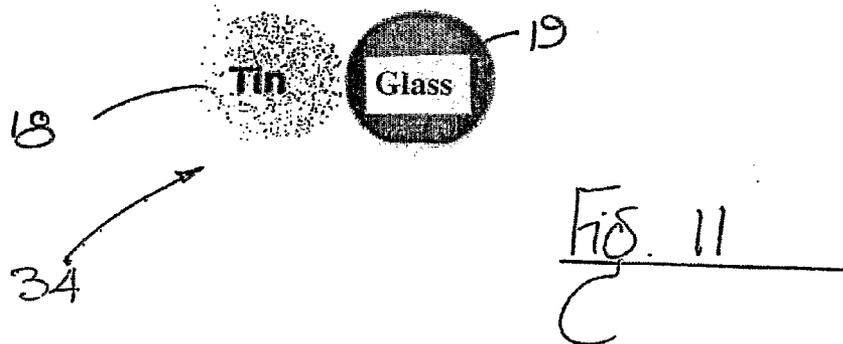
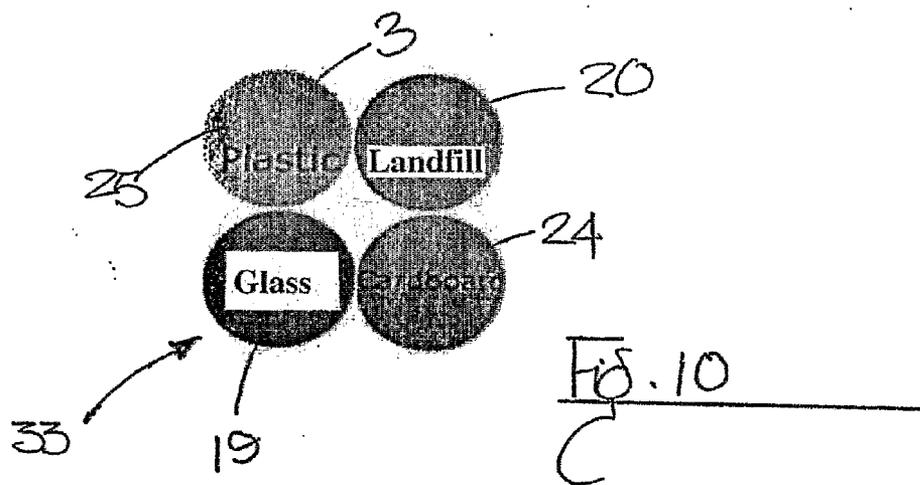


FIG. 7
C

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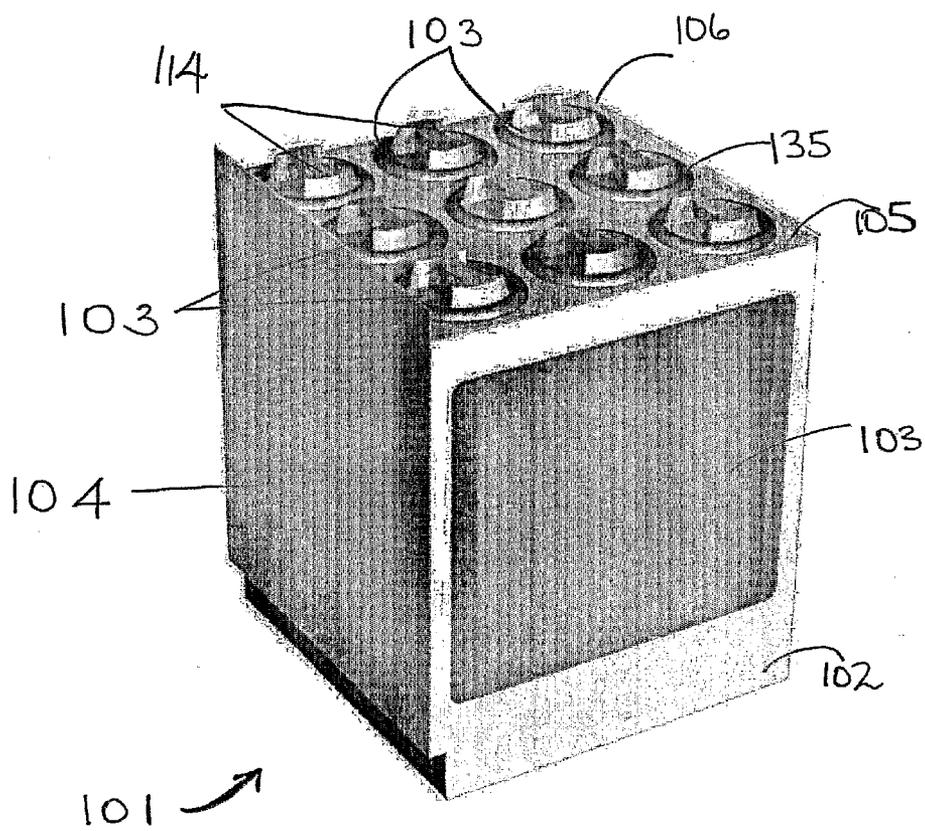


Fig. 12

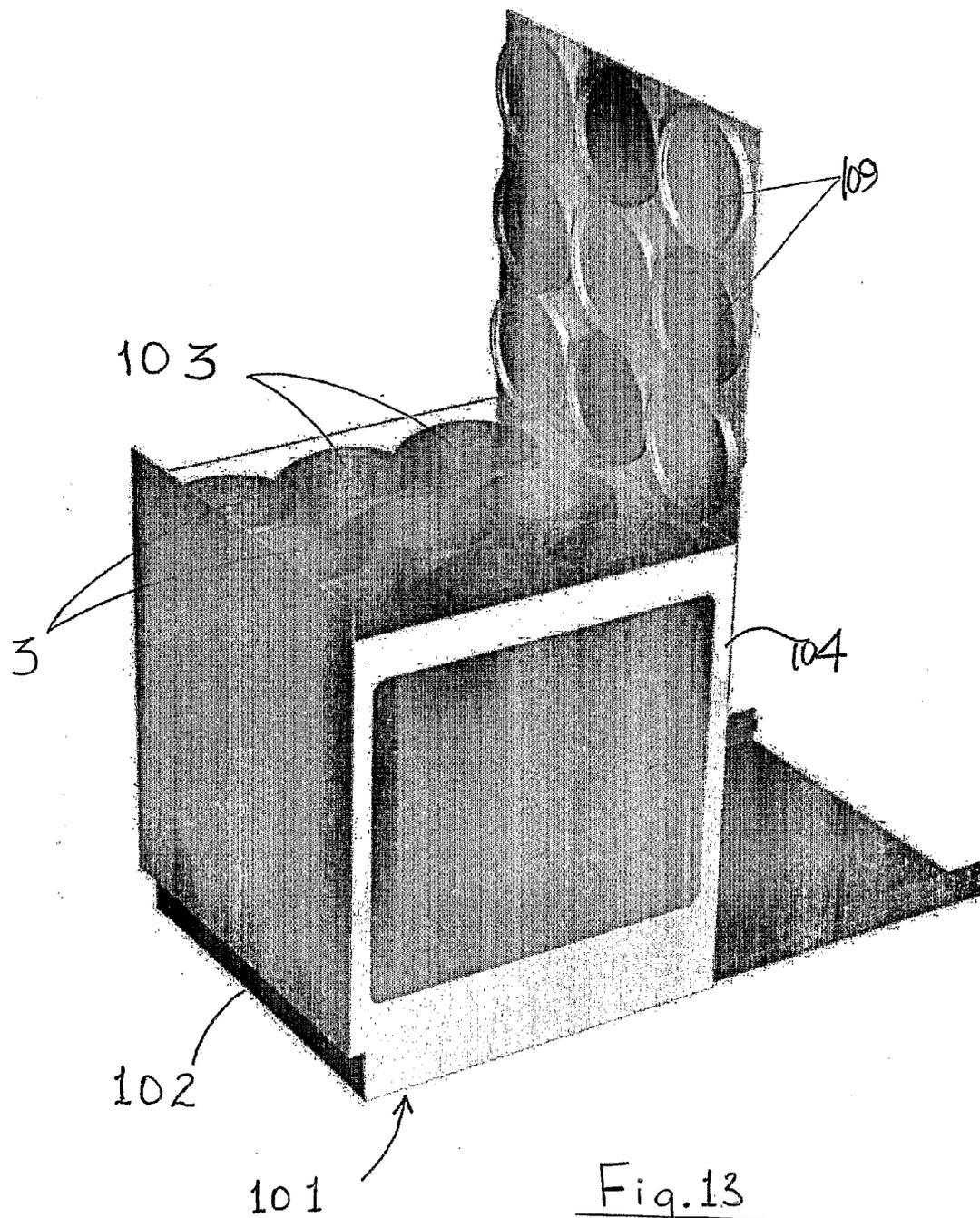


Fig.13

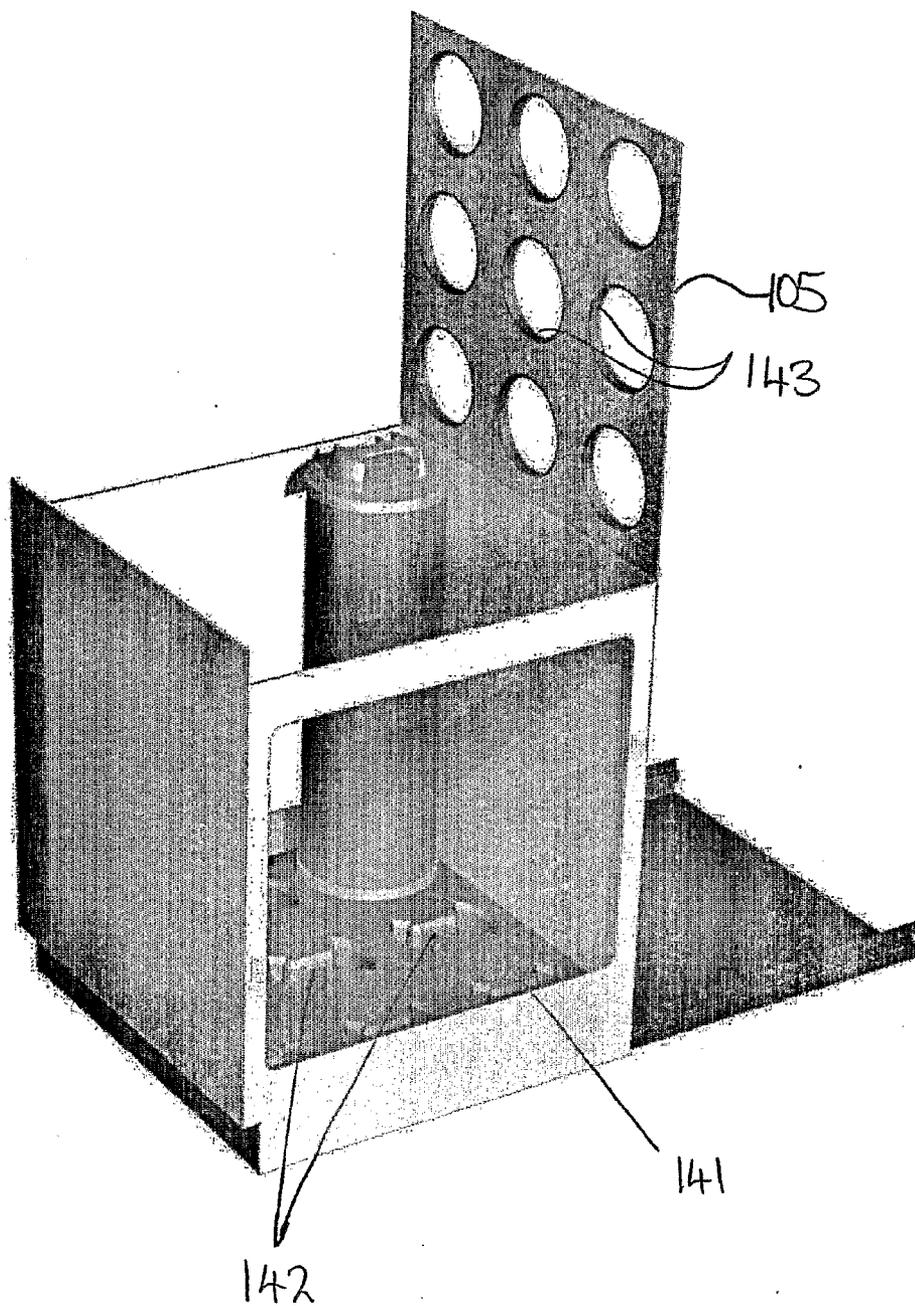
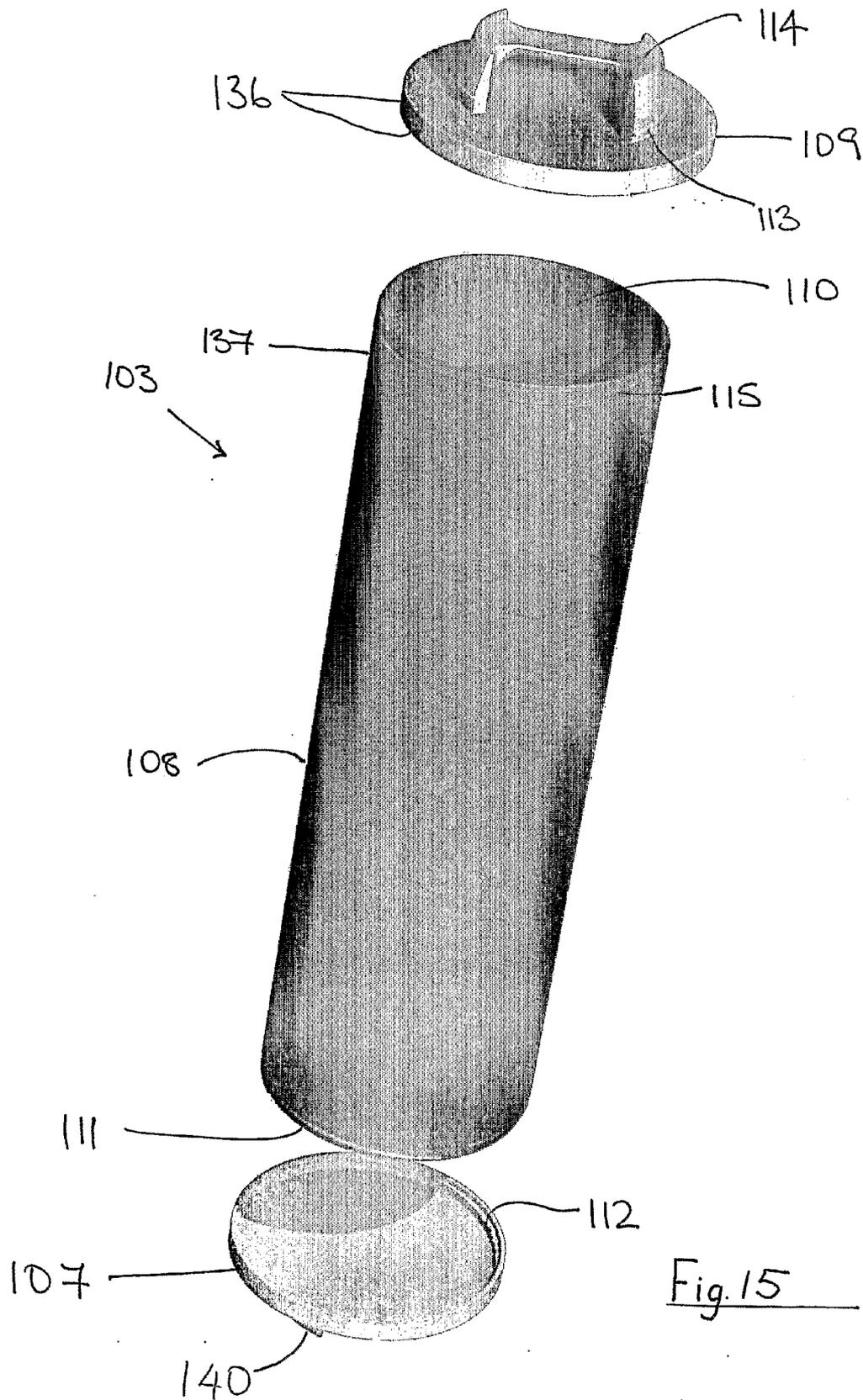


Fig. 14



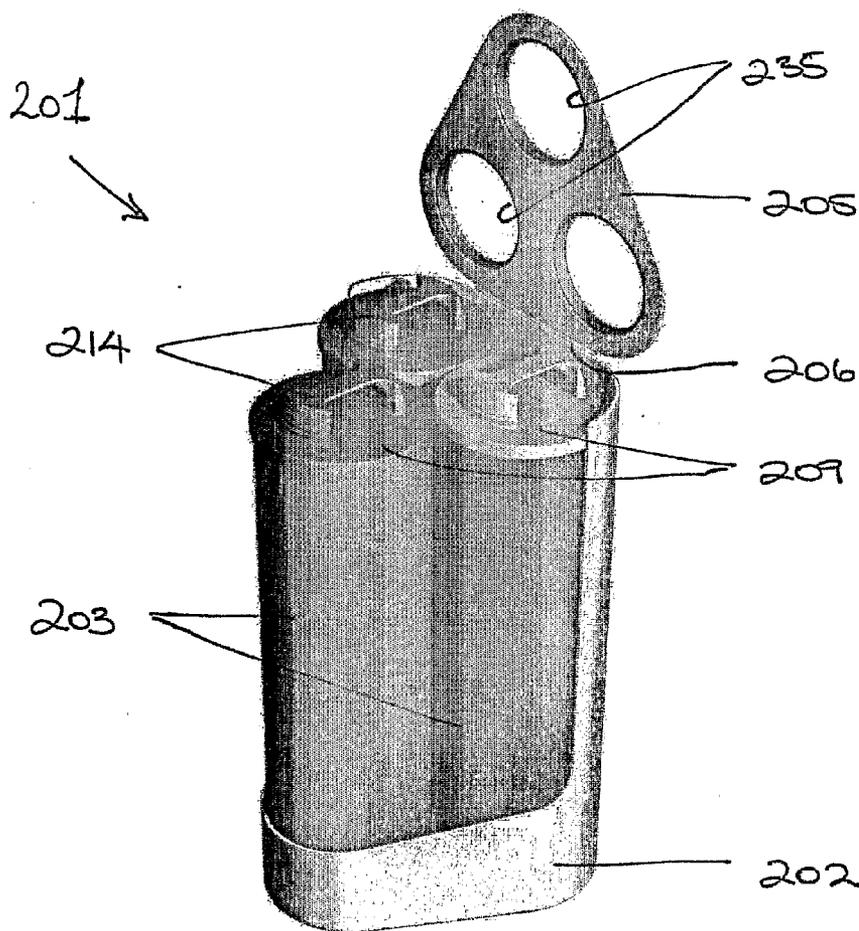


Fig. 16

WASTE MODULE

FIELD OF THE INVENTION

[0001] The present invention relates to a waste module and in particular to a waste module for sorting and collecting waste which aids recycling. The present invention further extends to a waste container for use with the waste module.

BACKGROUND OF THE INVENTION

[0002] Recycling of waste is increasingly common. During recycling, waste is segregated into various categories e.g. paper, glass, compostable waste etc. As recycling methods become increasingly sophisticated, it becomes necessary to increasingly refine segregation of various waste types for recycling or disposal. However, difficulties can be encountered in recycling where many containers are required to segregate the waste giving rise to increased recycling costs and difficulties for consumers.

[0003] British Patent No 2391794 describes a bin for recycling waste locatable in a kitchen cabinet which is segmented into a number of compartments requiring the use of colour coded recyclable waste bags for different waste products. The necessity for using recyclable waste bags gives rise to increased costs and complexity.

[0004] U.S. Pat. No. 5,398,838 describes the use of a bin in which fixed compartments are used to separate solid waste into recyclable materials and trash.

[0005] The inventors of the present invention have invented a waste module which provides surprising advantages in relation to its ease of use and further in relation to the ability to adapt the waste module to facilitate a wide range of recycling needs.

SUMMARY OF THE INVENTION

[0006] In accordance with a first aspect of the invention, there is provided a waste module (1) comprising:

[0007] a frame portion (2) and a lid portion (5) wherein the frame portion (2) is capable of housing at least one waste container (3) and the lid portion (5) is capable of being brought into releasable engagement with a closure means (9) of the at least one waste container (3).

[0008] In one embodiment the waste module further comprises a base (141), the base (141) comprising at least one engagement means (142) which allows for the at least one waste container (103) to be brought into releasable engagement with said waste module (101).

[0009] In one embodiment the lid portion (105) is moveable between a first closed and second open position, the movement of the lid portion (105) being such that any closure means (109) which is in engagement with the lid portion (105) remains engaged with the lid portion (105) during the movement between the first and second positions to displace the lid portion (105) from a body portion (108) of the waste container (103).

[0010] In one embodiment the outer surface of the closure means (9) comprises a screw mechanism for releasably engaging the closure means (9) with the lid portion (5).

[0011] In one embodiment the closure means comprises a handle (14, 114).

[0012] The waste module may comprise any one of the following number of waste containers: one, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, or more than 12. It will be appreciated that the waste module may also have

more than these numbers of waste containers. The waste containers housed within the waste module may be of identical shapes, cross sections or diameters, or may of differing shapes, cross sections or diameters.

[0013] The removable waste containers are easy to empty and clean. Such waste containers also enable simple, compact and effective organisation of waste for recycling. Each waste container may accommodate a specific type of waste to facilitate segregation of the waste.

[0014] It is preferred, at least one of the at least one removable waste container is replaceable by at least one other replacement waste container.

[0015] In one embodiment, the at least one other replacement waste container is at least partially rigid.

[0016] The waste containers are interchangeable to allow selection of appropriate waste containers for storing a particular type of waste. A household or business may select specific waste containers according to their waste requirements. Furthermore should the waste requirements change, selected waste containers may be replaced in accordance with the changing waste needs. For example, a household that begins to recycle more waste would require less general waste containers. A household that begins to compost waste could add compost waste containers. A resident of the household who starts working from home may produce more paper waste and may require a paper waste container to be added to the waste module.

[0017] Advantageously, the at least one of the plurality of waste containers or the at least one removable waste container or the at least one replacement waste container comprise a removable base.

[0018] Alternatively or additionally, at least one of the plurality of waste containers or the at least one removable waste container or the at least one replacement waste container comprise a removable lid.

[0019] Suitably, at least one of the plurality of waste containers or the at least one removable waste container or the at least one replacement waste container comprise a cylindrical shape.

[0020] Advantageously, at least one of the removable lid and the removable base comprise a screw mechanism for securing the removable lid and removable base to the waste container and the waste container comprises at least one screw engaging portion for engaging the screw mechanism.

[0021] In one embodiment, the at least one screw engaging portion is on an outer surface of the waste container and the screw mechanism is on an inner surface of the at least one of the removable lid and removable base.

[0022] Preferably, the at least one of the removable lid and removable base comprises an odour seal.

[0023] The odours from the waste in the waste containers are prevented from being released by the removable lid and removable base. The odour seal may comprise rubber or any other suitable sealing material.

[0024] Alternatively or additionally, at least one of the removable lid and the removable base comprises a handle.

[0025] The lid handle is useful for inserting an empty removable or replacement waste container into the waste module. Such a lid handle may also be used to remove the full removable or replacement waste container from the waste module and transport it. The base handle can be used to secure the waste container in the waste module by means of a releas-

able engagement between a complimentary shaped recesses in the base of the waste module which engages with the handle of the base.

[0026] The removable base allows for easy emptying and cleaning of the container and eliminates the necessity to use bin bags in the waste module.

[0027] In one embodiment, the plurality of waste containers or the at least one removable waste container or the at least one replacement waste container are adapted to receive different types of waste.

[0028] Preferably, the at least one removable waste container is shaped to slot tightly into the waste module.

[0029] The removable waste containers are held securely in the waste module while in use. Suitably this is facilitated by means of the engagement of the base of the container with the base of the waste module.

[0030] Desirably, at least one of the plurality of waste containers or the at least one removable waste container or the at least one replacement waste container comprise a smooth interior.

[0031] The smooth interior facilitates easy cleaning and eliminates the necessity for using bin bags.

[0032] Preferably, the waste module comprises a waste module lid, the removable lid of the at least one waste container being attachable to the waste module lid.

[0033] Alternatively or additionally, the removable lid of the at least one waste container comprises an engagement means provided about the outer periphery of the removable lid. Generally this engagement means is a thread to allow screw engagement. The lid of the waste module comprises at least one opening, which, when the lid of the waste module is in a closed position, is provided in general register with lid portions of the containers. The threaded portion on the outer surface of the container lid serves to engage with a threaded portion provided about the inner surface of the at least one lid openings.

[0034] In one embodiment, the threaded portion of the container lid is provided upon the handle portion of the lid. In a further embodiment the threaded portion is provided on an area of the lid or closure means which does not function as a handle means or for engagement of the container with the base of the waste module.

[0035] In one embodiment the waste module is rectangular, square triangular or circular in shape. The waste module may be any shape which affords the requisite properties.

[0036] Preferably, a side of the waste module comprises a door.

[0037] Preferably, the waste module comprises a sliding frame being slideable into a kitchen unit.

[0038] Preferably, the door comprises a wood panel for integration into a fitted kitchen.

[0039] In accordance with a first aspect of the invention, there is provided a waste container (3) which comprises a body portion (8) defining at least one opening (10), said opening (10) being releasably engageable with the closure means (9), and wherein the outer surface of the closure means (9) comprises engagement means suitable for releasable engagement with a lid portion (5) of the waste module (1).

[0040] In one embodiment the closure means (9) further comprises a handle (14) capable of moving the closure means (9) from a first position wherein the closure means (9) of the waste container (3) is not engaged with the lid portion (5) of

the waste module (1) to a second position wherein the closure means (9) is engaged with the lid portion (5) of the waste module (1).

[0041] In one embodiment the engagement means comprises a screw mechanism for releasably engaging the closure means (9) with the lid portion (5).

[0042] The screw engaging portion is on the outer surface in order that waste material will not become lodged in the screw engaging portion or the screw mechanism itself when in use.

[0043] In one embodiment, the body of the waste container defines a substantially cylindrical shape. In a further embodiment the body of the cylinder defines a substantially square, rectangular, triangular or elliptical shape or the like.

[0044] In a further embodiment, the body portion of like shaped and/or sized containers can be stored within each other to facilitate ease of storage.

[0045] In one embodiment the lid and base portions which are conjoined to the body are substantially identical.

[0046] The waste containers may be defined from a body portion which is substantially cylindrical in cross section. In further embodiments the body of the cylinder may be substantially square, rectangular, or triangular in shape.

[0047] Various embodiments of the invention will now be described, by way of example only, having regard to the accompanying drawings in which:

[0048] FIG. 1 is a front view from above and one side of an embodiment of a waste module according to a first aspect of the invention on a sliding frame adapted to be incorporated into a kitchen unit having a top panel and a stainless steel door;

[0049] FIG. 2 is a front view from above and one side of the waste module of FIG. 1 with the top panel removed to show the individual modules or cylindrical refuse containers;

[0050] FIG. 3 is an exploded view from above and one side of an individual module;

[0051] FIG. 4 is a front view from above and one side of the individual module arrangement of FIGS. 1 and 2;

[0052] FIG. 5 is a top view of the individual module arrangement of FIG. 4 with sample module designations;

[0053] FIG. 6 is a top plan view of the module arrangement of FIGS. 4 and 5 with the top panel in-situ;

[0054] FIG. 7 is a bottom plan view of the waste module with the individual modules located on the waste module bottom panel;

[0055] FIG. 8 is an alternative module arrangement in which smaller diameter modules are located between the individual modules to receive waste;

[0056] FIG. 9 is a top plan view of a further simplified module arrangement;

[0057] FIG. 10 is a top plan view of yet a further simplified module arrangement;

[0058] FIG. 11 is a top plan view of yet another simplified module arrangement;

[0059] FIG. 12 is a front view from above and one side of an embodiment of a waste module according to a second aspect of the invention on a sliding frame adapted to be incorporated into a storage unit having a top panel and a covering door;

[0060] FIG. 13 is a front view from above and one side of the waste module of FIG. 12 with the top panel removed to show individual modules or cylindrical refuse containers;

[0061] FIG. 14 is a front view from above and one side of the waste module of FIGS. 12 and 13 with only one individual module or cylindrical refuse container in position in the waste module;

[0062] FIG. 15 is an exploded view from above and one side of an individual module, and

[0063] FIG. 16 is a front view from above and one side of an embodiment of a waste module according to a third aspect of the invention.

[0064] As shown in the drawings, a waste module (1) in accordance with the invention is made up of a number of individual modules/cylindrical refuse containers (3) (hereinafter referred to as individual modules) adapted to receive different refuse types for recycling and disposal. The individual modules (3) can be removed from the waste module (1) when full for disposal or recycling.

[0065] FIGS. 1 to 7 show a first embodiment of the invention in which the waste module (1) is provided with a sliding frame (2) for incorporation into a domestic kitchen unit. The waste module (1) is substantially box-like in construction and is made up of a housing comprising a bottom panel (27), a front panel, in this case a stainless steel front door (4), and a top panel (5) all mounted on the sliding frame (2) referred to above. It will be appreciated that the waste module (1) can have provision to attach a door (not shown) to match a fitted kitchen. This door can be made of wood, timber or any other material which affords the requisite aesthetic appearance and properties and may be fitted in place of or mounted upon the stainless steel front door (4). It will also be appreciated that the waste module (1) can be a free standing unit without the sliding frame (2).

[0066] In the present embodiment, the waste module (1) houses nine individual cylindrical waste container modules (3) arranged in a 3 by 3 formation. The top panel (5) is provided with nine corresponding top panel openings (35) which are arranged to be in register with the corresponding 3 by 3 formation of the waste container modules (3). The lids which serve to form the closure mean element of the waste containers (9) can be releasably engaged to top panel openings (35) as shall be explained more fully hereinafter.

[0067] The top panel (5) is further provided with a back top panel hinge (6) to serve as a pivot means to allow for the opening and closing of the top panel (5). The top panel (5) is a hinged lid into which the module lids (9) are screwed.

[0068] Each individual container (3) is of identical construction comprising a screw in circular base (7), a body portion (8) upstanding from the screw in base (7) which in this embodiment is substantially cylindrical in shape and a substantially circular closure lid (9) which can be brought into removable engagement with the cylinder wall (8). The cylinder wall (8) defines a circular cylinder mouth (10) for receiving refuse or waste while the cylinder body (8) further defines a second opening which is provided at the opposite end of the body to the upper mouth. This lower opening is conjoined to a base member which may or may not be the same as the circular closure lid closure means which is releasably engageable with the upper opening of the body. The lower closure means may be conjoined to the container body by screwing facilitated by threads present on the outer surface of the container body and inner portion of the closure means. Typically, the interior surface of the container (3) is smooth.

[0069] The internal wall of the base closure member (7) is provided with a screw thread (12), this thread being engageable with complementary screw threads on the cylinder wall

(8). The base closure member (7) is further provided with a recessed groove (29) on its bottom face for positioning the individual containers (3) on the bottom panel (27) of the sliding frame (2) of the waste module. It will be appreciated that the sliding frame (2) is suitable for incorporating the waste module (1) into built in and integrated units, but is not essential. More particularly, as shown in FIG. 7, the bottom panel (27) is provided with three transverse bars (28) adapted to slot into the grooves (29) for securing the individual modules (3). Typically, the transverse bars (28) are part of the plastic moulding of the base of the waste module (1).

[0070] The upper closure lid (9) of the waste container is provided with an internal screw thread (36) for attachment to a complementary screw thread (15) which is present about the periphery of the cylinder wall (8), engagement of the screw threads serving to engage the lid with the body of the container, this serving to close the container (3). The upper closure lid (9) is further provided with an outer screw thread (13) for facilitating attachment to the top panel openings (35) of the waste module. The lid (9) is not attached to the individual container (3) when in use, but the lid acts as a seal until the top panel is opened for use. In use, the container lid (9) acts as an odour seal by fitting neatly onto the top (37) of the module (3) without fully engaging the outer cylinder screw thread (15). The container lid (9) is also provided with a lid handle (14) to assist when screwing the container lid (9) onto the individual module (3) and to assist with lifting and removing the individual module (3) from the waste module (1). In use, the container lid (9) is fixed to the top panel (5) so that the container lid (9) lifts when the top panel (5) is hinged open.

[0071] The internal screw thread (36) and the outer screw thread (13) on the container lid closure means (9) are arranged to enable the user to simultaneously disengage the internal screw thread (36) from the individual waste container module (3) and engage the outer screw thread (13) with the top lid portion (5) of the waste module (1). The lid handle (14) can be rotated, for example through a 90 degree rotation, which may, for example, be in a clockwise direction, in order to open the individual module (3) and secure the container lid (9) to the top panel (5) of the waste module (1).

[0072] Similarly, when the individual module (3) is filled with material for recycling or other general waste, the lid handle portion (14) can be rotated in the opposite direction, for example in a 90 degree anti-clockwise rotation, in order to close and seal the individual waste container module (3) and release and disengage the container lid (9) from the top panel (5) of the waste module (1). The individual module (3) can then be removed from the waste module (1) with the container lid (9) sealed closed.

[0073] FIG. 4 shows a front view from above and one side of the module arrangement (16) of a plurality of waste containers (3). The individual waste containers (3) of the module arrangement (16) are colour coded to signify or designate that each of the containers is to be used for the storage of a different waste types. As shown in FIG. 5, a sample container designation (17) is made up of a container which may be used to store tin (18), a container which is to be used to store glass (19), a container which is used to store waste suitable for landfill (20), a container which is to be used to store tetra cartons (21), a container which is to be used to store compost brown (22), a container which is to be used to store compostable waste (23), a container which is to be used to store

cardboard (24), a container which is to be used to store plastics (25) and a container which is to be used to store paper (26).

[0074] FIG. 8 shows a top plan view of an alternative waste module arrangement (30) in which like numerals indicate like parts. In the present embodiment, the waste module (1) is used to house nine individual waste container modules (3) as previously described. However, the waste module (1) is further provided with individual waste containers of reduced diameter (31) for increased segregation of waste. For example, as shown in FIG. 8, the reduced diameter waste containers (31) are designated to receive waste in the form of batteries, tinfoil, wood, hard plastics, crisp bags, metal, milk bottle tops, plastic straws, plastic cutlery, juice tops and the like. The reduced diameter containers (31) are located between the individual containers (3) within the waste module (1).

[0075] FIG. 9 shows an alternative module arrangement (32) in which the waste module (1) houses three individual waste containers adapted to store land fill, paper and plastics while FIG. 10 shows yet a further module arrangement (33) in which the individual containers (3) are designated to receive plastics, landfill, glass and cardboard.

[0076] FIG. 11 is a further simplified module arrangement (34) in that the individual waste containers (3) are designated to receive tin and glass.

[0077] Referring now to FIGS. 12 to 15, a second embodiment of the invention is disclosed that is substantially the same as that shown in FIGS. 1 to 7.

[0078] FIGS. 12 to 15 show a second embodiment of the invention in which a waste module (101) includes nine individual waste containers (103) arranged in a 3 by 3 formation. The individual containers (103) are removable from the waste module (101). The waste module (101) is provided with a sliding frame (102) and a stainless steel front door (104) for incorporation into a domestic kitchen unit. The waste module (101) can be moved from a storage position, as shown in FIG. 12, to a use position, as shown in FIGS. 13 and 14 by sliding the waste module (101) along the sliding frame (102).

[0079] A top panel (105) is hinged to the sliding frame via a back top panel hinge (106). The top panel is provided with nine corresponding top panel openings (135), also arranged in a 3 by 3 formation.

[0080] Each individual module (103) comprises a cylindrical wall (108), a screw in lid (109) and a screw in base (107). The screw in lid (109) and the screw in base (107) are of identical construction, each comprising a handle (114, 140) and being detachable from the cylindrical wall (108) by screw mechanism. The screw in lid (109) is provided with an internal screw thread (136) for attachment to a complementary outer cylinder screw thread (115) on the cylinder wall (108) to close the individual module (103). The container lid (109) is further provided with an outer screw thread (113) located about the peripheral outer surface of the lid handle (114), this facilitating attachment of the container lid to the openings in the top panel lid (135) of the waste module, which are provided in register with, and which accommodate the container lid.

[0081] As shown in FIG. 14, a bottom panel (141) of the waste module (101) is provided with recesses (142) arranged in a 3 by 3 formation. Each recess (142) is shaped to receive the base handle (140) to enable the individual container (103) to be secured in position in the waste module (101). The individual container (103) is lowered into the waste module

(101). The base handle (140) of the container (103) is placed in the recess (142) to align the container (103) in position and restrict lateral movement and rotation of the individual module (103).

[0082] When all the desired containers (103) are in position in the waste module (101), the top panel (105) is hinged closed, as shown in FIG. 12. The longitudinal dimension of each lid handle (114) corresponds to the diameter of each corresponding top panel opening (135) in the lid of the waste module such that each lid handle (114) at least partially protrudes through the top panel opening (135) when the top panel (105) is closed down upon the containers.

[0083] The container lid (109) is detached from the container (103) by disengaging the internal screw thread (136) from the outer cylinder screw thread (115) on the cylinder wall (108). The container lid (109) is attached to the top panel (105) by engaging the outer screw thread (113) on the lid handle (114) with the top panel opening screw thread (143). When the top panel (105) is closed, each lid handle (114) is rotated 90 degrees clockwise to simultaneously detach the screw in lid (109) from the container (103) and attach the container lid (109) to the top panel (105).

[0084] The top panel (105) can be then hinged open, as shown in FIG. 13. Each of the container lids (109) remain attached to the top panel (105) so that all of the containers (103) are opened simultaneously.

[0085] When it is desired to remove at least one or all of the container (103) from the waste module (101), the top panel (105) is hinged closed. Each of the lid handles (114) corresponding to the respective individual module (103) is rotated 90 degrees anti-clockwise to simultaneously detach the container lid (109) from the top panel (105) and attach the container lid (109) to the container (103). The top panel (105) is then opened to allow the at least one or all of the containers (103) to be removed using the lid handle (114) to lift each individual module (103) out of the waste module (101).

[0086] It will be appreciated that the rotation direction and degrees required to open or close the container lid (109) and attach it to the top panel (105) is determined by the shape and dimensions the screw threads and can be any rotation direction or any number of degrees.

[0087] FIG. 16 shows a third embodiment of the invention in which a waste module (201) includes three individual containers (203) arranged in a compact triangular formation and contained in a frame (202). The waste module (201) is similar to the waste module (101) as shown in FIGS. 12 to 15. The waste module has a top panel lid (205), which has a plurality of openings (235) which correspond to and which are in general register with the containers housed in the waste module, the openings being arranged in a triangular formation. The lid is hinged to the sliding frame via a back top panel hinge (206). Each individual container (203) is identical to that shown in FIG. 15, each having a screw in lid (209) with a lid handle (214) and a screw in base (not shown) with a base handle (not shown). The screw in base and the screw in lid are substantially the same. The individual containers (203) are secured and removed from the waste module (201) as described above for the waste module (101) shown in FIGS. 12 to 15.

[0088] The waste module (201) can be used as a free standing unit. Alternatively, the waste module (201) can be mounted on a kitchen unit door by attaching the back of the frame (202) to the kitchen unit door using attachment means (not shown).

[0089] In use, the waste module (1) is constructed as previously described and the individual modules are employed according to their designations to receive waste. When an individual module (3) is full of waste, the individual module (3) may be removed from the waste module (1), sealed with a cylinder lid (9) and easily transported for recycling as required.

[0090] The waste module (1) allows a consumer to take control of total household (or indeed workplace) waste so that the waste may be recycled e.g. glass may be collected separately, sealed in its individual module (3) when full and transported to a local bottle bank whereas compostable brown and green waste product can be collected before being composted. The waste module (1) of the invention also facilitates collection of general waste for landfill thereby providing a solution for all types of household or commercial waste.

[0091] Generally, the individual modules (3) are of a standard size and shape. This is useful to allow the waste module (1) to be increased or decreased in size. The different possible flexible layouts of waste module (1) accommodate using such waste modules (1) in households, businesses or public places. The size of the individual modules (3) can be standardised to enable the waste to be collected as part of a waste collection system. The individual modules (3) can be stored outside to await collection or be transported to a recycling centre or other waste disposal centre.

[0092] The waste module of the invention eliminates the requirement for bin liners or bags as individual modules (3) are removed for disposal and replaced as required. The individual modules (3) can be manufactured from any suitable material including biodegradable materials. As previously described, the individual modules (3) can be colour designated as desired. The screw-in base (7) and cylinder lid (9) of each module (3) can easily be removed as previously described to facilitate cleaning of the waste module (1).

[0093] A consumer may select individual modules (3) according to their requirements e.g. an individual commencing recycling may employ two or more general waste modules (3) initially and reduce the number of general waste modules (3) as the level of recycling is increased. As a further example, a family with infants could include a diaper module whereas a household which entertains frequently may opt to include one or more of the glass or aluminium modules.

[0094] As previously described, additional modules of reduced size or diameter (31) may be included in the waste module as required by the user. Items such as bottle tops could for example be returned in quantity to local traders for return in turn to a manufacturer.

[0095] As previously described, the waste module can be incorporated into a fitted kitchen or alternatively may be provided in the form of a free standing unit.

[0096] The waste module (1) has many applications and could also be employed to replace wheelie bins as an efficient collection method with a reduced amount of general waste being sent to landfill. The individual modules destined for landfill may be sealed and left for collection in place of employing a wheelie bin which is bulky and costly.

[0097] In a further embodiment of the invention, the waste module (1) may be provided with a removable top tray located beneath the top panel (5). The top tray could include module designations as desired by the consumer and could also prevent spillage onto the side walls of the individual modules (3). The top tray could also include instructions on appropriate waste for each waste module (3).

[0098] In a further embodiment of the invention, a compactor can be incorporated into the waste module (1) to compress individual modules (3) e.g. paper, plastic bottles and the like. The compactor could be screwed to the top of each individual module (3) and simply removed following compaction. Alternatively, the compactor is attached to the base of the hinged top panel (5).

[0099] In a further embodiment of the invention, a suction means can be incorporated into the waste module (1) to compress the contents of individual modules (3), such as plastic bottles. The suction means may be screwed to the top of each individual module (3) and simply removed following compression. Alternatively, the suction means may be attached to the base of the hinged top panel (5).

[0100] It will be appreciated that the individual modules (3) can comprise tracking means, such as a chip or barcode.

[0101] It will also be appreciated that the individual modules (3) can comprise graphical illustrations or text for advertising and marketing purposes.

[0102] It will be appreciated that the individual modules (3) can be used alone without necessarily incorporating the individual modules (3) into the waste module (1). The individual modules (3) can be free standing units.

[0103] Certain households may only use one individual module (3) for example for general waste. A household or business may also have several individual modules (3) for various types of waste or recyclable material. Again each of the individual modules (3) can be stored outside to await collection or be transported to a recycling centre or other waste disposal centre.

[0104] The invention is not limited to the embodiments herein defined which may be varied in construction and detail.

1-25. (canceled)

26. A waste module comprising:

a frame portion, and

a lid portion, wherein

the frame portion is capable of housing at least one waste container and the lid portion is capable of being brought into releasable engagement with a closure means of the at least one waste container.

27. A waste module as claimed in claim 26 further comprising a base, the base comprising at least one engagement means which allows for the at least one waste container to be brought into releasable engagement with said waste module.

28. A waste module as claimed in claim 26 in which the lid portion is moveable between a first closed and second open position, the movement of the lid portion being such that any closure means which is in engagement with the lid portion remains engaged with the lid portion during the movement between the first and second positions to displace the lid portion from a body portion of the waste container.

29. A waste module as claimed in claim 26 in which an outer surface of the closure means comprises a screw mechanism for releasably engaging the closure means with the lid portion.

30. A waste module as claimed in claim 29 in which the closure means comprises a handle.

31. A waste module as claimed in claim 30 in which the screw mechanism is on an outer surface of the handle.

32. A waste module as claimed in claim 26 in which an inner surface of the closure means comprises a screw closure mechanism for releasably engaging the closure means with an outer surface of the at least one waste container.

33. A waste module as claimed in claim **26** in which the waste container comprises a cylindrical shape, and preferably, the at least one waste container comprises a partially rigid material.

34. A waste module as claimed in claim **26** in which the at least one waste container is removable from the waste module, and preferably, the at least one waste container comprises any one of the following number of waste containers: one, two, three, four, five, six, seven, eight, nine, ten, eleven and twelve.

35. A waste module as claimed in claim **26** in which the closure means comprises a removable lid.

36. A waste module as claimed in claim **26** in which the closure means comprises a removable base.

37. A waste module as claimed in claim **26** in which the closure means comprises an odour seal, and preferably, the odour seal comprises rubber or any other suitable sealing material.

38. A waste module as claimed in claim **26** in which the at least one waste container is adapted to receive various types of waste.

39. A waste module as claimed in claim **26** in which the at least one waste container is shaped to slot tightly into the waste module.

40. A waste module as claimed in claim **26** in which the at least one waste container comprises a smooth interior.

41. A waste module as claimed in claim **26** in which the waste module is rectangular, square, triangular or circular in shape.

42. A waste module as claimed in claim **26** in which the frame portion comprises a door, and preferably, the frame portion is mountable on guide means for enabling the waste module to be slideable into a kitchen unit, and advantageously, the door comprises a wood panel for integration into a fitted kitchen.

43. A waste container for the waste module as claimed in claim **26**, the waste container comprising a body portion defining at least one opening, said opening being releasably engageable with the closure means, and the outer surface of the closure means comprising engagement means suitable for releasable engagement with the lid portion of the waste module.

44. A waste container as claimed in claim **43** in which the closure means further comprises a handle capable of moving the closure means from a first position with the closure means of the waste container not engaged with the lid portion of the waste module to a second position with the closure means engaged with the lid portion of the waste module.

45. A waste container as claimed in claim **43** in which the engagement means comprises a screw mechanism for releasably engaging the closure means with the lid portion.

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