

(12) UK Patent Application (19) GB (11) 2461889 (13) A

(43) Date of A Publication

20.01.2010

(21) Application No: 0812968.6  
(22) Date of Filing: 16.07.2008

(51) INT CL:  
B65F 1/14 (2006.01) B30B 9/30 (2006.01)  
B65F 1/16 (2006.01)

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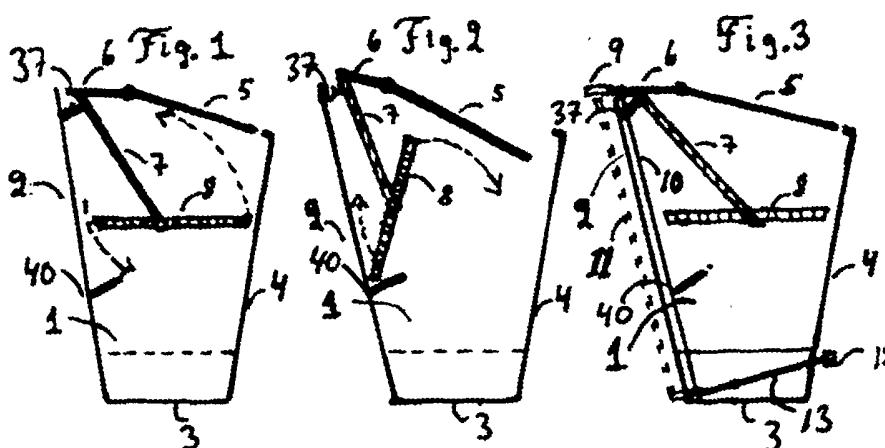
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(58) Field of Search:  
INT CL B30B, B65F  
Other: WPI, EPODOC & Internet

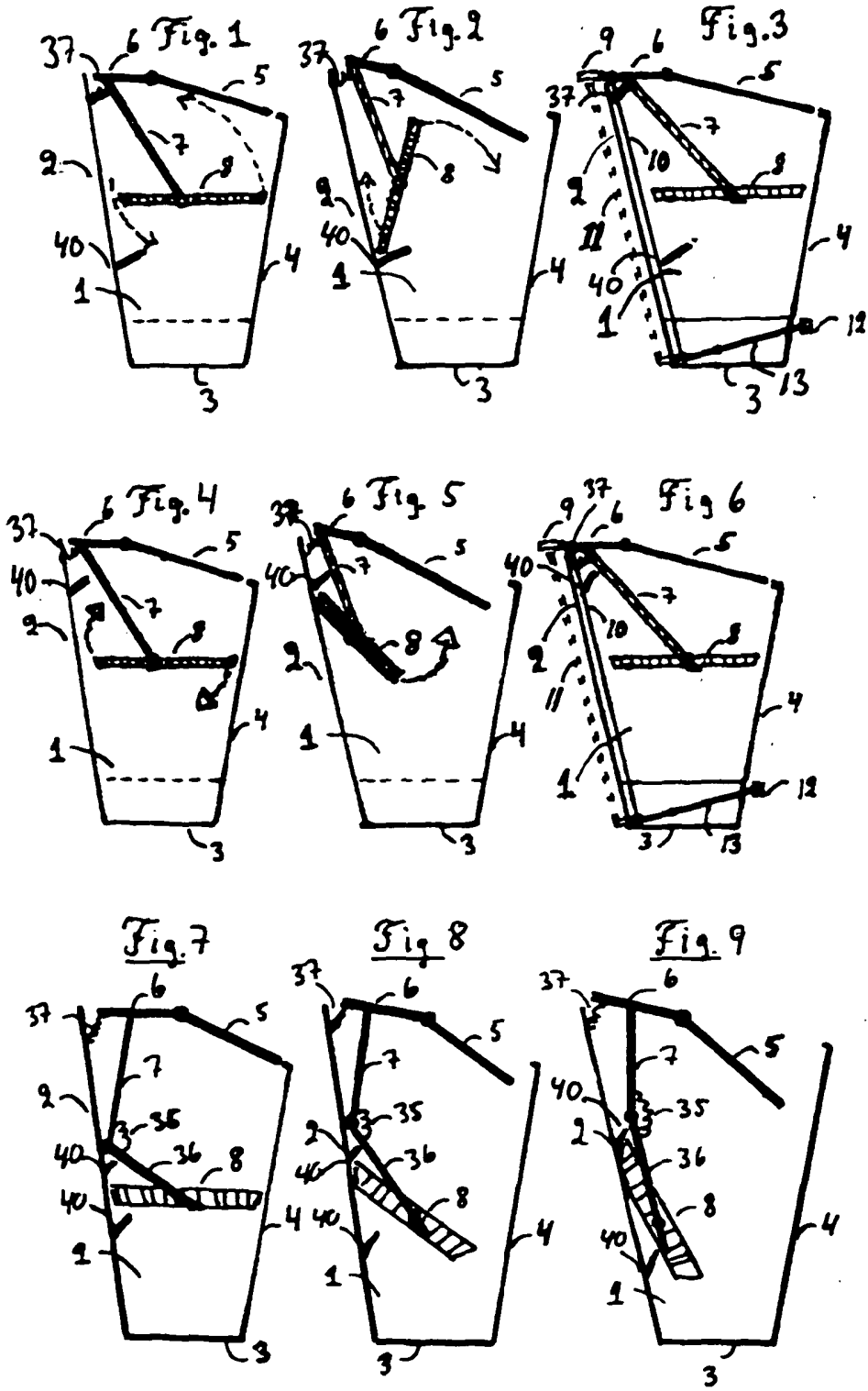
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(54) Abstract Title: **A waste bin with compacting apparatus**

(57) A waste bin with a compacting plate 8 attached to the lid 5, 6 of the bin, the compacting plate 8 automatically moves out of the way when the lid 5, 6 is opened to allow waste material to be placed into the bin, and compacts/compresses the waste material within the bin when the bin lid is closed. The compacting plate is pivotally attached to the bin lid via at least one levered arm that may be bent, straight, telescopic or bendy. The levered arm(s) may be attached or flexibly attached to one of the interior walls of the bin and with the aid of lugs 40 protruding from one or more of the interior walls of the bin, determine the movement of the compacting plate as it moves from a compacting position to a retracted position against one of the interior walls of the bin to aid the deposit of waste material. The levered arm(s) 7 may be telescopic (figs 10 — 12) and may be extended via springs or hydraulic means to assist the compacting of waste material. Springs on the levered arm(s), lid or compacting plate and weights on the compacting plate may also assist the movement of the compacting plate. The bin lid may be open and closed via a pedal lever system that is attached to the lid 9. Alternatively the compacting plate may be moved directly by a motor or via the use of a pedal activated lever (figs 16 — 18). The stop lug and compacting plate may also be used in combination as a bin lid (fig 28 — 30).



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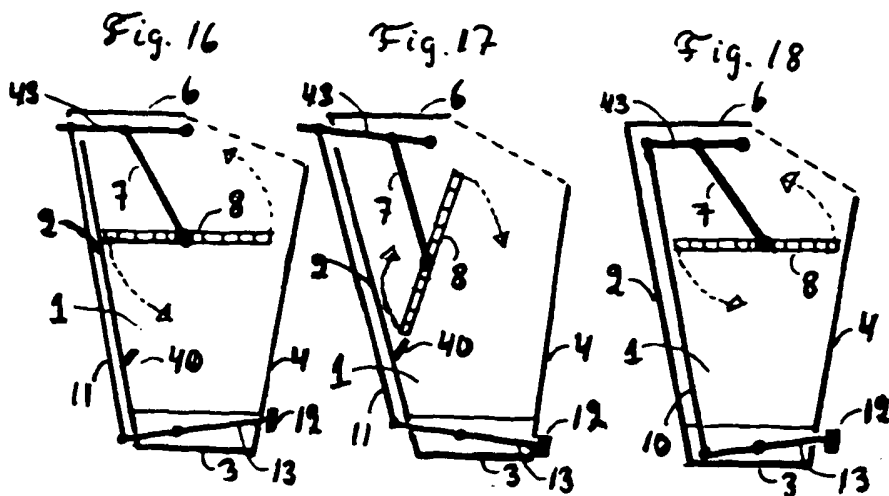
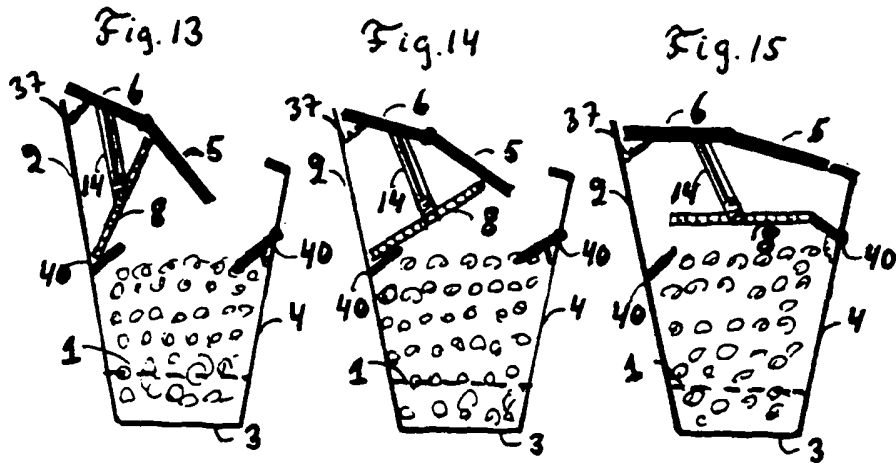
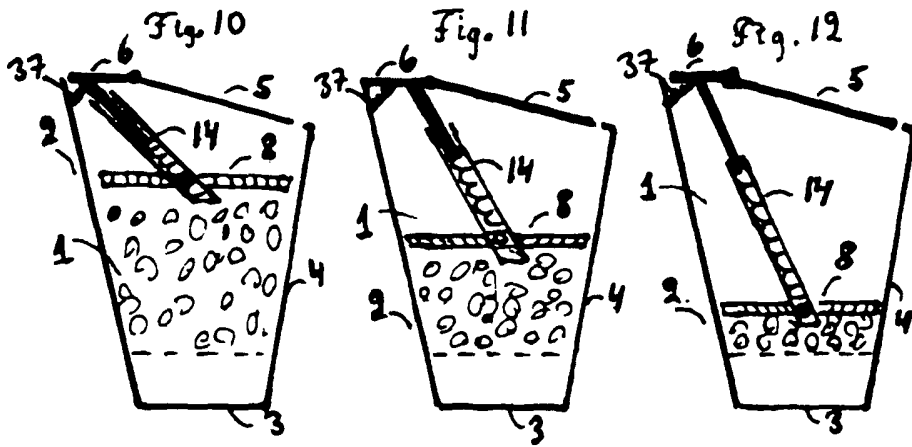


Fig. 19

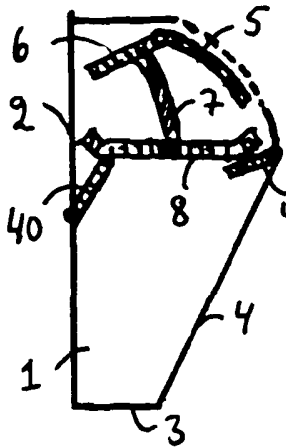


Fig. 20

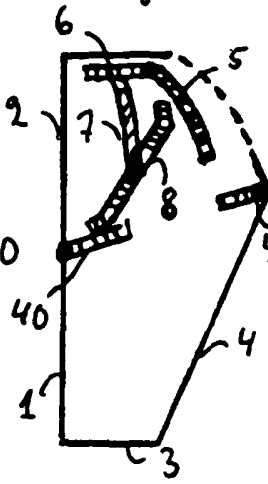


Fig. 21

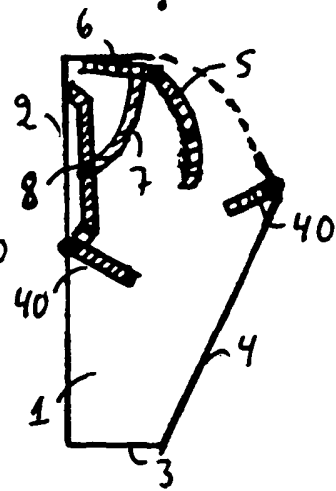


Fig. 22

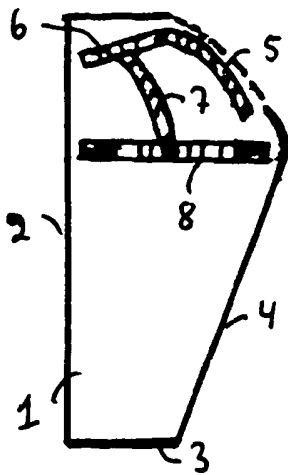


Fig. 23

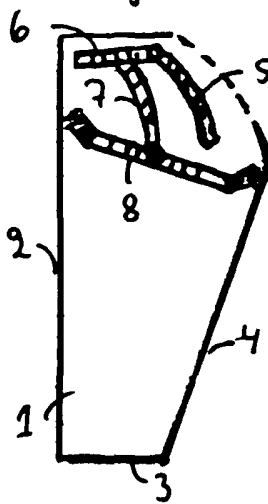


Fig. 24

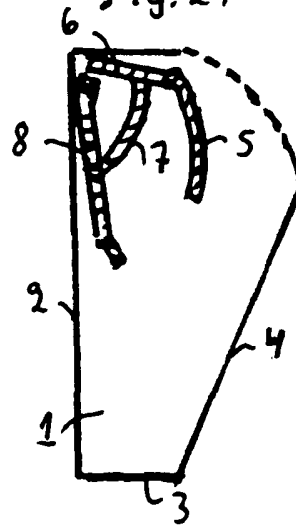


Fig. 25

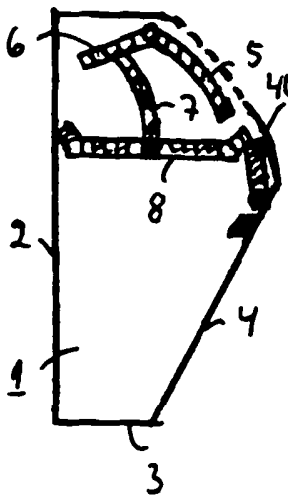


Fig. 26

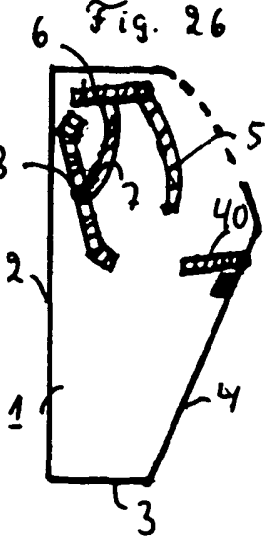
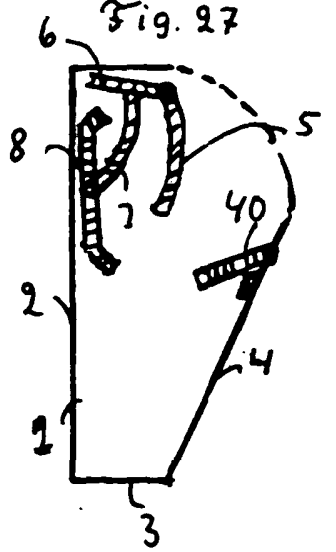


Fig. 27



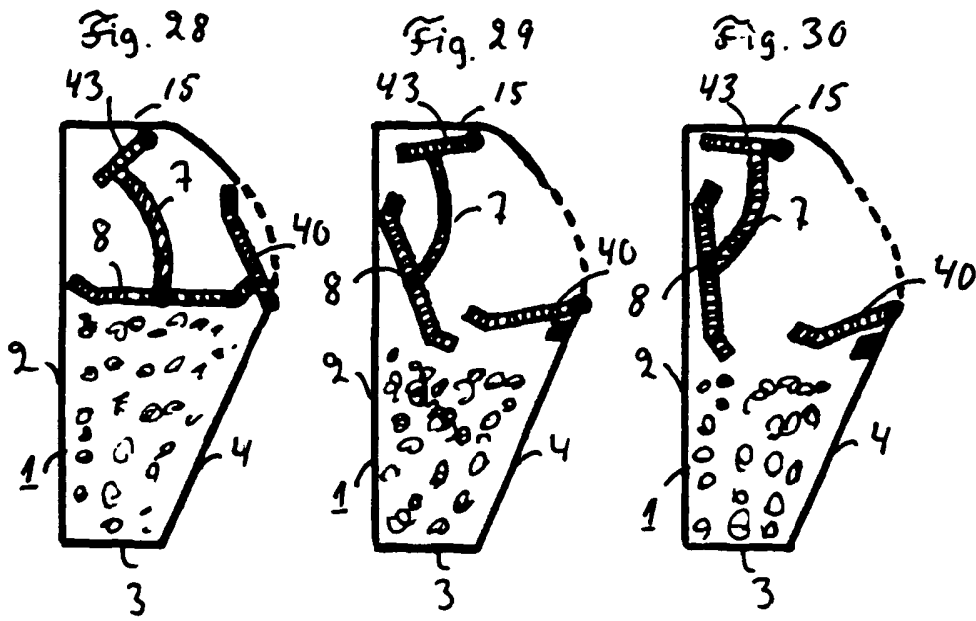


Fig. 31

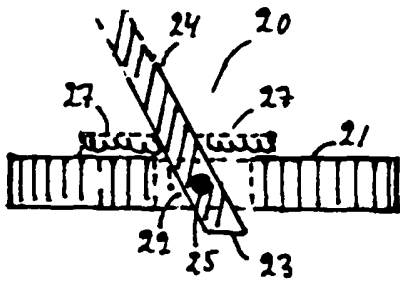
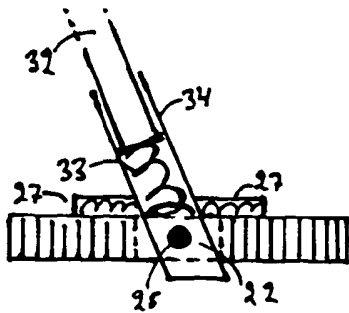


Fig. 32



## Description

### Background of the invention

The existing invention refers to an apparatus for the storing and compacting of waste. The apparatus comprises of a receptacle with a mechanism for the storing and compacting of waste. The waste may consist of paper, biological waste (vegetables, food waste and similar), cigarettes and other waste that is compactable and other waste that is optional to be stored and compacted with the aid of the invention.

Concerning the storing of paper towels or toilet paper existing waste and paper baskets on the market tend to spill over its contents with the consequence that the waste ends up outside the basket. This often occurs in public places and particularly in restrooms, resulting in deteriorated hygiene and inconvenience for people on-the-spot. The invention is also applicable to all other public and private environments (hotels, libraries, hospitals, schools, industries, home etc.), that is all environments where waste temporarily must be collected and kept.

With waste receptacles, waste bins, paper baskets where the waste is kept and compacted within the receptacle these problems are prevented.

The invention is applicable to the storing and compacting of paper hand towels, other soft paper (paper towels etc.), toilet paper and other compactable paper waste.

The invention is also applicable to the storing of other kind of waste that should be prevented from getting outside the receptacle in question, i.e. to prevent the waste from spoiling the environment. The invention has the advantage that the hygiene will be improved and that the comfort factor will increase for the local environment.

The invention also minimizes the risk of fire in the receptacle with an "internal lid" and that the handling of the waste is facilitated. The compacting and the storing decreases the number of emptying and the environment becomes more hygienic and easy to clean. The costs also decrease for those responsible for the cleaning

The following patents refer to compacting of wastes:

US 2002/0056377 A1 (application) with motor run compacting plate

US 5.195.432 with piston run paddle (scoop) for compacting means

US 3.696.737 with motor run lever arms and a compacting plate

US 3.357.346 with in the upper part of a container, a submersible compacting plate governed by lever arm and a foot pedal.

JP 3284501 with a compacting plate governed by lever arms and a foot pedal

GB 2 315 404 with a governing arm for lever arm and compacting plate fixed to the lid.

JP 7323397 with link arms governed by a compacting plate and movable bottom end attached to the outside of a container

US 5440978 with a compacting plate and "stocking" bag for compacting purposes located in the lid

US 5,575,199 with a movable plate with the aid of an exterior "machinery" in a rectangular container

UK 1 593 808 with a lid governed by a foot pedal and a lever arm that also compresses the waste

EP00006242 with in upper part located mechanism that at a horizontally governed arm tilts a decompression unit in a downward movement.

US patents 3,285,505 J M Katz 1966

EP 0006242 A1. AUPURA GMBH 1980

EP 0532848 A2. VON LEPEL 1993

JP 10007204 A. BAKUMA 1998

US 2392604 A. MALLORY 1946

US 5440978 A. Ó Brian 1995

US 5884556 A. KLEPACKI ET ALDER 1999

US 20030121425 A1. BLATZ 2003

In additional patents there are patents with paper shredder. piston - and motor run compression units and patents that have a screw -auger- that compacts the waste.

The existing patent application differs in a high degree from above described patents as to:

- To tilt a compacting plate (8) during feeding of waste (Fig. 1-30).
- To use above mentioned movement of a compacting plate (8) against the receptacle's wall (2) for the compacting of waste during feeding and ceasing of feeding of waste into the receptacle (Fig. 1-30).
- That by the movement of the compacting plate (8) against the receptacle's wall (2) said plate will compact and convey the waste sideways and thereby facilitating the feeding of waste (Fig.1-30).
- That the compacting plate (8) keeps the waste at a certain level and also compacts the underlying waste at the termination of feeding of waste (Fig.1-30).
- To govern the compacting plate (8) with an extra lever arm (43) located beneath the upper fixed part of the receptacle (1) (Fig.16-18. 28-30).
- To govern a compacting plate (8) with a two-section lid (tilting lid) beneath a fixed part of the receptacle (1) (19-27).
- To govern a compacting plate (8) with a two-section lid without a fixed upper part of the receptacle (Fig.1-15).
- To use a foot pedal (Fig.3. 6.16-18). a lid-function (Fig.1-15) or motor in order to govern the opening and closing of the receptacle linked to the compacting device
- That compacting plate (8) and lever arm with a telescope function (14) can be governed by lids, foot-pedal or motor (Fig.10-15).
- To use a compacting plate (8) to compact the waste and to keep the waste within the receptacle (1) (Fig.1-30).
- To use the design of the lever arm with telescope function -14- (gas spring or mechanical spring) in order to increase the degree of the compacting of waste (Fig.10-15).
- To use a bendable lever arm in order to increase the degree of compacting of waste (Fig.19-30).
- To use a lever arm (7) that can be bent in order to increase the degree of the compacting of waste.

- To use a stop-lug (means of stopping) for the decompression of a telescopic arm and for the tilting against the receptacle's wall (1) for improved storing and compacting of waste (Fig.13-30).
- To use fixed stop-lugs (40) and/or movable pivoted and flexible stop-lugs (40) (Fig. 1-3. 7-9. 13-17. 19-30) for improved compacting of waste and facilitating of the tilting movement of the compacting plate (8).
- That the compacting and storing functions occur simultaneously with the feeding of waste and the ceasing of feeding of waste into a receptacle (1) (Fig.1-30).
- That a compacting plate (8) keeps the waste beneath a certain given level and thereby preventing the waste to "spill over" and thereby facilitating further feeding of waste into the receptacle (1) (1-30).
- That the compacting plate has flexible outer edges (Fig. 31-32).
- The fact that a lid can be opened downwards or upwards is applicable to all described drawings and thereby allowing stop-lugs (40) to move upwards or downwards in the receptacle (1) and govern the compacting plate (8) to be tilted against the receptacle's (1) wall (2).

### **Summary of the invention**

When waste is not feed into the receptacle and the compacting plate is immersed in a horizontal position the waste is kept beneath the compacting plate and within the container. Lever arms of telescopic function, fixed lever arms, flexible lever arms, bent lever arms and straight lever arms compact the underlying waste gradually according to the increased volume and the feeding of waste.

During the feeding of waste there is a function that the lever arms and the compacting plate move against either interior wall of the receptacle and thereby allowing the feeding of waste.

The moving of a compacting plate clockwise during the feeding of waste (Fig.4-9.22-30) brings waste diagonally downwards against either interior wall of the receptacle and during the ceasing of feeding of waste the compacting plate returns to its original position and during this movement compacting underlying waste. Waste that is fed into the receptacle increase the level of waste in the receptacle but the waste is efficiently pressed down since the compacting plate is lowered down from a higher level in a partial circular path.

With telescopic function of the lever arms (Fig.10-15) the lever arms and the compacting plate can be tilted slantingly down against stop- lugs at optional levels in the receptacle during the feeding of waste. The stop-lugs themselves prevent the underlying waste to increase. A compacting plate with a different lever arm (straight, bent, flexible, fixed) can also be tilted against the receptacle's walls and/or against stop-heels at one or more levels in the receptacle.

Stop-lugs make telescopic arms to be compressed at a certain level and the compacting plate to be tilted obliquely against the receptacle's wall during the feeding of waste. During the ceasing of feeding of waste there is a compaction of waste when the telescopic arm is extended and decompressed and when returning to a horizontal position the telescopic arm compact the underlying waste.



The compacting plate with a telescopic arm can also be intercepted by the receptacle's walls during the ceasing of feeding of waste due to a slanting design of the receptacle's interior walls

Stop-lugs can be fixed, i.e. not flexible. With a fixed stop-lug at different levels in the receptacle the slanting and tilting of the compacting plate and the compression of the telescopic arm will be facilitated as the waste volume increases. Stop-lugs can also constitute a lid for the receptacle and to be governed by lever arms, a compacting plate and an extra lever arm beneath the upper part of the vessel (Fig.28-30).

Flexible stop-lugs can be moveable and pivoted for a movement towards a compacting position of underlying waste and a movement back against a locked position. This movement is achieved by the bringing back of the stop-lugs to the original position by means of a spring mechanism. Stop-lugs thereby have a compacting function concerning the waste and can interact with the compacting plate for a higher degree of compacting. With a stop-lug that is designed as a springy and pivoted plate the compacting and storing functions are further improved.

Such a springy and pivoted plate has during a closed function, i.e. during no feeding of waste, a tilted, slanting or other position thereby not preventing the feeding of waste, when the compacting plate meets the stop-lug. This stop-lug is applicable to all in this patent described functions and receptacles.

Flexible stop-lugs can interact with fixed stop-lugs (Fig.19-21: wall 4) for the optimization of compacting and storing of waste.

The function to have lever arms with telescopic function increases the degree of compacting where a higher degree of compacting is desired and for applications concerning waste that is difficult to compact.

The compacting plate is automatically tilted as it meets either of the receptacle's walls. The compacting plate can then have a slight inclination and/or to have various weights of the compacting plate's two halves - divided by the arbor attached to the lever arm or have different spring resistance and force on respective halves of the plate.

With a lid and a compacting plate in the receptacle, located at a lower position the invention is made into a more closed unit, more hygienic, safe (injuries of the user caused by crushing) and fire safe. The invention can also function where a compacting plate constitutes both compacting unit and lid.

The compacting plate can via a lever arm be governed by a lid, foot-pedal system or an electrical motor.

The receptacle's lid can be divided into two sections, a so called tilting lid; - that can be tilted- (for example Fig. 1-15) or a lid with one section with a suspension of the lid in the receptacle's upper part in a pivoted arbor. Two-section lid and one section lid can lack a fixed upper part of the receptacle (Fig.1-15) or have a fixed upper part of the receptacle (Fig.19-30). The receptacle can also have an extra lever arm, a lever arm and a compacting plate beneath the fixed upper part of the receptacle (Fig. 16-18, 28-30) and lack a lid or have a tilting lid or other type of lid. The receptacle can also have a stop-lug as a lid governed by a compacting plate and a lever arm (Fig.28-30).

Lever arm and compacting plate can be governed by the movement of a lid (Fig.1-15; via the pressing of the lid downwards or upwards). via a foot-pedal movement (Fig. 16-18: through a pressure of the foot-pedal -12-) or via an electrical motor (Fig. 1-30: via a running of the lid's pivoted arbor. via the running of an extra lever arm (43 - Fig. 16-18: without a foot-pedal mechanism moving upwards or downwards or via the running of the pivoted arbor of an extra lever arm).

All above described functions and effects can also be achieved with an opening of lids upwards and/or with a movement downwards of lever arms and/or an extra lever arm.

### **Detailed description:**

During an anticlockwise rotation of the compacting plate (8) and opening of the receptacle's lid, for the feeding of waste, the compacting plate is tilted gradually approaching the wall of the receptacle (2) and being in contact with the wall the plate further initiates a rotation around its own shaft (25) -the lever arm (7) is pivoted to the compacting plate- in a anticlockwise movement and rotation.

Figures 1-3. 13-21 are described with an anticlockwise rotation of the compacting plate.

Figures 4-9. 22-33 are described with clockwise rotation of the compacting plate.

Similar effects and functions are achieved by anticlockwise and clockwise rotation of the compacting plate.

This above described anticlockwise movement and tilting of the compacting plate against the wall require that the compacting plate's left side to be at a somewhat lower position than the right side and/or that the lever arm (7) has springs with varying strength or the compacting plate has different weight on the plate's halves (Fig.1-3.13-15.19-21).

In contact with the inner wall of the receptacle (2) the compacting plate (8) moves in an anticlockwise movement and stops being tilted against the wall (2).

A spring mechanism with different strength/force of springs attached to the slewing bracket (Fig. 31-33) may also have the effect that the tilting movement of the compacting plate is facilitated during the movement against the wall. In this case the spring on the side of the compacting plate that gets in contact with the vessel's wall is weaker (spring 27 or 28; Fig. 31-33).

During the movement towards this tilted position of the compacting plate the lid is opened gradually and thereby creating an opening for the feeding of waste (Fig. 1-3 etc.).

During the above mentioned opening movement ( feeding of waste) the compacting plate moves in such a manner that also existing waste is compacted by the compacting plate when it in contact with the wall moves downwards along the same. During closing -ceasing of feeding of waste) the right edge -part- of the compacting plate (Fig. 1-3) compacts existing waste and with flexible springy outer edges of the compacting plate the compacting of waste is further enhanced.

This implies that the compacting plate by the opening of lid (feeding of waste) moves against the receptacle's wall and during this opening movement get in contact with the wall. The length of the plate. length of the springy outer edges of the compacting plate (Fig. 32). the

bending of the slewing bracket and its length and design (fixed, springy, gas spring, springy lever arm etc.) affects the movement of the compacting plate and the compacting of the waste during the opening movement.

If the compacting plate has springy and flexible outer edges (Fig. 32) a certain spring force is achieved in contact with the wall, the force of which further compacts the waste downwards against the bottom of the receptacle.

When the lid is in an open position (drawing 2 etc.) the compacting plate is tilted in a slanting position against the receptacle's wall. The lid is in this position wants to resume a closed position (drawing 3) with the aid of a spring (37) and/ or flexible (bendable)-springy outer edges of the compacting plate (drawing 32) or with the aid of spring (27, 28: Fig. 31-33). The lid (5, 6) may be kept in position (open position) by the aid of a foot -pedal system (drawing 3) or with a pressing movement on the lid (5). This pressing is performed by the user of the receptacle with a movement of the hand. The foot-pedal system is governed by the foot of the user.

With an extended section (5) of the lid there is a leverage effect and a heightened counter force on the spring (37) or with a springy lever arm (7) and also with springy outer parts of a compacting plate (8) during the opening (feeding of waste) by the use of the hand force or enforced force towards spring (27, 28, Fig. 31-33).

During the opening with a foot pedal system part of lid (6, 9) can be made longer than part (5) to attain a leverage effect (Fig. 3).

The lid can with a foot pedal system be pivoted against wall (2) and in that application having a lid of one section or being pivoted at (6) with a two -section lid (a tiltable lid) -drawing 3). If there is no lid section (5) a lever arm may be attached to any part of (6) or beneath a fixed lid section (6: Fig. 16-18).

If there is no lid an extra lever arm (43) may be attached and pivoted to the upper parts and attached to the lever arm of the compacting plate and to a foot-pedal system. (Fig. 16-18). All described functions of the design of the lid are also applicable to an opening of the lid with hand force.

With one lever arm (7, 14, 36) this arm may be rigid (steel, plastic and other materials), bendable (spring, springy steel or other kind of bendable material or a combination of these alternatives).

The lever arm (7, 14, 36) may also be of a telescopic design (with a mechanic spring; drawing 10-15) and/or with a gas spring or other kind of hydraulics.

Springs (27, 28; drawing 31-33) improves the compacting of waste.

The choice of lever arm design is determined by the need of compaction and what level the compacted waste should have in the receptacle. The degree of compaction is enhanced by the use of a telescopic design (mechanical or gas spring) compared to a rigid lever arm, bendable lever arm and lever arm with springs attached to the compacting plate.

The invention may consist of a combination of the lever arms mentioned. Especially if more than one lever arm is used.

More than one lever arm is applicable to all described applications.

Depending on the length of the lever arm the volumetric compacting efficiency of waste in the receptacle will be affected, so the degree of compaction of the waste varies with the technical design.

The design of the receptacle affects the degree of compaction and "degree of spilling over of the waste". Slanting walls increases the compaction of waste.

In order for the compacting plate to move and achieve functions as described above at least one wall could have an inclined design, i.e. the vessel narrows in the direction of the bottom of the receptacle. Described functions can also be achieved with one or more straight walls of the receptacle. In the latter case the receptacle could have an inner slanting wall or stop-lugs (40).

With two lever arms during opening (Fig. 7-9) they move against the wall and simultaneously the lever arm is tilted against the wall when the compacting plate meets the wall. During this opening movement the waste is compacted by the clockwise movement of the compacting plate.

Even in a closed position the waste is compacted. This compacting effect increases if the lever arm is of a telescopic design (with a mechanical spring, a gas spring or other kind of hydraulics). A stop-lug (40) facilitates the tilting of the lever arm (7, 36) and compacting plate against the wall.

Spring (35, 37) brings the compacting plate back to a closed horizontal position (Fig. 7) during the closing of the receptacle (stopping of feeding of waste).

Systems with two or more lever arms may also be governed by a foot-pedal.

The compacting plate may also be tilted against the wall by an anticlockwise movement.

During a clockwise rotation by the compacting plate and opening of the lid of the receptacle for the feeding of waste the compacting plate is gradually getting closer to the wall and when in contact with the wall the compacting plate starts turning round its own axis (the lever arm is pivoted in the compacting plate (25) which makes the plate rotatable) in a clockwise movement and rotation.

Drawings 4-9, 22-33 are described with a clockwise movement of the compacting plate. This above described clockwise movement and slanting of the compacting plate against the wall requires that the left side of the compacting plate is at a somewhat lower level and position than the right side or that the spring force against the slewing bracket has varied force or that there is different weight on the halves and sides of the compacting plate (drawing 1-3, 13-15, 19-21).

In contact with the wall the compacting plate moves in a clockwise movement and stops tilted against the wall where springs which are attached to the slewing bracket (drawing 31-33) brings about that the compacting plate is more easily slanted against the wall during the movement. In this application the spring on the side of the compacting plate that is in contact with the wall of the receptacle is the weakest spring (spring 27 or 28; Fig. 31-33).

During said movement against this tilted position of the compacting plate the lid is opened gradually and thereby creating an open space for the feeding of waste (drawing 4-6 etc.). During this opening movement the compacting plate moves in such a manner that also existing waste is compacted by the compacting plate is in contact with the wall (2). During the closing movement the right side of the compacting plate compacts existing waste and brings it sideways. With springy outer parts (drawing 32) of the compacting plate the compacting of waste is enhanced.

This tilting movement of the compacting plate requires that the compacting plate by the opening of the lid moves against the wall and gets in contact with the wall.

The length of the compacting plate, of the springy outer parts of the compacting plate, the bending of the lever arm, length and design (rigid, springy, gas spring, springy lever arm – Fig. 32) affects the movement of the compacting plate and degree of compacting of the waste during the opening movement.

If the compacting plate has springy and bendable outer parts (Fig. 32) a slight spring force is created in contact with the wall, the force of which further compacts the waste downwards in the direction of the bottom of the receptacle.

With a fixed upper part of the receptacle corresponding to a fixed upper part of lid (6; Fig. 16-18 or 28-30) an extra lever arm (43) is located beneath this fixed part of the lid, to which a lever arm (7) and a compacting plate is attached.

An extra lever arm (43) is pivoted in a shaft of the wall of the receptacle and moves beneath the lid in an upward movement during the feeding of waste (Fig. 17) and downwards at the ceasing of feeding of waste- closing-in the empty space between the lid (6) and wall (2).

With a fixed lid and an extra lever arm (43) a foot-pedal system (Fig. 16-18) or an electrical motor can govern this movement.

The waste is fed into the opening of the upper part of the receptacle (broken line) and the compacting plate (8) also has the function as a lid towards underlying compacted waste in its horizontal closed position.

At a fixed part of a receptacle (Fig. 28-30) an extra lever arm (43), lever arm (7) and compacting plate (8) govern stop-lugs; in Fig. 28-30 the stop-lug works as a lid.

An extra lever arm as described in Fig. 28-30 is also capable via the lever arm and compacting plate to govern stop-lugs as described in Fig. 19-27.

Stop-lugs may be fixed at an optional level in the receptacle with optional length and in an optional number depending on the requirements of compaction of waste.

Stop-lugs may be attached to the receptacle as described in Fig. 1-18 and in Fig. 19-30.

Stop-lugs can be rigid, pivoted and springy.

## Description of drawings

### Fig. 1

Schematically discloses a perspective view of a receptacle (1) with a wall (2), a wall (4) and a bottom (3), a front part of lid (5), a rear part of lid (6), a lever arm (7) attached to a lid at (6), a compacting plate (8). The lid is in a closed position with the lid (5) pointing at the upper edge of the wall (4) and the compacting plate (8) being immersed in a horizontal position.

The dotted line displays the position of installation of a possible foot-pedal system.

A stop-lug (40) has the function to aid the movement of the compacting plate (8) during the oblique tilting downward against the wall (2 or 4). With a proper design (angel, size, length etc.) the stop-lug (40) also has the function of blocking up the waste and thus a compacting function.

A number of stop-lugs (40) may be attached at varying levels in the receptacle for an optimization of compacting and storing of waste.

A spring (37) between the rear part (6) of lid and the wall (2) brings the lid back after the opening of the receptacle (1).

In this position of the compacting plate (8) there is no feeding of waste.

### Fig. 2

Schematically discloses a perspective view of a receptacle (1) with a wall (2), a wall (4) and a bottom (3), a front part of lid (5), a rear part of lid (6), a lever arm (7) attached to a lid at (6), a compacting plate (8). The lid is in an open position with the front part of the lid (5) pointing obliquely downward towards the wall (4) forming an opening between the front part of the lid (5) and the wall (4) and the compacting plate (8) is obliquely tilted against the wall (2). The compacting plate (8) has rotated anticlockwise.

The dotted line displays the position of installation of a possible foot switch system.

A stop-lug (40) has the function to aid the movement of the compacting plate (8) during the oblique tilting downward against the wall (2 or 4). With a proper design (angel, size, length etc.) the stop-lug (40) also has the function of blocking up the waste and thus a compacting function.

A number of stop-lugs (40) may be attached at varying levels in the receptacle for an optimization of the compacting and storing of waste.

A spring (37) between the rear part of the (6) of the lid and the wall (2) brings the lid back after the opening of the receptacle (1).

In this position of the compacting plate (8) the feeding of waste may be initiated.

### Fig.3

Schematically discloses a perspective view of a receptacle (1) with a wall (2), a wall (4) and a bottom (3), a front part of lid (5), a rear part of lid (6), a lever arm (7) attached to a lid at (6), a compacting plate (8). The lid is in a closed position with the front part of the lid (5) pointing at the upper edge of the wall (4) and the compacting plate (8) being immersed in a horizontal position.

A foot-pedal system is disclosed with a pedal (12), a lever arm (13) of the pedal, an interior lever arm (10) – inside the receptacle and an exterior lever arm (11). - outside the receptacle

A spring in the foot-pedal system attached to the lever arm (13) and/or a spring between the rear part of the (6) of the lid and the wall (2) brings the lid (5.6) back after the opening of the receptacle.

Disclosed is also a protruding part (9) of the lid (6) above wall (2). A lever arm (10. 11) is attached to a protruding lid (9).

A stop-lug (40) has the function to aid the movement of the compacting plate (8) during the oblique tilting downward against the wall (2 or 4). With a proper design (angel. size. length etc.) the stop-lug (40) also has the function of blocking up the waste and thus a compacting function.

A number of stop-lugs (40) may be attached at varying levels in the receptacle (1) for an optimization of the compacting and storing of waste.

#### Fig.4

Schematically discloses a perspective view of a receptacle (1) with a wall (2), a wall (4) and a bottom (3), a front part of the lid (5), a rear part of the lid (6), a lever arm (7) attached to the rear part of the lid (6), a compacting plate (8). The lid is in a closed position with the front part of the lid (5) pointing at the upper edge of the wall (4) and the compacting plate (8) being immersed in a horizontal position.

The dotted line displays the position of installation of a possible foot-pedal system.

A stop-lug (40) has the function to aid the movement of the compacting plate (8) at the oblique tilting downward against the wall (2 or 4). With a proper design (angel. size. length etc.) the stop-lug (40) also has the function of blocking up the waste and thus a compacting function.

A number of stop-lugs (40) may be attached at varying levels in the receptacle (1) for an optimization of compacting and storing of waste.

A spring (37) between the rear part of the lid (6) and the wall (2) brings the lid back after the opening of the receptacle.

In this position of the compacting plate (8) there is no feeding of waste.

#### Fig.5

Schematically discloses a perspective view of a receptacle (1) with a wall (2), a wall (4) and a bottom (3), a front part of the lid (5), a rear part of the lid (6), a lever arm (7) attached to the rear part of the lid at (6), a compacting plate (8). The lid (5.6) is in an open position with the front part of the lid (5) pointing obliquely downward towards the wall (4) forming an open space between the front part of lid (5) and wall (4) and the compacting plate (8) is obliquely tilted against the wall (2). Here the feeding of waste may be initiated.

The dotted line displays the position of installation of a possible foot-pedal system -Fig.3-

The compacting plate moves in a clockwise rotation against wall (2).

A stop-lug (40) has the function to aid the movement of the compacting plate (8) during the oblique tilting downward against the wall (2 or 4). With a proper design (angel. size. length etc.) the stop-heel (40) also has the function of blocking up the waste and thus a compacting function.

A number of stop-lugs (40) can be attached on varying levels in the receptacle for an optimization of compacting and storing of waste.

A spring (37) between the rear part of lid (6) and the wall (2) brings the lid back after the opening of the receptacle and thereby contributing to the entire opening and closing movement.

In this position of the compacting plate (8) the feeding of waste may be initiated.

Fig.6

Schematically discloses a perspective view of a receptacle (1) with a wall (2), a wall (4) and a bottom (3), a front part of lid (5), a rear part of lid (6), a lever arm (7) attached to a rear part of the lid at (6), a compacting plate (8). The lid is in a closed position with the front part of the lid (5) pointing at the upper edge of the wall (4) and the compacting plate (8) being immersed in a horizontal position.

A foot-pedal system is disclosed with a pedal (12), a lever arm of the pedal (13), an interior lever arm (10) -inside the receptacle and an exterior lever arm (11) -outside the receptacle. A spring in the foot-pedal system and/or a spring (37) between the rear part of the lid (6) and the wall (2) bring the lid back after the opening of the receptacle. Disclosed is also a protruding part (9) of the rear part of the lid (6) above wall (2). A lever arm (10, 11) is attached to a protruding lid (9).

A stop-lug (40) has the function to aid the movement of the compacting plate (8) during the oblique tilting downward against the wall (2 or 4). With a proper design (angel. size, length etc.) the stop-lug (40) also has the function of blocking up the waste and thus a compacting function.

A number of stop-lugs (40) can be attached at varying levels in the receptacle for an optimization of compacting and storing of waste.

Fig.7

Schematically discloses a perspective view of a receptacle (1) with a wall (2), a wall (4) and a bottom (3), a front part of the lid (5), a rear part of the lid (6), a lever arm (7) attached to the rear part of the lid (6), a compacting plate (8), a lever arm (36), a spring (35) for the lever arm (7,36) and a spring (37) for the lid (5,6). The lid (5,6) is in a closed position with the front part of the lid (5) pointing at the upper edge of the wall (4) and the compacting plate (8) being immersed in a horizontal position. In this position there is no feeding of waste. The receptacle has two lever arms (7, 36).

A stop-lug (40) has the function to aid the movement of the compacting plate (8) during the oblique tilting downward against the wall (2 or 4). With a proper design (angel. size, length etc.) the stop-lug (40) also has the function of blocking up the waste and thus a compacting function.

A number of stop-lugs (40) may be attached at varying levels in the receptacle for an optimization of compacting and storing of waste.

The stop-lug (40) at the wall (2) improves the tilting of the compacting plate (8) during anticlockwise rotation of the compacting plate (8) and the stop-lug (40) at the wall (4) improves the tilting of the compacting plate (8) during clockwise rotation of the compacting plate (8).

In this position of the compacting plate (8) there is no feeding of waste.



Fig.8

Schematically discloses a perspective view of a receptacle (1) with a wall (2), a wall (4) and a bottom (3), a front part of the lid (5), a rear part of the lid (6), a lever arm (7) attached to the rear part of the lid (6), a compacting plate (8), a lever arm (36), a spring (35) for lever arms (7,36) and a spring (37) for the lid (5,6). The lid (5, 6) is in a half open position with the front part of the lid (5) pointing obliquely downward towards the wall (4) and the compacting plate (8) being in an immersed and tilted position. Here the feeding of waste can be initiated. The receptacle has two lever arms (7, 36).

A stop-lug (40) has the function to aid the movement of the compacting plate (8) during the oblique tilting downward against the wall (2 or 4). With a proper design (angel. size, length etc.) the stop-lug (40) also has the function of blocking up the waste and thus a compacting function.

A number of stop-lugs (40) may be attached at varying levels in the receptacle for an optimization of compacting and storing of waste.

The stop-lug (40) at the wall (2) improves the tilting of the compacting plate (8) during anticlockwise rotation of the compacting plate (8) and the stop-lug (40) at the wall (4) improves the tilting of the compacting plate (8) during clockwise rotation of the compacting plate (8).

In this position of the compacting plate (8) the feeding of waste may be initiated.

Fig.9

Schematically discloses a perspective view of a receptacle (1) with a wall (2), a wall (4) and a bottom (3), a front part of lid (5), a rear part of lid (6), a lever arm (7) attached to the rear part of the lid at (6), a compacting plate (8). The lid (5, 6) is in an open position with the front part of the lid (5) pointing obliquely downward towards the wall (4) forming an open space between the lid (5, 6) and the wall (4) and the compacting plate (8) being immersed and tilted against the wall (2). Here the feeding of waste may be initiated.

The compacting plate (8) may also move anticlockwise against the wall (2).

The receptacle (1) has two slewing brackets (7, 36).

A stop-heel (40) has the function to aid the movement of the compacting plate (8) during the oblique tilting downward against the wall (2 or 4). With a proper design (angel. size, length etc.) the stop-heel (40) also has the function of blocking up the waste and thus a compacting function.

A number of stop-heels (40) may be attached at varying levels in the receptacle for an optimization of the compacting and storing of waste.

The stop-lug (40) at the wall (2) improves the tilting of the compacting plate (8) during anticlockwise rotation of the compacting plate (8) and the stop-lug (40) at the wall (4) improves the tilting of the compacting plate (8) during clockwise rotation of the compacting plate (8).

In this position of the compacting plate (8) the feeding of waste may be initiated.

Fig.10

Schematically discloses a perspective view of a receptacle (1) with a wall (2), a wall (4) and a bottom (3), a front part of lid (5), a rear part of lid (6), a lever arm (7) attached to the rear part of the lid at (6), a compacting plate (8). The lever arm (14) is a telescopic arm with a mechanical spring, a gas spring or other hydraulics. The lid (5,6) is in a closed position with the front part of the lid (5) pointing at the upper edge of the wall (4) and the compacting plate

(8) being immersed in a horizontal position. This upper position of the compacting plate (8) discloses a receptacle (1) filled with waste.

The dotted line displays the position of installation of a possible foot-pedal system.

A spring (37) between the rear part of the lid (6) and the wall (2) brings the lid back after the opening of the receptacle.

Fig. 11

Schematically discloses a perspective view of a receptacle (1) with a wall (2), a wall (4) and a bottom (3), a front part of lid (5), a rear part of the lid (6), a lever arm (14) attached to the lid (6), a compacting plate (8). A lever arm (14) is a telescopic arm with a mechanical spring, a gas spring or other hydraulics. The lid (5,6) is in a closed position with the front part of the lid (5) pointing at the upper edge of the wall (4) and the compacting plate (8) being immersed in a horizontal position. This middle position of the compacting plate discloses a partly filled receptacle.

The dotted line displays the position of installation of a foot-pedal system.

A spring (37) between the rear part of the lid (6) and the wall (2) brings the lid back after the opening of the receptacle.

Fig.12

Schematically discloses a perspective view of a receptacle (1) with a wall (2), a wall (4) and a bottom (3), a front part of lid (5), a rear part of lid (6), a lever arm (14) attached to the rear part of the lid (6), and a compacting plate (8). A lever arm (14) is a telescopic arm with the front part of the lid (5) pointing at the upper edge of the wall (4) and the compacting plate (8) being immersed in a horizontal position. This lower position of the compacting plate (8) discloses a receptacle in an initial stage of filling.

The dotted line displays the position of installation of a foot-pedal system.

A spring (37) between the rear part of the lid (6) and the wall (2) brings the lid back after the opening of the lid.

Fig.13

Schematically discloses a perspective view of a receptacle (1) with a wall (2), a wall (4) and a bottom (3), a front part of lid (5), a rear part of lid (6), a lever arm (14) attached to the rear part of the lid (6), and a compacting plate (8). A lever arm (14) is a telescopic arm with a mechanical spring, a gas spring or other hydraulics. The lid (5,6) is in an open position with the front part of the lid (5), pointing obliquely downward towards the wall (4) and the compacting plate (8) being in a tilted position against the wall (2) and against the stop-lug (40) at the wall (2). Stop-lugs may be rigid or pivoted, springy. Waste can be fed into the receptacle.

The dotted line displays the position of installation of a foot switch system

A spring (37) between the rear part of the lid (6) of lid and the wall (2) brings the lid back after the opening of the receptacle and thereby contributing to the entire opening and closing movement.

Fig. 14

Schematically discloses a perspective view of a receptacle (1) with a wall (2), a wall (4) and a bottom (3), a front part of lid (5), a rear part of lid (6), a lever arm (14) attached to the rear part of the lid (6), and a compacting plate (8). A lever arm (14) is a telescopic arm with a mechanical spring, a gas spring or other hydraulics. The lid (5,6) is in a partly open position with the front part of the lid (5) pointing obliquely downward towards the wall (4) and the compacting plate (8) in a partly tilted position in contact with the stop-lug (40). Stop-lugs can be rigid or pivoted, springy.

The dotted line displays the position of installation of a foot-pedal system.

A spring (37) between the rear part of the lid (6) and the wall (2) brings the lid back after the opening of the receptacle.

Fig.15

Schematically discloses a perspective view of a receptacle (1) with wall (2), wall (4) and bottom (3), front part of lid (5), rear part of lid (6), lever arm (14) attached to lid at (6), and compacting plate (8). Lever arm (14) is a telescopic arm with a mechanical spring, gas spring or other hydraulics. The lid is in a closed position with lid (5) pointing at the upper edge of the wall (4) and the compacting plate (8) is immersed in a horizontal position and in contact with stop-lug (40) at wall (4). Stop-lugs can be rigid or pivoted, springy.

The dotted line displays the position of installation of a possible foot-pedal system – See drawing 3.

A spring (37) between part (6) of lid and wall (2) keeps the lid in its position and brings the lid back after the opening of the receptacle and thereby contributing to the entire opening and closing movement.

Fig.16

Schematically discloses a perspective view of a receptacle (1) with wall (2), wall (4), bottom (3), rear fixed part of lid (6), open upper part of receptacle –dotted line- lever arm (7) is attached to extra lever arm (43) beneath a fixed part of lid (6). The compacting plate (8) is immersed in a horizontal position. In this position there is no feeding of waste. The arrows show the direction of movement of the compacting plate (8). The extra lever arm (43), lever arm (7) and compacting plate (8) are governed by a foot-pedal system (11,12, 13). The arm (11) for the foot-pedal system is outside the vessel (1). A stop-lug is attached to the wall (2).

Fig.17

Schematically discloses a perspective view of a receptacle (1) with wall (2), wall (4), bottom (3), rear fixed part of lid (6), open upper part of receptacle –dotted line- lever arm (7) is attached to extra lever arm (43) beneath a fixed part of lid (6). The compacting plate is in a tilted position slanting against wall (2). In this position there is feeding of waste. The arrows show the direction of movement of the compacting plate (8).

The extra lever arm (43), lever arm (7) and compacting plate (8) are governed by a foot-pedal system (11,12, 13). The arm (11) for the foot-pedal system is outside the receptacle (1). A stop-lug is attached to the wall (2).

Fig.18

Schematically discloses a perspective view of a receptacle (1) with wall (2), wall (4), bottom (3), rear fixed part of lid (6), open upper part of receptacle –dotted line- lever arm (7) is attached to extra lever arm (43) beneath lid (6). The compacting plate is immersed in a horizontal position. In this position there is no feeding of waste. The arrows show the direction of movement of the compacting plate (8).

The extra lever arm (43), lever arm (7) and compacting plate are governed by a foot-pedal system (11,12, 13). The arm (10) for the foot-pedal system is inside the receptacle (1). The cycle of feeding of waste has the similar movement of the lever arm (43, 7) and the compacting plate as described in Fig. 16-17.

Fig.19

Schematically discloses a perspective view of a receptacle (1) with wall (2), wall (4) and bottom (3), front part of lid (5), rear part of lid (6), lever arm (7) attached to lid at (6), and compacting plate (8). The lid is in a closed position with lid (5) pointing at the upper edge of the wall (4) and the compacting plate (8) is immersed in a horizontal position. And there is no feeding of waste.

The compacting plate rotates anticlockwise in a partial circular circle movement towards wall (2).

The different sections of the lid (5, 6) are positioned beneath a fixed upper part of the receptacle (15) and these sections (5, 6) move beneath this fixed part of the receptacle during the feeding of waste and ceasing of feeding of waste.

An alternative design would be that there was no fixed part and that the lid section (6) moves freely in the upper part of the vessel.

A stop-lug (40) has the function to aid the movement of the compacting plate (8) at tilting and slanting against wall (2 or 4). With proper design (angel, size, length etc.) the stop-lug also has the function of blocking up the waste and thus a compacting function.

Stop-lug against wall (4) can be unbendable, bendable, pivoted and springy and will thereby also have the function to hold up the waste and thus a compacting function.

The compacting plate (8) is in a horizontal position and jointly with stop-lugs (40) compacting the underlying waste and keeping the waste back at a certain level.

Fig.20

Schematically discloses a perspective view of a receptacle (1) with wall (2), wall (4) and bottom (3), front part of lid (5), rear part of lid (6), lever arm (7) attached to lid at (6), and compacting plate (8). The lid is in a half open position with lid (5) pointing at the upper edge of the wall (4) but with a space between lid (5) and the opening of the receptacle (dotted line) and the compacting plate (8) is in a tilted position. In this position the feeding of waste can be initiated. The lid has moved towards the upper part of the receptacle (1).

The compacting plate rotates anticlockwise in a partial circular movement towards wall (2). The different sections of the lid (5, 6) are positioned beneath a fixed upper part of the receptacle (15) and these sections (5, 6) move beneath this fixed part of the receptacle at the feeding of waste and ceasing of feeding of waste.

An alternative design would be there was no fixed part and that the lid section (6) moves freely in the upper part of the receptacle.

A stop-lug (40) against wall (2) has the function to aid the movement of the compacting plate (8) at tilting and slanting against wall (2 or 4). With proper design (angel. size. length etc.) the stop-lug also has the function of blocking up the waste and thus a compacting function. The compacting plate (8) has initiated its tilting movement against wall (2) and simultaneously pushes the stop-lug (40) outwards from wall (2) which initiates the compacting of underlying waste. There is a spring between stop-lug (40) and wall (2) for the bringing back of the stop-lug against wall (2).

Stop-lug (40) against wall (4) can be unbendable or bendable and then having the function to stop up the waste and thus a compacting function. With an unbendable stop-lug it has the same position as with a horizontal position of the compacting plate and keeps earlier fed waste in a fixed position. With a bendable stop-lug it returns to a former adjusted position.

Fig. 21

Schematically discloses a perspective view of a receptacle (1) with wall (2), wall (4) and bottom (3), front part of lid (5), rear part of lid (6), lever arm (7) attached to lid at (6), and compacting plate (8). The lid is in an open position with lid (5) pointing at the upper edge of the wall (4) forming a maximum space between lid (5) and the inlet of the receptacle (1) for the feeding of waste with the compacting plate (8) tilted slantingly against wall (2). In this position the feeding of waste can be initiated. The lid (6) has moved towards the upper part of the vessel (1) to a position where it is in contact with the upper part of the vessel or very close to this part of the vessel.

The compacting plate rotates anticlockwise in a partial circular movement towards wall (2).

The different sections of the lid (5, 6) are positioned beneath a fixed upper part of the receptacle (15) and these sections (5, 6) move beneath this fixed part of the receptacle during the feeding of waste and ceasing of feeding of waste.

An alternative design would be there was no fixed part and that the lid section (6) moves freely in the upper part of the receptacle.

A stop-lug (40) has the function to aid the movement of the compacting plate (8) at tilting and slanting against wall (2 or 4). With proper design (angel. size. length etc.) the stop-lug also has the function of blocking up the waste and thus a compacting function.

The compacting plate (8) is in a tilted position against wall (2) and simultaneously pushes the stop-lug (40) outwards from wall (2) which initiates the compacting of underlying waste. There is a spring between stop-lug (40) and wall (2) for the bringing back of the stop-lug against wall (2).

Stop-lug (40) against wall (4) can be unbendable or bendable and then also has the function to stop up the waste and thus a compacting function. With an unbendable stop-lug it has the same position as with a horizontal position of the compacting plate and keeps earlier fed waste in a fixed position. With a bendable stop-lug it returns to a former adjusted position.

Fig.22

Schematically discloses a perspective view of a receptacle (1) with wall (2), wall (4) and bottom (3), front part of lid (5), rear part of lid (6), lever arm (7) attached to lid at (6), and compacting plate (8). The lid is in a closed position with lid (5) pointing at the upper edge of the wall (4) and the compacting plate is immersed in a horizontal position. And there is no feeding of waste.

The compacting plate is to rotate clockwise in a partial circular movement towards wall (2). Stop-lugs have been removed but disclose the same functions and patterns as described in Fig. 19-21.

Fig.23

Schematically discloses a perspective view of a receptacle (1) with wall (2). wall (4) and bottom (3). front part of lid (5). rear part of lid (6). lever arm (7) attached to lid at (6). and compacting plate (8). The lid is in a half open position with lid (5) pointing at the upper edge of the wall (4) and the compacting plate (8) in a tilted position and feeding of waste can be initiated.

The compacting plate is to rotate clockwise in a partial circular movement towards wall (2). Stop-lugs have been removed but disclose the same functions and pattern as described in Fig. 19-21.

Fig.24

Schematically discloses a perspective view of a receptacle (1) with wall (2). wall (4) and bottom (3). front part of lid (5). rear part of lid (6). lever arm (7) attached to lid at (6). and compacting plate (8). The lid is in an open position with the lid (5) pointing at the upper edge of the wall (4) forming a space between the lid and the inlet of waste with the compacting plate tilted slantingly against wall (2). In this position the feeding of waste can be initiated. The compacting plate is to rotate clockwise in a partial circular movement towards wall (2). Stop-lugs have been removed but disclose the same functions and pattern as described in Fig. 19-21.

Fig.25

Schematically discloses a perspective view of a receptacle (1) with wall (2). wall (4) and bottom (3). front part of lid (5). rear part of lid (6). lever arm (7) attached to lid at (6). and compacting plate (8). The lid is in a closed position with lid (5) pointing at the upper edge of the wall (4) and the compacting plate (8) is immersed in a horizontal position. And there is no feeding of waste.

The compacting plate is to rotate clockwise in a partial circular movement towards wall (2).

The different sections of the lid (5. 6) are positioned beneath a fixed upper part of the receptacle (15) and these sections (5. 6) move beneath this fixed part of the receptacle at the feeding of waste and ceasing of feeding of waste.

An alternative design would be where there was no fixed part and that the lid section (6) moves freely in the upper part of the receptacle.

Stop-lug against wall (40) is bendable and is in this position tilted against wall (4). It has at a tilted position the function to hold up the waste and thus a compacting function.

The compacting plate (8) is in a horizontal position and jointly with stop-lugs (40) compacting the underlying waste and keeping the waste back at a certain level.

Fig.26

Schematically discloses a perspective view of a receptacle (1) with wall (2). wall (4) and bottom (3). front part of lid (5). rear part of lid (6). slewing lever arm (7) attached to lid at (6). and compacting plate (8). The lid is in a half open position and the compacting plate is tilted slantingly against wall (2). The feeding of waste can be initiated in this position.

The compacting plate has rotated clockwise in a partial circular movement towards wall (2).

The different sections of the lid (5, 6) are positioned beneath a fixed upper part of the receptacle and these sections (5, 6) move beneath this fixed part of the receptacle during the feeding of waste and ceasing of feeding of waste.

An alternative design would be there was no fixed part and that the lid section (6) moves freely in the upper part of the receptacle.

Stop-lug (40) against wall (4) is bendable and is in this position tilted out from wall (4). It has during this tilted position the function to hold up underlying the waste and thus a compacting function.

The compacting plate (8) is tilted slantingly against wall (2) and has during its partial circular movement against wall (2) pushed underlying waste slantingly down in the vessel and thereby facilitates the feeding of further waste.

#### Fig.27

Schematically discloses a perspective view of a receptacle (1) with wall (2), wall (4) and bottom (3), front part of lid (5), rear part of lid (6), lever arm (7) attached to lid at (6), and compacting plate (8). The lid is in an open position and the compacting plate (8) is tilted against wall (2). The feeding of waste can be initiated in this position without being stopped by the compacting plate and stop-lug.

The compacting plate has rotated clockwise in a partial circular movement towards wall (2) and then rotates back to the horizontal position.

The different sections of the lid (5, 6) are positioned beneath a fixed upper part of the receptacle and these sections (5, 6) move beneath this fixed part of the receptacle during the feeding of waste and ceasing of feeding of waste.

An alternative design would be there was no fixed part and that the lid section (6) moves freely in the upper part of the receptacle

Stop-lug (40) against wall (4) is bendable and is in this position tilted out from wall (4). It has at this tilted position the function to hold up underlying the waste and thus a compacting function. During the turning back to the horizontal position of the compacting plate the edge of the compacting plate tilts the stop-lug to move up against wall (4) - like in Fig.25).

The compacting plate (8) is tilted slantingly against wall (2) and has during its partial circular movement against wall (2) pushed underlying waste slantingly down in the receptacle and thereby facilitates the feeding of further waste.

#### Fig.28

Schematically discloses a perspective view of a receptacle (1) with wall (2), wall (4) and bottom (3), lever arm (7), extra lever arm (43) that is pivoted and attached to the upper part of the receptacle and the compacting plate (8).

The lid consists of a bendable and pivoted stop-lug (40-wall 4) tilted against the opening of the receptacle-dotted line- is in a closed position. The compacting plate (8) is immersed in a horizontal position compacting underlying waste and there is no feeding of waste.

Stop-lug (40) against wall (4) is bendable and thereby also has the function to hold up the waste and thus having a compacting function when it is tilted.

The compacting plate (8) is in a horizontal position and compacting underlying waste. An extra lever arm (43) is positioned beneath a fixed upper part of the receptacle (15) and moves beneath this fixed part during the feeding of waste and ceasing of feeding of waste.

There is no feeding of waste in this position.

Fig.29

Schematically discloses a perspective view of a receptacle (1) with wall (2). wall (4) and bottom (3). lever arm (7). extra lever arm (43) that is pivoted and attached to the upper part of the receptacle and the compacting plate (8).

The compacting plate rotates clockwise in a partial circular movement against wall (2).

The lid consists of a bendable and pivoted stop-lug (40-wall 4) tilted slantingly down in the vessel and thereby compacting underlying waste.

The compacting plate is tilted slantingly against wall (2) and has during its partial circular movement brought underlying waste slantingly down in the receptacle.

An extra lever arm (43) is positioned beneath a fixed upper part of the receptacle (15) and moves beneath this fixed part at the feeding of waste and ceasing of feeding of waste.

Feeding of waste can be initiated.

Fig.30

Schematically discloses a perspective view of a receptacle (1) with wall (2). wall (4) and bottom (3). lever arm (7). extra lever arm (43) that is pivoted and attached to the upper part of the receptacle and attached via lever arm (7) to the compacting plate (8).

An extra lever arm (43) is positioned beneath a fixed upper part of the receptacle (15) and moves beneath this fixed part at the feeding of waste and ceasing of feeding of waste.

The compacting plate has rotated clockwise in partial circular movement against wall (2).

The compacting plate is tilted slantingly against wall (2) and has during its partial circular movement brought underlying waste slantingly down in the vessel.

The lid consists of a bendable and pivoted stop-lug (40-wall 4) tilted slantingly down in the receptacle and thereby compacting underlying waste. In this position feeding of waste can be initiated.

After having this position the compacting plate rotates back to the horizontal position (see Fig.28) and thereby brings the stop-lug (lid) back to a closed position where there is no feeding of waste

Fig.31

Schematically discloses a perspective view of a compacting plate (20) with a lever arm (24). a compacting plate (21). a recess (22) for lever arm (24). a lower part of lever arm (23). a mounting arbor (25) for the lever arm and spring (27) of the lever arm.

Fig.32

Schematically discloses a perspective view of a compacting plate (20) with a lever arm (24). pivoted parts of the compacting plate (31). a lower part of the lever arm (23). a mounting arbor (25) for the lever arm and a spring (28) for the lever arm. a spring (29) for pivoted outer parts (31) of the compacting plate (20). a pivoted arbor (30) for movable part of the plate (31).

Fig.33

Schematically discloses a perspective view of a compacting plate (20) with a telescopic arm consisting of a fixed arm (32). a tube (34). a spring (33) for the telescopic arm. a spring (27) for the compacting plate. a pivoted shaft (25) for the compacting plate and a recess (22) for the telescopic arm

The spring (33) of the figure is replaceable with a gas spring or other hydraulics.



CLAIMS

1. An apparatus for storing and compacting of waste and fitted into an upper part of a receptacle (1) having a top opening. said apparatus comprising

a compacting mechanism including:

a compacting plate (8) pivotally attached to a lever arm (7.14.36);

via a shaft (25) attached to said compacting plate:

said compacting plate (8) via a lever arm (7.14.36) attached to a lid;

said lid being a tilting lid;

said tilting lid consisting of portion (5) and portion (6);

said portion (5) of the tilting lid being the lid for the opening of the receptacle and for the feeding of waste into the receptacle and said portion (6) of the tilting lid being the lid to which the lever arm (7.14.36) is attached:

a receptacle (1) including;

an interior wall (2) opposite to the interior wall (4). the latter adjacent to the top opening of the receptacle and the portion (5) of the tilting lid;

said interior wall (2) being the wall against which the compacting plate is tilted

wherein by the opening of the lid and pressing down of the lid portion (5) in a receptacle a horizontally positioned compacting plate (8). attached to one or more lever arms (7.14.36) and to the lid portion (6) and via a shaft (25) in the compacting plate (8) pivoted to said lever arm. is made to move

wherein by the opening of the lid the movement of the lever arm (7.14.36). the position and angle of inclination of the compacting plate (8). the length of the compacting plate and the proximity of the compacting plate (8) to the wall (2). make the compacting plate (8) to move towards the wall (2)

wherein by the opening of the lid the compacting plate is made to rotate in a partial circular path around said shaft (25) when the compacting plate in contact with the wall (2) is tilted against said wall. during which tilting the portion of the compacting plate that is in contact with the wall (2) is made to move upwards because of a slightly tilted position upwards towards the lid part (6) in the horizontal position of said compacting plate and thereby the waste is compacted by the side of the compacting plate that is moving downwards in the receptacle. the side of which is adjacent to the wall (4) of the receptacle.

wherein by the opening of the lid the compacting plate is made to rotate in a partial circular path around said shaft (25) when the compacting plate in contact with the wall (2) is tilted against said wall. during which tilting the portion of the compacting plate that is in contact with the wall (2) is made to move downwards because of a slightly tilted position downwards towards the bottom (3) of the receptacle in the horizontal position of said compacting plate and thereby the waste is compacted by the side of the compacting plate that is tilted downwards in the receptacle towards the wall (2)

wherein by the closing of the lid, the lid portion (5) is made to move upwards and the lid portion (6) with the lever arm (7.14.36) to move downwards, thereby the compacting plate in the receptacle moves back to the horizontal position with the aid of springs (27.28) between the lever arm (7.14.36) and the compacting plate (8) and spring (37) between the lid portion (6) and the wall (2) and the compacting plate (8) compacts the waste during said movement back to the horizontal position by the opposite sides of the compacting plate to those compacting the waste during the opening of the lid and compacts the underlying waste when the compacting plate has reached its horizontal position

2. The apparatus according to claim 1 wherein the compacting plate (8) has flexible, bendable and springy outer edges (31) with springs (29), the edges facilitating the compaction of the underlying waste and tilting of the compacting plate (8)
3. The apparatus according to claim 1 wherein the compacting plate (8) has springs (27, 28) between the compacting plate (8) and the lever arm (7, 14, 36).
4. The apparatus according to claim 1 wherein the compacting plate (8) moves in a clockwise or anticlockwise movement for the tilting of said compacting plate (8) against the wall (2) of the receptacle or against stop-lugs (40).
5. The apparatus according to claim 1 or 4 wherein the stop-lugs (40) are attached at varying levels to the interior wall of the receptacle (1) and that the stop-lugs (40) are movable or not movable
6. The apparatus according to claim 1 or 5 wherein moveable stop-lugs (40) attached at varying levels to the interior wall of the receptacle (1) by the movement of the compacting plate are made to be tilted and thus compacting the waste
7. The apparatus according to claim 1 or 5 wherein not moveable stop-lugs (40) attached at varying levels to the interior wall of the receptacle (1) against which the compacting plate is tilted and said stop-lugs by their fixed position compact the underlying waste
8. The apparatus according to claim 1, 5 or 6 wherein either of the stop-lugs (40) constitute the lid of the receptacle (1).
9. The apparatus according to claim 1 wherein the lever arm (7, 14, 36) and the compacting plate (8) consist of a springy and bendable material.

10. The apparatus according to claim 1 wherein the lever arm (7.14.36) includes an extra lever arm (43) attached to the upper part of the receptacle, pivoted to a shaft and attached to the wall of the receptacle, the extra lever arm (43) being attached to the lever arm (7.14.36) of the compacting plate (8).
11. The apparatus according to claim 1 or 10 wherein the extra lever arm (43) is attached to the upper part of the waste bin and pivoted to a shaft in the interior wall of the receptacle and that the extra lever arm (43) is attached to the lever arm (7.14.36) and to the compacting plate (8) and that said extra lever arm (43) is positioned beneath a rigid and fixed upper part of the receptacle (15)
12. The apparatus according to claim 1, 9, 10 or 11 wherein the movement of the lever arm (7.14.36), the extra lever arm (43) and the compacting plate (8) are governed by the movement of a lid, a foot-pedal system (10.11.12.13) or an electrical motor.
13. The apparatus according to claim 1, 9, 10, 11 or 12 wherein the lever arm (7, 14, 36) and the extra lever arm (43) are adapted to move upwards or downwards in the receptacle (1) and thereby the lever arms and the compacting plate (8) are tilted against either wall of the receptacle.
14. The apparatus according to claim 1, 9, 10, 11, 12 or 13 wherein the lever arm (7.14.36) is of a telescopic design (14) with a mechanical spring (33) in a tube (34) or a gas spring and that the telescopic lever arm (14) governs the compacting plate (8) for a movement against the wall (2) of the receptacle causing the compacting plate (8) to be tilted against the wall (2)
15. The apparatus according to claim 1 wherein the lid is a single tilting lid, i.e. with one portion (5) and with a protruding portion thereof to which the lever arm (7,14.36.43) is attached
16. The apparatus according to claim 1 or 15 wherein the lid is a single tilting lid, i.e. with one portion (5) and with a protruding portion thereof and which protruding part is a lever arm
17. The apparatus according to claim 1 wherein springs (27, 28, 37) govern the lid, the lever arm (7, 14, 36, 43) and the compacting (8) plate back to their original positions.
18. The apparatus according to claim 1 wherein the lid is a tilting lid with a portion (5) and (6), positioned within the receptacle (1) below a fixed upper part of the housing and with said portion (5) of the lid adjacent to the opening of the receptacle and thus constituting the lid of the receptacle (1).
19. The apparatus according to claim 1 wherein the receptacle lacks a lid and the lever arm (7, 14, 36, 43) and the compacting plate (8) is positioned within the receptacle (1) below a fixed part of the housing with an opening in the receptacle for the feeding of waste.

**Application No:** GB0812968.6

**Examiner:** Sally Vaughan

**Claims searched:** 1 - 19

**Date of search:** 14 November 2008

**Patents Act 1977: Search Report under Section 17**

**Documents considered to be relevant:**

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
A	-	US3285505 A1 (KATZ) see whole document
A	-	US3202346 A1 (JACOBS) see whole document
A	-	WO97/43196 A1 (PIERCE) see whole document
A	-	WO2005/092743 A1 (PIERCE) see whole document
A	-	US3018719 A1 (WATSON) see whole document
A	-	DE19604302 A1 (KUNZMANN) WPI abstract Accession No. 1997/403553-38 and figs
A	-	US3961573 A1 (SCHMIDT) see whole document

**Categories:**

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
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&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

**Field of Search:**

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC<sup>X</sup>:

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Worldwide search of patent documents classified in the following areas of the IPC

B30B; B65F
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The following online and other databases have been used in the preparation of this search report

WPI, EPODOC & Internet
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**International Classification:**

<b>Subclass</b>	<b>Subgroup</b>	<b>Valid From</b>
B65F	0001/14	01/01/2006
B30B	0009/30	01/01/2006
B65F	0001/16	01/01/2006