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(54) **A RECEPTACLE FOR RECYCLABLE WASTE**

BEHÄLTER FÜR WIEDERVERWERTBAREN ABFALL

RÉCEPTACLE POUR DÉCHETS RECYCLABLES

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(73) Proprietor: **Global Bins Designs Ltd.**

Edinburgh, Scotland EH2 4AN (GB)

(72) Inventor: **O'GORMAN, Kevin A.**

Scariff

Co. Clare (IE)

(74) Representative: **Purdylucey Intellectual Property**

6-7 Harcourt Terrace

D02 FH73 Dublin 2 (IE)

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Description

[0001] There is disclosed a receptacle. In particular, there is disclosed a receptacle for household waste, for example a refuse bin such as a wheelie bin.

BACKGROUND

[0002] Refuse collection containers or 'wheelie bins' are in common use to hold and transport waste materials from the household to the kerbside for collection. These wheelie bins are typically emptied by a truck with either an arm-like mechanism with jaws, or a comb-like apparatus with a clamp. The established waste management practice is to put mixed waste into one bin and then empty that unsegregated waste into one waste collection lorry.

[0003] In more recent times new environmental legislation has given rise to the requirement that all householders must segregate their waste into such categories as non-recyclable waste, organic waste and recyclable waste, recyclable waste generally comprising paper, cardboard, glass, metal and plastic. As such the established practice of not segregating waste cannot continue.

[0004] This new reality has given rise to new methods for dealing with segregated household waste as follows:

- Use several wheelie bins, each being collected on the same day
- Use a mix of bin(s) and bag(s)
- Use bin and Crates and/or boxes
- Use several bins, each collected on a different week

[0005] This variety of options is of some value in that it allows for the segregation of different waste materials. However, the resultant multiplicity of bags, boxes, crates and bins tends to clutter pavements and narrow streets, encumbering pedestrians, motorists and even the bin collection lorries. This clutter can be hazardous and a nuisance. A further hazard occurs when the refuse collectors have to manually lift the bags, crates and boxes of recyclables and/or general waste. These containers may be very light or very heavy - they are unspecified weights, and as such contravene current EU health and safety legislation regarding manual lifting of unspecified weights.

[0006] AU 678 918 B2 discloses a compartmentalised wheelie bin for collection and storage of household waste. However, the compartmentalised wheelie bin does not appear to be suitable for use with existing refuse vehicles.

[0007] EP 0 634 344 A1 discloses a compartmentalised wheeled bin with a plurality of lids, said lids pivot toward the front of the wheeled bin, and wherein either lid may be locked by a locking member.

[0008] GB 2 474 874 A discloses a dividing insert with

attached lids which pivot toward the sides of the wheeled bin rather than toward the front of the bin.

[0009] DE 41 23 458 A1 discloses a wheeled bin with a plurality of compartments under a plurality of lids. The compartments may be comprised of a plurality of small bins which are placed inside the wheeled bin. This wheelie bin cannot be emptied using conventional waste management collection vehicles.

[0010] IE 86119 B1 and its family member WO 2013/076664 A1 disclose a wheeled bin for recyclable waste having two hinged lids for separate compartments. The two compartments are separated by a dividing wall. Furthermore, one or both of the separate compartments, each under its respective lid, may be compartmentalised into sub-compartments by means of one or more subdividing walls or inserts. The compartmentalising inserts extend from the open mouth of the receptacle to its base such that the division of the bin or the sub-division of its compartments is a complete separation and not partial.

BRIEF SUMMARY OF THE DISCLOSURE

[0011] According to a first aspect of the invention, a receptacle for recyclable waste in accordance with claim 1 is provided. Alternatively, according to a second aspect of the invention, a receptacle for recyclable waste in accordance with claim 2 is provided.

[0012] An advantage of the receptacle is that the wedge-shaped cross bar acts to prevent waste from getting stuck in the cross bar in use. The wedge-shaped cross bar forms a funnelling surface to deflect waste away from the cross bar as it is emptied from the receptacle.

[0013] Optionally, the cross bar is provided with a ridge for receiving and supporting the second lid when the second opening is closed by the second lid.

[0014] Optionally, the receptacle is provided with a ridge for receiving and supporting the first lid when the first opening is closed by the first lid.

[0015] An advantage of the receptacle is that the first and second lids are able to close flush with the open end, to thereby close the receptacle. This reduces the release of odours into the environment from inside the receptacle.

[0016] The ridges provide seals for the lids which reduce the release of odours into the environment, limit ingress of rain water into the receptacle and limit cross-contamination of waste.

[0017] Optionally, the dividing wall may be inserted into the receptacle and may be held at the apex of the cross bar using a fastening element.

[0018] The body may be provided with a number of elongate channels or slots configured to accept and support a portion of a perimeter of the dividing wall.

[0019] In one example, the first and/or the second lid are replaced by first and second sub-lids configured to seal the sub-compartments. Multiple lids may be used to close multiple compartments. In another arrangement, the sub-lids are provided with complementary closures configured to couple with a portion of the sub-dividing

wall so as to form a sealed sub-compartment that prevents cross-contamination of waste.

[0020] Optionally, an attachment element is provided at the open end, the attachment element being configured for compatibility with a refuse vehicle lifting mechanism. The attachment element may be a slot for receiving a hook of the refuse vehicle lifting mechanism.

[0021] Optionally, the receptacle is further provided with wheels attached to an axle.

[0022] Optionally, the receptacle is further provided with a locking member. The locking member may be arranged to lock either the first lid, the second lid, or both the first and second lids simultaneously. The locking member may be arranged to lock each lid in a closed position or an open position. Alternatively, the locking member may be arranged to lock both lids in a closed position or an open position.

[0023] A benefit of the locking member is that different compartments may be emptied independently of each other reducing the risk of cross-contamination of waste types.

[0024] The locking member may be a retractable elongate bar configured to slot into tracks provided in the cross bar and/or in the body.

[0025] Additionally, yet not within the claimed invention, this description discloses a retro-fit compartmentalising device suitable for a standard wheelie bin, wherein the retro-fit compartmentalising device comprises:

a frame configured for attachment to a rim of the standard wheelie bin;

a wedge-shaped cross bar having an apex and a base, the wedge-shaped cross bar spanning the open end thereby defining a first and a second opening;

a first lid hingedly connected to the base of the wedge-shaped cross bar, the first lid being arranged to substantially close the first opening when the first lid is contiguous with a portion of the open end; and
a second lid hingedly connected to the open end of the receptacle, the second lid being arranged to substantially close the second opening when the second lid is contiguous with a portion of the base of the wedge-shaped cross bar, and wherein the wedge-shaped cross bar is arranged such that the apex of the wedge-shaped cross bar is located in the body.

[0026] An advantage of the retro-fit compartmentalising device is that the device provides a compartmentalising device able to compartmentalise a standard receptacle such as a wheelie bin. The first and second lids are able to close flush with the open end of the wheelie bin to thereby close the bin. This reduces the release of odours into the environment from inside the bin and allows a cost effective and easy means of compartmentalising an existing bin. Furthermore, the cross bar supports the hinged mechanism of the first lid and forms a funnel surface for egress of rubbish during emptying.

[0027] Optionally, the compartmentalising device may be provided with an insert for inserting into the standard wheelie bin, wherein the insert includes channels for receiving a dividing wall.

BRIEF DESCRIPTION OF THE DRAWINGS

[0028] Embodiments are further described hereinafter with reference to the accompanying drawings, in which:

Figure 1 shows a three dimensional view of an example of a receptacle;

Figure 2 shows a side view of an example of a receptacle;

Figure 3 shows a view of an example of a cross bar;

Figure 4 shows a side view of an example of a receptacle having first and second lids in the open position;

Figure 5 shows a side view of an example of a receptacle having first and second lids in the closed position;

Figure 6 shows a three dimensional view of an example of a receptacle having first and second lids in the open position;

Figure 7 shows of an example a lid and a locking member;

Figure 8 shows of an example of a cross bar and a dividing wall;

Figure 9 shows an expanded view of an example of a cross bar, dividing wall and a receptacle;

Figure 10 shows a side view of an example of a receptacle.

DETAILED DESCRIPTION

[0029] The receptacle is suitable for waste, for example a refuse bin such as a wheeled bin or a wheelie bin. Figure 1 and Figure 2 show an example of the receptacle 1. The receptacle includes wheels 2 and is tapered, being widest at its top and narrowing to its lower end, its lower end being that part of the receptacle which touches the ground when the receptacle is in an upright position.

[0030] Specifically, the receptacle 1 includes at least two compartments 15, 16, each compartment having its own independently operated lid 7, 10 (lid 10 is shown in Figure 2). The compartments may be further divided into sub-compartments and an example of how this is achieved is shown in Figure 1. The rearmost compartment 16 is provided with a divider 18, which is configured

to slot into a channel in a side wall of the receptacle 1.

[0031] The compartments are configured for storing household waste and the compartments allow the user to sort the waste as the user is depositing the waste in the receptacle 1.

[0032] The hollow interior region of the receptacle 1 is divided into two main compartments, (one compartment 15 to the fore of the receptacle 1, one compartment 16 to the rear of the receptacle) by a dividing wall 9. The dividing wall 9 is tapered to complement the internal shape of the receptacle 1. Furthermore, slots 23 are located on the inside of the receptacle into which the dividing wall 9 fits. These slots 23 receive the dividing wall 9 and secure the dividing wall 9 in place.

[0033] The dividing wall 9 is further secured in place by a dividing insert cross bar.

[0034] Once the dividing wall 9 has been inserted into the receptacle recesses, the cross bar 12 is then placed atop the dividing wall 9 and the cross bar 12 is then attached in place using the cross bar bolts 20 as shown in Figure 2.

[0035] Figure 3 shows the cross bar 12 in more detail. The cross bar 12 includes at its front face, a series of protruding members 25, each of which protruding members 25 has a bolt hole 26, these members are designed to intermesh with a counterpart series of similar members on the proximal end of the foremost lid 10 to form a hinge 24, 25 about which the foremost lid pivots. The cross bar 12 is substantially wedge-shaped having an apex 12' and a base or face 12". The wedge-shaped cross bar 12 provides a funnelled surface to facilitate waste egress from the compartments when the receptacle is emptied (by turning the receptacle upside down). The wedge is intended to prevent waste from getting stuck underneath the cross bar.

[0036] The rear face of the cross bar comprises a locking member 4 which is intended to receive a counterpart locking member 6 on the distal end of the rear lid 7.

[0037] The two main compartments 15, 16 are provided with independently operated closing members, or lids 7, 10 as show in Figure 2. The foremost lid pivots about a hinge, the rear lid pivots about a hinge member which is intended to act as a handle for the receptacle.

[0038] Furthermore, the lids are outwardly convex such that when the lids are in a closed position, relative to their respective compartments, and the receptacle is in an upright position, the lids allow for water runoff thus, keeping the inside of the receptacle (and any materials therein) dry.

[0039] This water-resistant affect is further achieved through the presence of a protruding ridge 11 around the mouth of each main compartment, each of which protruding ridges fits inside its respective compartment lid 7, 10. The inside of the lids 7, 10 are inwardly concave and the leading edge of the inwardly concave lids encircles the protruding ridge 11 of their respective compartment 15, 16 when the lids are in a closed position relative to their respective compartments 15, 16.

[0040] The lid of either compartment includes a locking mechanism.

[0041] Figure 4 shows the locking members. The locking member 14 on the distal end of on the foremost lid 10 is received by a counterpart locking member 13 on the front face of the receptacle 1. These locking members 13, 14 lock the foremost lid 10 in a closed position relative to the front compartment 9.

[0042] The locking member 6 on the rear lid 7 is received by a counterpart locking member 4 on the rear of the cross bar 12. These locking members 4, 6 lock the rear lid 7 in a closed position relative to the rear compartment 16.

[0043] The locking member 27 on the rear lid 7 is received by a counterpart locking member 28 on the back face of the receptacle 1, positioned between the steering handle 5 and the wheels 2. These locking members 27, 28 lock the rear lid 7 in an open position relative to the rear compartment 16, during the emptying of the rear compartment 16.

[0044] Figure 5 shows a rear view highlighting the rear lid lock-O 27 and the rear lid lock-O receiving member 28, protruding elements on the rear lid 29, rear lid hinging bar 30, receptacle wheels 2, and the axle 22 for receptacle wheels.

[0045] Figure 6 shows the hinge mechanism for the lids 7, 10. The cross bar 12 resides across the receptacle 1, and provides structural support and attachment for the lid 10 in the closed position. The protruding elements 32 provide an attachment point for the lid 7, and the cross bar further includes bolt holes 26 for securing the cross bar 12 to the receptacle. The cross bar also includes a rear lid lock receiving member 4. The rear compartment lid lock locks the rear lid in a closed position relative to the rear main compartment when the rear lid lock receiving member 4 engages with the locking member 6.

[0046] The receptacle includes a locking member 13 for the first lid 10. The foremost compartment lid lock 13, 14, which locking member 14 is intended to lock the foremost lid 10 in a closed position relative to the foremost main compartment 15.

[0047] A sub-compartmentalising slot 23 is shown which is designed to receive a sub-dividing wall. The first lid is provided with an inner lid ridge 33 adapted to co-operate with the sub-dividing wall 8. The inner lid ridge 33 and the sub-dividing wall 8 cooperate when the lid is in the closed position to seal each of the sub-compartments.

[0048] It should be understood that the number of compartments or sub-compartments is dependent upon local refuse disposal regulations, and any number of compartments may be incorporated into the receptacle. For example, multiple cross bars may be used to form multiple compartments. Each cross bar is provided with a wedge shaped surface to funnel waste from lodging under the cross bar. Each compartment may be sub-divided any number of times. Each lid may be adapted so that it is independent operable.

[0049] A steering handle 5 is provided and is positioned to the rear of the receptacle; the steering handle 5 allows the receptacle to be steered by the user and the waste material collection service worker. The steering handle 5 is positioned at the top rear of the receptacle 1.

[0050] Figure 6 shows the cross bar 12 which has two main compartmentalising insert cross bar bolts 20. These cross bar bolts 20 hold the cross bar 12 in place.

[0051] The dividing wall 8 provides complete separation between the first and second compartments 15, 16. Figure 7 shows the lid according to the first aspect of the invention, having an inner lid ridge 33.

[0052] The inner lid ridge aligns with the top of a sub-dividing wall 8 and thereby creates a complete separation between sub-compartments which reside under the same lid 7, 10. The lid ridge 33 is intended to limit cross contamination of waste types between such sub-compartments under a locked lid when the bin is inverted for emptying of the compartments under another lid. In an alternative arrangement in accordance with the second aspect of the invention, the sub-dividing wall 8 extends beyond the external walls of the receptacle so as to provide a flush closure with the lid 7, 10 when the lid is in a closed position. In one example, the sub-dividing wall 8 and the inner lid ridge 33 may slide together to form a seal, and thereby overlap when the lid 7, 10 is in a closed position.

[0053] Figures 8 and 9 show the dividing wall inserts in more detail. The main compartmentalising insert 9 or dividing wall acts to separate the forward and rear compartments 15, 16. In accordance with the invention, a further sub-dividing wall 8 is provided. The inserts 8, 9 are shaped so as to complement the shape of the receptacle. In one example, the inserts are tapered to complement a tapered receptacle. Multiple dividing walls may be incorporated into the receptacle by using multiple cross bars or similarly by using multiple sub-dividing walls 8 within each compartment 15, 16 depending upon user requirements.

[0054] The main compartmentalising insert 9 is flared at its upper edge, the upper edge being that part which, when the compartmentalising insert is in place, aligns to the upward facing open mouth of the receptacle 1. The lower end of the main compartmentalising insert 9 narrows to match the tapered shape of the receptacle 1.

[0055] Further, the sub-dividing wall 8 is tapered on one side, the taper being on that face of the sub-dividing wall 8 which faces toward the inner wall of the receptacle 1.

[0056] Furthermore, the dividing walls 8, 9 will extend from the open mouth of the receptacle 1 to the base of the receptacle such that the division of the receptacle 1 or the sub-division of its compartments 15, 16 provides complete separation and not a partial separation.

[0057] Wheels 2 are provided to allow the receptacle 1 to be moved without recourse to lifting, said wheels 2 being fitted to an axle 22. The wheels 2 are secured to the bin with an axle 22 which is threaded through the

lower rear of the receptacle 1 and runs the width of the receptacle 1.

[0058] A lifting lip 3 which allows the receptacle 1 to be picked up by the lifting mechanism of a waste collection lorry

[0059] Figure 10 shows a side view of the receptacle 1 with the lids open. The rear lid 7 is provided with locking members 27, 28 which lock the lid 7 in the open position.

[0060] A benefit of the receptacle is that it allows for ease of segregation and storage of household waste and recyclables by the householder

[0061] A further benefit of the receptacle is that it allows for ease of collection of household waste and recyclables by the waste collection service without recourse to building a special waste collection vehicle.

[0062] A further benefit of the receptacle is that it resolves the issues of how to secure the hinging of the foremost lid, and the locking of the rear lid.

[0063] A benefit of the receptacle is that it works by providing a purpose-built, wheelie bin which is comprised of two separate main compartments; each compartment is covered with its own hinged lid; such lids may be held open or closed through the use of a locking mechanism; and each of the two main compartments may be divided into sub-compartments.

[0064] The receptacle facilitates waste collection service workers to easily move the recyclables from the kerb-side to the waste collection lorry without any manual lifting of unspecified weights which potentially represents an lifting-injury hazard. The receptacle is lifted by a conventional waste collection lorry using conventional lifting mechanisms, again allowing the user to forego potentially injurious lifting, otherwise endured when lifting or emptying the waste bags, boxes, crates or bins into the waste collection lorry. The receptacle is intended to have multiple lids and any of the lids can be held open or closed during the lifting sequence through the use of a lid locks. It is intended that only one lid be open at a time during the lifting sequence.

[0065] During the emptying sequence, only one compartment or sub-compartment is emptied at a time. The other main compartment and any sub-compartments keep the waste in place under the locked lid.

[0066] Sub-dividing walls and inner lid ridges are intended to act together to prevent the cross-contamination of waste between the sub-compartments of a main compartment under a locked lid when the receptacle is up-turned during the emptying sequence. The waste remains in the sub-compartments while another compartment or sub-compartment of are being emptied, thereby limiting any cross-contamination of waste during the emptying sequence.

[0067] In one example, a receptacle for waste is provided which has an upward facing open mouth and around the perimeter of this open mouth is a surrounding ridge, which ridge is broken by two recesses.

[0068] The receptacle is divided into two main compartments (a rear compartment and a foremost compart-

ment) through the use of a dividing wall 9, which Z may be tapered inwardly at its lower end and is flared at its top end (the top end of the dividing wall 9 aligning to the open mouth of the receptacle 1 when inserted into the receptacle 1), and either of which main compartments may be sub-divided into sub-compartments through the use of sub-dividing walls 8.

[0069] The receptacle 1 features slots intended to receive dividing walls 8, 9. The dividing wall 9 is further provided with additional slots to receive sub-dividing walls 8.

[0070] The two main compartments and any sub-compartments are intended to allow for the efficient and simple sorting of household waste, household recyclables and other waste in one wheelie bin. This one unit approach allows for the simplification of sorting of household wastes by the householder, ease of storage of household wastes, ease of movement of waste and recyclables from household to kerbside and the accessible collection of said wastes by waste collection service providers, while keeping the different types of waste segregated. Furthermore, the receptacle is a wheel-mounted bin with a steering handle, both the wheels and the steering handle allow for physical ease of movement of the bin. This allows the householder to wheel the wheelie bin to the kerbside, without any potentially injurious lifting, and it allows the waste collection operative to empty the wheelie bin without any potentially injurious lifting.

[0071] In one example, a pair of cross bar bolts are provided for holding the compartmentalising insert cross bar in place by securing it to the receptacle at a point directly above the dividing wall 9. The dividing wall is connected to the apex of the cross bar 12.

[0072] In another example, the dividing wall 9 assembly includes a cross bar 12 and two dividing wall grommets. The cross bar 12 fits into recesses in the receptacle 1, and the cross bar 12 is further provided with two closing ridges 21; one front facing toward the front main compartment 15, and one rear facing toward the rear main compartment 16. Each closing ridge 21 closes off the breaks in the surrounding ridge 11 of the receptacle 1. The front facing closing ridge 21 closes off the break in the surrounding ridge and thereby forms a complete ridge around the foremost compartment 15. The rear facing closing ridge 21 closes off the break in the surrounding ridge 11 forming a complete ridge around the rear compartment 16. The cross bar 12 includes two bolt holes 26 which receive two bolts to secure the cross bar 12 in place. The forward or leading edge of this cross bar 12 is further provided with a series of protruding elements 25 each of which has a throughgoing aperture, such apertures configured to receive the compartmentalising insert bar 17.

[0073] In one example, the foremost lid 10 has a series of protruding elements 24 at its proximal end, each of which protruding elements has an aperture, and each of which protruding elements are intended to intermesh with the protruding elements 25 on the front face of the cross

bar 12.

[0074] These two sets of protruding members 24, 25 intermesh and the aligned throughgoing apertures receive the compartmentalising insert bar 17 which acts as a pivot point around which the foremost compartment lid 10 pivots.

[0075] The compartmentalising insert bar 17 is hollow, and is fixed in place with two compartmentalising insert grommets 18; one at either end of the bar.

[0076] The upper rear of the receptacle also has a series of protruding elements 32 as described above. When intermeshed, the protruding members 29 of the rear of the receptacle and the proximal end of the rear lid receive an insert bar 17 which secures the members to each other and forms a pivot point about which the rear compartment lid 7 rotates and simultaneously the insert bar 17 acts as a steering handle. Each lid of the receptacle is configured to cover one main compartment and any sub-compartments therein.

[0077] In one example, the compartment 16 is sub-divided using rear compartment sub-dividing wall 8, thus creating two sub-compartments, which are provided for different types of recyclable waste or non-recyclable waste.

[0078] In another example, the compartment 16 is sub-divided using two rear compartment sub-dividing wall 8. These two rear compartment sub-dividers are intended to run parallel to each other thus creating three sub-compartments provided for different types of recyclable waste or non-recyclable waste.

[0079] In another example, the compartment 16 is sub-divided using two rear compartment sub-dividing walls 8. These two rear compartment sub-dividers are intended to run at right angles to each other thus creating four sub-compartments which are provided for different types of recyclable waste or non-recyclable waste.

[0080] In another example, the compartment 16 is sub-divided using three rear compartment sub-dividing walls 8. Two rear compartment sub-dividers running parallel to each other with a further sub-divider set at right angles to the first two, thus creating six sub-compartments provided for different types of recyclable waste or non-recyclable waste.

[0081] The compartment 15 may be sub-divided in the same manner as compartment 16.

[0082] In another example, the cross bar and dividing wall 9 are one single element rather than two elements to be attached together.

[0083] In another example, the cross bar is held in place with glue.

[0084] In another example, the cross bar is held in place with rivets.

[0085] In another example, the cross bar is held in place with an electronic weld.

[0086] In another example, the cross bar is held in place with snap joint.

[0087] In another example, the dividing insert bar and the rear lid bar are not hollow but have apertures at their

ends to receive grommets which will secure the bars in place.

[0088] In another example, grommets are used in place of insert bars.

[0089] In another example, the compartments 15 and 16 and any sub-compartments may be differentiated by colour coding, brail and/or appropriate graphic images or symbols indicating different types of recyclable wastes or non-recyclable waste.

[0090] In another example, the receptacle 1 includes a housing to accommodate a computer chip for the purposes of tracking and weighing of the contents of the receptacle.

[0091] It will be clear to a person skilled in the art that features described in relation to any of the embodiments described above can be applicable interchangeably between the different embodiments. The embodiments described above are examples to illustrate various features of the receptacle.

Claims

1. A receptacle (1) for recyclable waste, the receptacle (1) comprising:

a body, the body being closed at a first end and open at an opposing second end;

a wedge-shaped cross bar (12) having an apex and a base, the wedge-shaped bar (12) spanning the open end thereby defining a first and a second opening;

a first lid (10) hingedly connected to the base of the wedge-shaped cross bar (12), the first lid (10) being arranged to substantially close the first opening when the first lid (10) is contiguous with a portion of the open end; and

a second lid (7) hingedly connected to the open end of the receptacle, the second lid (7) being arranged to substantially close the second opening when the second lid (10) is contiguous with a portion of the base of the wedge-shaped cross bar (12), and wherein the wedge-shaped cross bar (12) is arranged such that the apex of the wedge-shaped cross bar (12) is located in the body;

wherein the cross bar (12) is provided with a dividing wall (9) extending from the apex towards a base of the body so that the first and second openings define first and second compartments in the receptacle (1);

wherein the first compartment is provided with a sub-dividing wall (8) to provide sub-compartments and wherein

the first lid (10) comprises an inner lid ridge (33) which aligns with the top of the sub-dividing wall (8) and thereby creates a complete separation between sub-compartments which reside under

said first lid (10) and/or

wherein the second compartment is provided with a sub-dividing wall to provide sub-compartments and wherein the second lid (7) comprises an inner lid ridge which aligns with the top of the sub-dividing wall and thereby creates a complete separation between sub-compartments which reside under said second lid (7).

2. A receptacle (1) for recyclable waste, the receptacle (1) comprising:

a body, the body being closed at a first end and open at an opposing second end;

a wedge-shaped cross bar (12) having an apex and a base, the wedge-shaped bar (12) spanning the open end thereby defining a first and a second opening;

a first lid (10) hingedly connected to the base of the wedge-shaped cross bar (12), the first lid (10) being arranged to substantially close the first opening when the first lid (10) is contiguous with a portion of the open end; and

a second lid (7) hingedly connected to the open end of the receptacle, the second lid (7) being arranged to substantially close the second opening when the second lid (10) is contiguous with a portion of the base of the wedge-shaped cross bar (12), and wherein the wedge-shaped cross bar (12) is arranged such that the apex of the wedge-shaped cross bar (12) is located in the body;

wherein the cross bar (12) is provided with a dividing wall (9) extending from the apex towards a base of the body so that the first and second openings define first and second compartments in the receptacle (1);

wherein the first compartment is provided with a sub-dividing wall (8) to provide sub-compartments and wherein the sub-dividing wall (8) extends beyond the external wall of the body to form a seal with an underside of the first lid (10) when the first lid (10) is in a closed position, and/or

wherein the second compartment is provided with a sub-dividing wall to provide sub-compartments and wherein the sub-dividing wall extends beyond the external wall of the body to form a seal with an underside of the second lid (7) when the second lid (7) is in a closed position.

3. A receptacle according to claim 1 or 2, wherein the cross bar (12) is provided with a second ridge (21) for receiving and supporting the second lid (7) when the second opening is closed by the second lid (7).
4. A receptacle according to any one of the preceding claims, wherein the receptacle (1) is provided with a

third ridge (11) for receiving and supporting the first lid (10) when the first opening is closed by the first lid (10).

5. A receptacle according to any one of the preceding claims, wherein the dividing wall (9) is inserted into the receptacle (1) and is held at the apex of the cross bar (12) using a fastening element (20). 5
6. A receptacle according to any one of the preceding claims, wherein the body is provided with a number of elongate channels or slots (23) configured to accept and support a portion of a perimeter of the dividing wall (9). 10
7. A receptacle according to any preceding claim, wherein an attachment element is provided at the open end, the attachment element being configured for compatibility with a refuse vehicle lifting mechanism. 15
8. A receptacle according to any preceding claim, wherein the receptacle is further provided with wheels (2) attached to an axle. 20
9. A receptacle according to any preceding claim, wherein the receptacle is further provided with a locking member (4,6). 25
10. A receptacle according to claim 9, wherein the locking member is a retractable elongate bar configured to slot into tracks provided in the cross bar and/or in the body. 30

Patentansprüche

1. Behältnis (1) für recyclingfähigen Abfall, wobei das Behältnis (1) Folgendes umfasst:

einen Körper, wobei der Körper an einem ersten Ende geschlossen und an einem gegenüberliegenden zweiten Ende offen ist;

eine keilförmige Querstrebe (12) mit einem Scheitel und einer Basis, wobei die keilförmige Strebe (12) das offene Ende überspannt, wodurch eine erste und eine zweite Öffnung definiert werden;

einen ersten Deckel (10), der gelenkig mit der Basis der keilförmigen Querstrebe (12) verbunden ist, wobei der erste Deckel (10) dazu angeordnet ist, die erste Öffnung im Wesentlichen zu verschließen, wenn der erste Deckel (10) an einen Abschnitt des offenen Endes angrenzt; und einen zweiten Deckel (7), der gelenkig mit dem offenen Ende des Behältnisses verbunden ist, wobei der zweite Deckel (7) dazu angeordnet ist, die zweite Öffnung im Wesentlichen zu ver-

schließen, wenn der zweite Deckel (10) an einen Abschnitt der Basis der keilförmigen Querstrebe (12) angrenzt, und wobei die keilförmige Querstrebe (12) derart angeordnet ist, dass sich der Scheitel der keilförmigen Querstrebe (12) in dem Körper befindet;

wobei die Querstrebe (12) mit einer Trennwand (9) versehen ist, die sich von dem Scheitel in Richtung einer Basis des Körpers erstreckt, so dass die erste und die zweite Öffnung ein erstes und ein zweites Abteil in dem Behältnis (1) definieren;

wobei das erste Abteil mit einer Untertrennwand (8) versehen ist, um Unterabteile bereitzustellen, und wobei der erste Deckel (10) eine innere Deckelrippe (33) umfasst, die auf die Oberseite der Untertrennwand (8) ausgerichtet ist und dadurch eine vollständige Trennung zwischen Unterabteilen, die unter dem ersten Deckel (10) liegen, erzeugt und/oder

wobei das zweite Abteil mit einer Untertrennwand versehen ist, um Unterabteile bereitzustellen, und wobei der zweite Deckel (7) eine innere Deckelrippe umfasst, die auf die Oberseite der Untertrennwand ausgerichtet ist und dadurch eine vollständige Trennung zwischen Unterabteilen, die unter dem zweiten Deckel (7) liegen, erzeugt.

2. Behältnis (1) für recyclingfähigen Abfall, wobei das Behältnis (1) Folgendes umfasst:

einen Körper, wobei der Körper an einem ersten Ende geschlossen und an einem gegenüberliegenden zweiten Ende offen ist;

eine keilförmige Querstrebe (12) mit einem Scheitel und einer Basis, wobei die keilförmige Strebe (12) das offene Ende überspannt, wodurch eine erste und eine zweite Öffnung definiert werden;

einen ersten Deckel (10), der gelenkig mit der Basis der keilförmigen Querstrebe (12) verbunden ist, wobei der erste Deckel (10) dazu angeordnet ist, die erste Öffnung im Wesentlichen zu verschließen, wenn der erste Deckel (10) an einen Abschnitt des offenen Endes angrenzt; und einen zweiten Deckel (7), der gelenkig mit dem offenen Ende des Behältnisses verbunden ist, wobei der zweite Deckel (7) dazu angeordnet ist, die zweite Öffnung im Wesentlichen zu verschließen, wenn der zweite Deckel (10) an einen Abschnitt der Basis der keilförmigen Querstrebe (12) angrenzt, und wobei die keilförmige Querstrebe (12) derart angeordnet ist, dass sich der Scheitel der keilförmigen Querstrebe (12) in dem Körper befindet;

wobei die Querstrebe (12) mit einer Trennwand (9) versehen ist, die sich von dem Scheitel in

- Richtung einer Basis des Körpers erstreckt, so-
dass die erste und die zweite Öffnung ein erstes
und ein zweites Abteil in dem Behältnis (1) de-
finieren;
wobei das erste Abteil mit einer Untertrennwand
(8) versehen ist, um Unterabteile bereitzustel-
len, und wobei sich die Untertrennwand (8) über
die Außenwand des Körpers hinaus erstreckt,
um mit einer Unterseite des ersten Deckels (10)
eine Dichtung zu bilden, wenn sich der erste De-
ckel (10) in einer geschlossenen Stellung befind-
et, und/oder
wobei das zweite Abteil mit einer Untertrenn-
wand versehen ist, um Unterabteile bereitzu-
stellen, und wobei sich die Untertrennwand über
die Außenwand des Körpers hinaus erstreckt,
um mit einer Unterseite des zweiten Deckels (7)
eine Dichtung zu bilden, wenn sich der zweite
Deckel in einer geschlossenen Stellung befind-
et.
3. Behältnis nach Anspruch 1 oder 2, wobei die Quer-
strebe (12) mit einer zweiten Rippe (21) versehen
ist, um den zweiten Deckel (7) aufzunehmen und zu
stützen, wenn die zweite Öffnung durch den zweiten
Deckel (7) verschlossen ist.
4. Behältnis nach einem der vorangehenden Ansprü-
che, wobei das Behältnis (1) mit einer dritten Rippe
(11) versehen ist, um den ersten Deckel (10) aufzu-
nehmen und zu stützen, wenn die erste Öffnung
durch den ersten Deckel (10) verschlossen ist.
5. Behältnis nach einem der vorangehenden Ansprü-
che, wobei die Trennwand (9) in das Behältnis (1)
eingesteckt ist und unter Verwendung eines Fixie-
rungselements (20) an dem Scheitel der Querstrebe
(12) gehalten wird.
6. Behältnis nach einem der vorangehenden Ansprü-
che, wobei der Körper mit einer Anzahl von langge-
streckten Nuten oder Schlitten (23) versehen ist, die
dazu konfiguriert sind, einen Abschnitt eines Um-
fangsrandes der Trennwand (9) aufzunehmen und zu
stützen.
7. Behältnis nach einem der vorangehenden Ansprü-
che, wobei ein Befestigungselement an dem offenen
Ende bereitgestellt ist, wobei das Befestigungsele-
ment zur Kompatibilität mit einem Hebemechanis-
mus eines Abfallsammelfahrzeug konfiguriert ist.
8. Behältnis nach einem der vorangehenden Ansprü-
che, wobei das Behältnis ferner mit an einer Achse
angebrachten Rädern (2) versehen ist.
9. Behältnis nach einem der vorangehenden Ansprü-
che, wobei das Behältnis ferner mit einem Verriegel-

lungsglied (4, 6) versehen ist.

10. Behältnis nach Anspruch 9, wobei es sich bei dem
Verriegelungsglied um eine einziehbare langge-
streckte Stange handelt, die dazu konfiguriert ist, in
in der Querstrebe und/oder in dem Körper bereitge-
stellte Schienen eingesteckt zu werden.

10 Revendications

1. Réceptacle (1) pour déchets recyclables, le récep-
tacle (1) comportant :

un corps, le corps étant fermé au niveau d'une
première extrémité et ouvert au niveau d'une
deuxième extrémité opposée ;
une barre transversale cunéiforme (12) ayant
un sommet et une base, la barre cunéiforme (12)
s'étendant en travers de l'extrémité ouverte dé-
finissant de ce fait une première ouverture et
une deuxième ouverture ;
un premier couvercle (10) relié de manière arti-
culée à la base de la barre transversale cunéi-
forme (12), le premier couvercle (10) étant agen-
cé pour sensiblement fermer la première ouver-
ture quand le premier couvercle (10) est contigu
à une partie de l'extrémité ouverte ; et
un deuxième couvercle (7) relié de manière arti-
culée à l'extrémité ouverte du réceptacle, le
deuxième couvercle (7) étant agencé pour sen-
siblement fermer la deuxième ouverture quand
le deuxième couvercle (10) est contigu à une
partie de la base de la barre transversale cunéi-
forme (12), et dans lequel la barre transversale
cunéiforme (12) est agencée de telle sorte que
le sommet de la barre transversale cunéiforme
(12) est situé dans le corps ;
dans lequel la barre transversale (12) comporte
une paroi de séparation (9) s'étendant depuis le
sommet vers une base du corps de telle sorte
que les première et deuxième ouvertures défi-
nissent des premier et deuxième compartiments
dans le réceptacle (1) ;
dans lequel le premier compartiment comporte
une paroi de sous-séparation (8) à des fins de
mise en œuvre de sous-compartiments et dans
lequel le premier couvercle (10) comporte une
nervure intérieure pour couvercle (33) qui s'ali-
gne sur la partie supérieure de la paroi de sous-
séparation (8) et qui, de ce fait, crée une sépa-
ration complète entre les sous-compartiments
qui se trouvent sous ledit premier couvercle (10)
et/ou dans lequel le deuxième compartiment
comporte une paroi de sous-séparation à des
fins de mise en œuvre de sous-compartiments
et dans lequel le deuxième couvercle (7) com-
porte une nervure intérieure pour couvercle qui

s'aligne sur la partie supérieure de la paroi de sous-séparation et qui, de ce fait, crée une séparation complète entre les sous-compartiments qui se trouvent sous ledit deuxième couvercle (7).

2. Réceptacle (1) pour déchets recyclables, le réceptacle (1) comportant :

un corps, le corps étant fermé au niveau d'une première extrémité et ouvert au niveau d'une deuxième extrémité opposée ;
 une barre transversale cunéiforme (12) ayant un sommet et une base, la barre cunéiforme (12) s'étendant en travers de l'extrémité ouverte définissant de ce fait une première ouverture et une deuxième ouverture ;
 un premier couvercle (10) relié de manière articulée à la base de la barre transversale cunéiforme (12), le premier couvercle (10) étant agencé pour sensiblement fermer la première ouverture quand le premier couvercle (10) est contigu à une partie de l'extrémité ouverte ; et
 un deuxième couvercle (7) relié de manière articulée à l'extrémité ouverte du réceptacle, le deuxième couvercle (7) étant agencé pour sensiblement fermer la deuxième ouverture quand le deuxième couvercle (10) est contigu à une partie de la base de la barre transversale cunéiforme (12), et dans lequel la barre transversale cunéiforme (12) est agencée de telle sorte que le sommet de la barre transversale cunéiforme (12) est situé dans le corps ;
 dans lequel la barre transversale (12) comporte une paroi de séparation (9) s'étendant depuis le sommet vers une base du corps de telle sorte que les première et deuxième ouvertures définissent des premier et deuxième compartiments dans le réceptacle (1) ;
 dans lequel le premier compartiment comporte une paroi de sous-séparation (8) à des fins de mise en œuvre de sous-compartiments et dans lequel la paroi de sous-séparation (8) s'étend au-delà de la paroi externe du corps pour former un joint d'étanchéité avec une partie inférieure du premier couvercle (10) quand le premier couvercle (10) est dans une position fermée, et/ou dans lequel le deuxième compartiment comporte une paroi de sous-séparation à des fins de mise en œuvre de sous-compartiments et dans lequel la paroi de sous-séparation s'étend au-delà de la paroi externe du corps pour former un joint d'étanchéité avec une partie inférieure du deuxième couvercle (7) quand le deuxième couvercle (7) est dans une position fermée.

3. Réceptacle selon la revendication 1 ou la revendication 2, dans lequel la barre transversale (12) com-

porte une deuxième nervure (21) servant à recevoir et à supporter le deuxième couvercle (7) quand la deuxième ouverture est fermée par le deuxième couvercle (7).

4. Réceptacle selon l'une quelconque des revendications précédentes, dans lequel le réceptacle (1) comporte une troisième nervure (11) servant à recevoir et à supporter le premier couvercle (10) quand la première ouverture est fermée par le premier couvercle (10).

5. Réceptacle selon l'une quelconque des revendications précédentes, dans lequel la paroi de séparation (9) est insérée dans le réceptacle (1) et est retenue au niveau du sommet de la barre transversale (12) au moyen d'un élément de fixation (20).

6. Réceptacle selon l'une quelconque des revendications précédentes, dans lequel le corps comporte un certain nombre de canaux ou fentes allongés (23) configurés pour accepter et supporter une partie d'un périmètre de la paroi de séparation (9).

7. Réceptacle selon l'une quelconque des revendications précédentes, dans lequel un élément de fixation est mis en œuvre au niveau de l'extrémité ouverte, l'élément de fixation étant configuré à des fins de compatibilité avec un mécanisme de levage d'un véhicule à ordures.

8. Réceptacle selon l'une quelconque des revendications précédentes, dans lequel le réceptacle comporte par ailleurs des roues (2) attachées à un essieu.

9. Réceptacle selon l'une quelconque des revendications précédentes, dans lequel le réceptacle comporte par ailleurs un élément de verrouillage (4, 6).

10. Réceptacle selon la revendication 9, dans lequel l'élément de verrouillage est une barre allongée rétractable configurée pour s'emboîter dans des chemins mis en œuvre dans la barre transversale et/ou dans le corps.

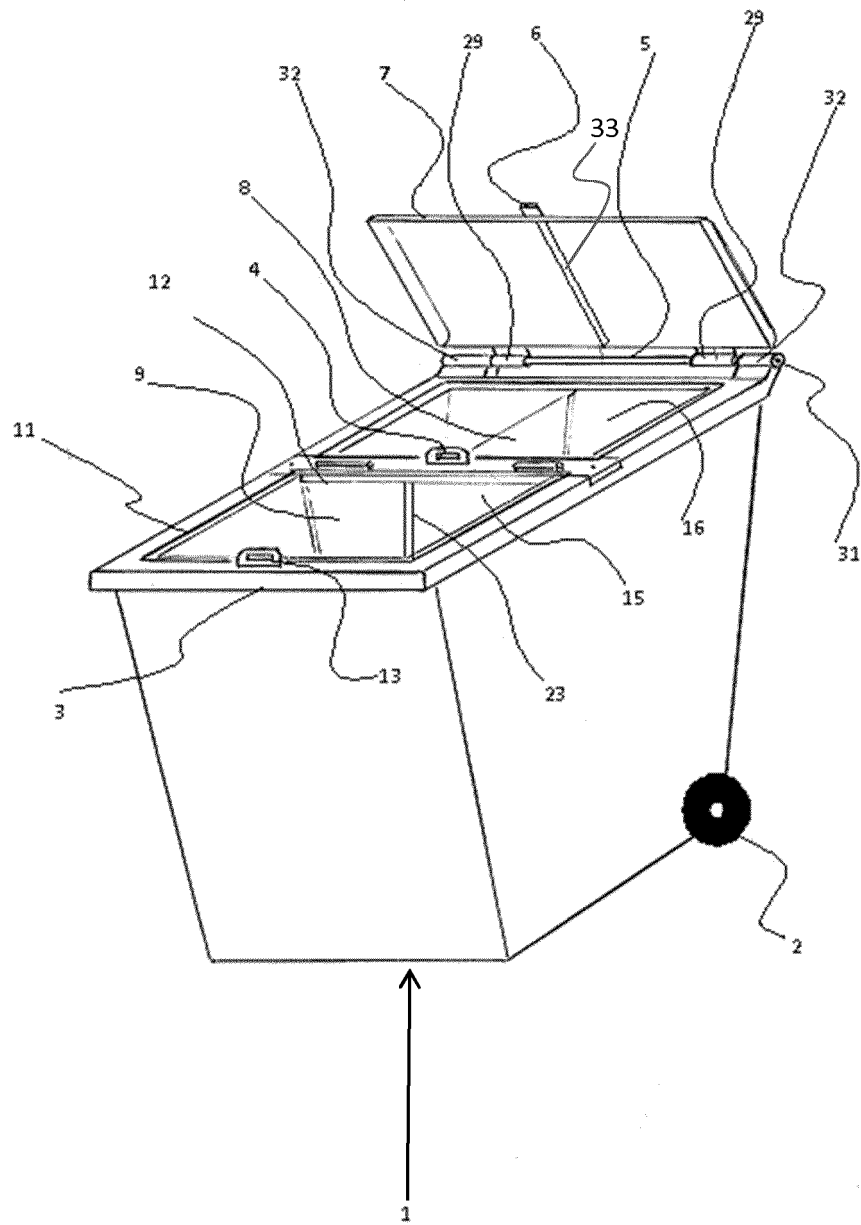


FIGURE 1

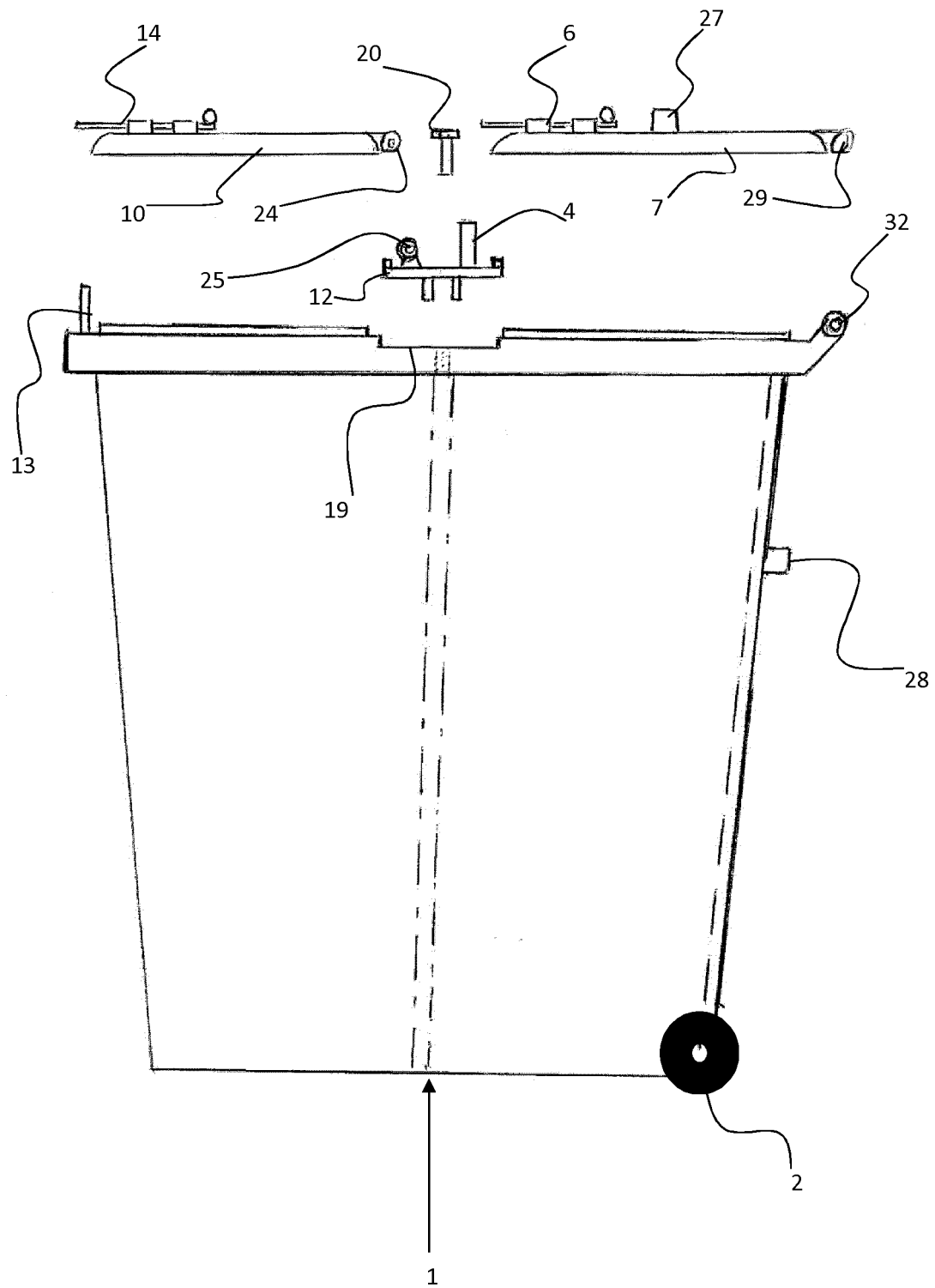


FIGURE 2

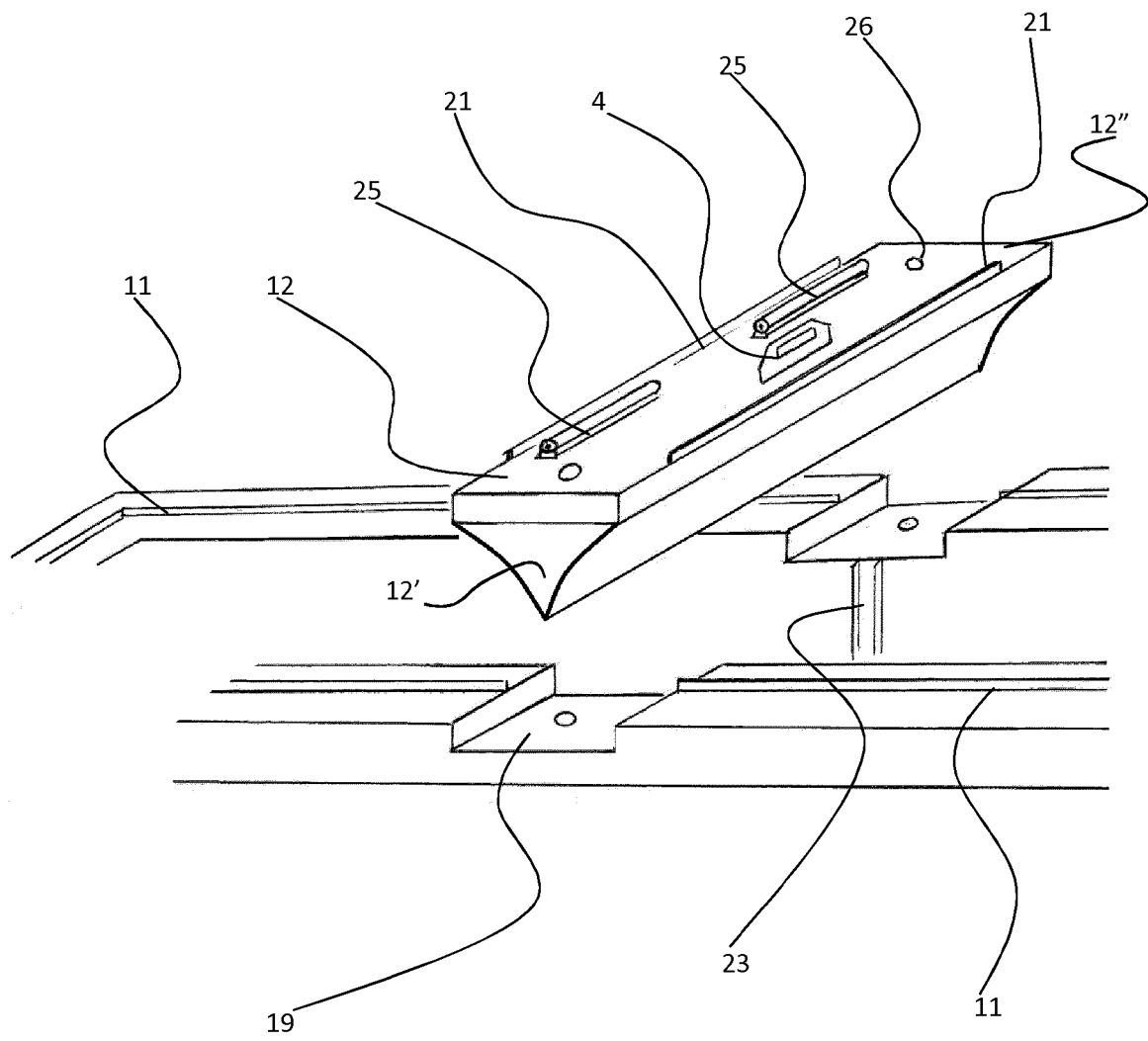


FIGURE 3

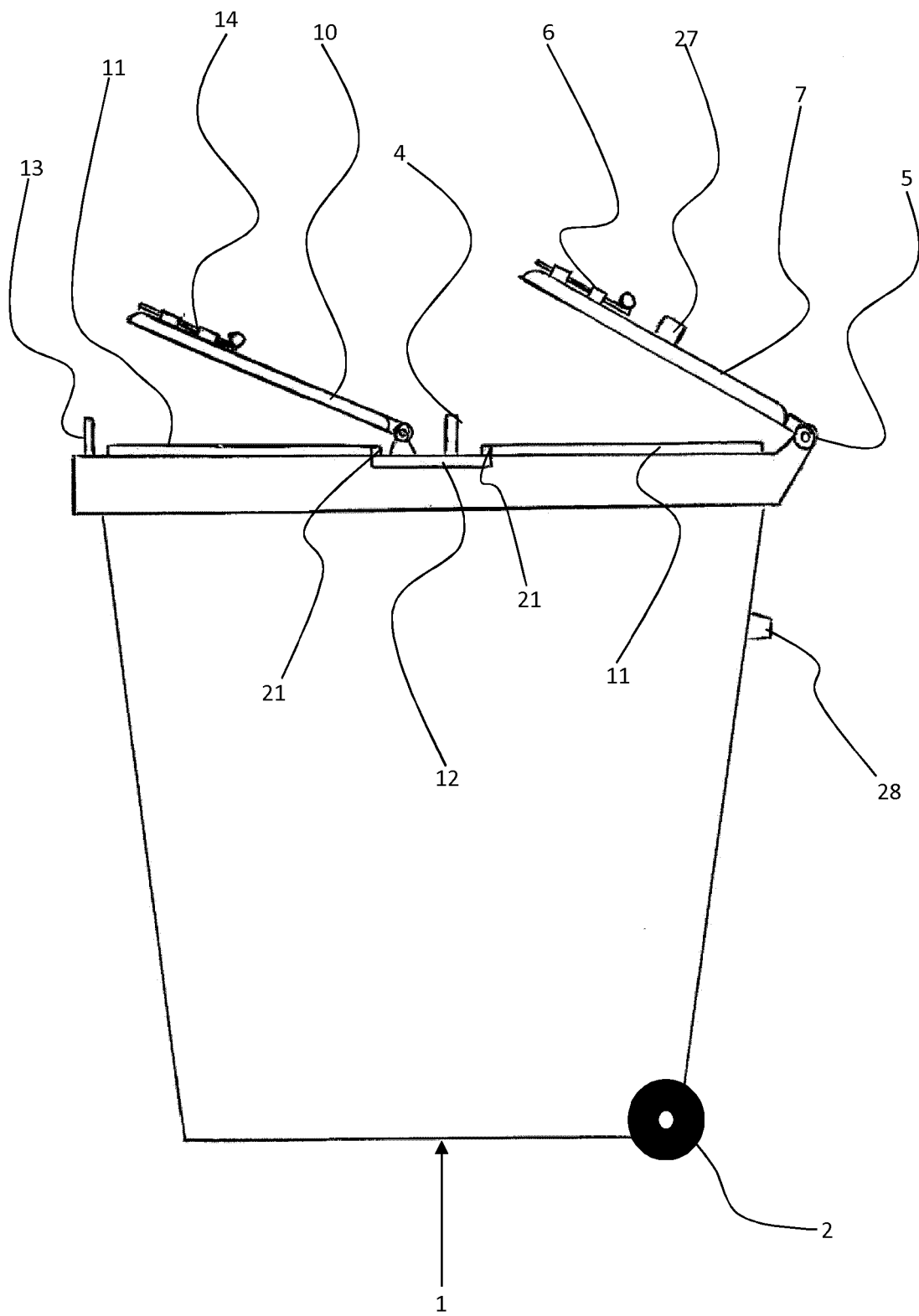


FIGURE 4

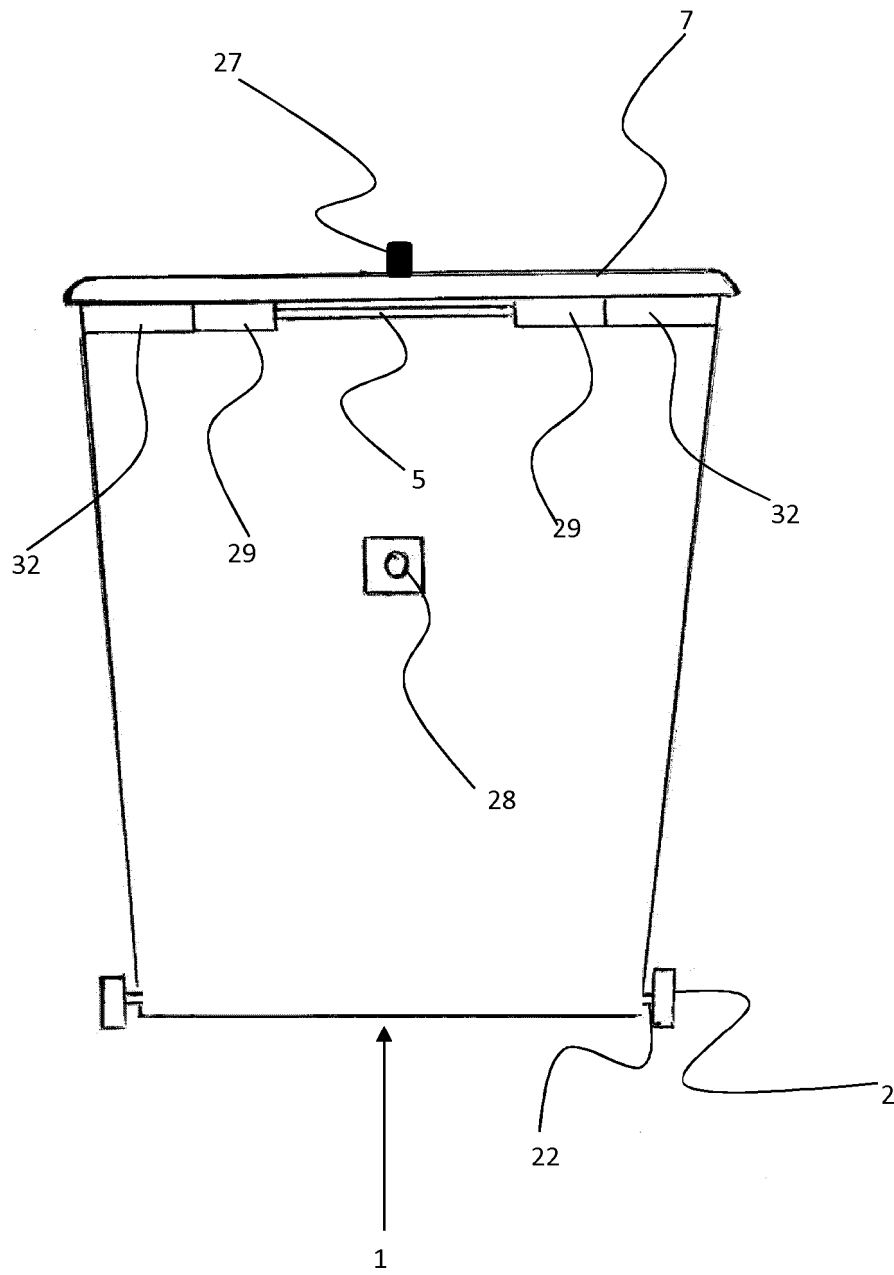


FIGURE 5

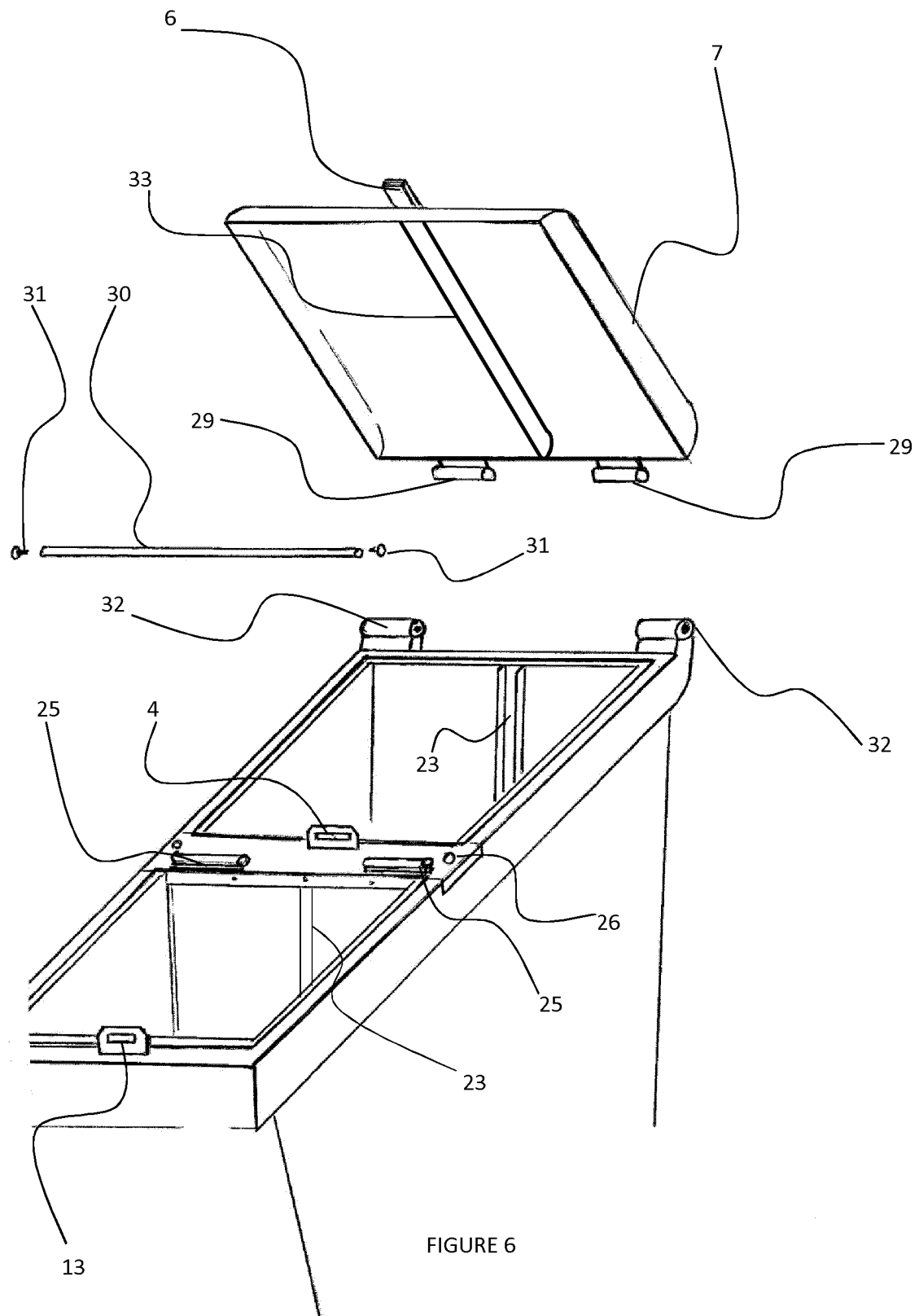


FIGURE 6

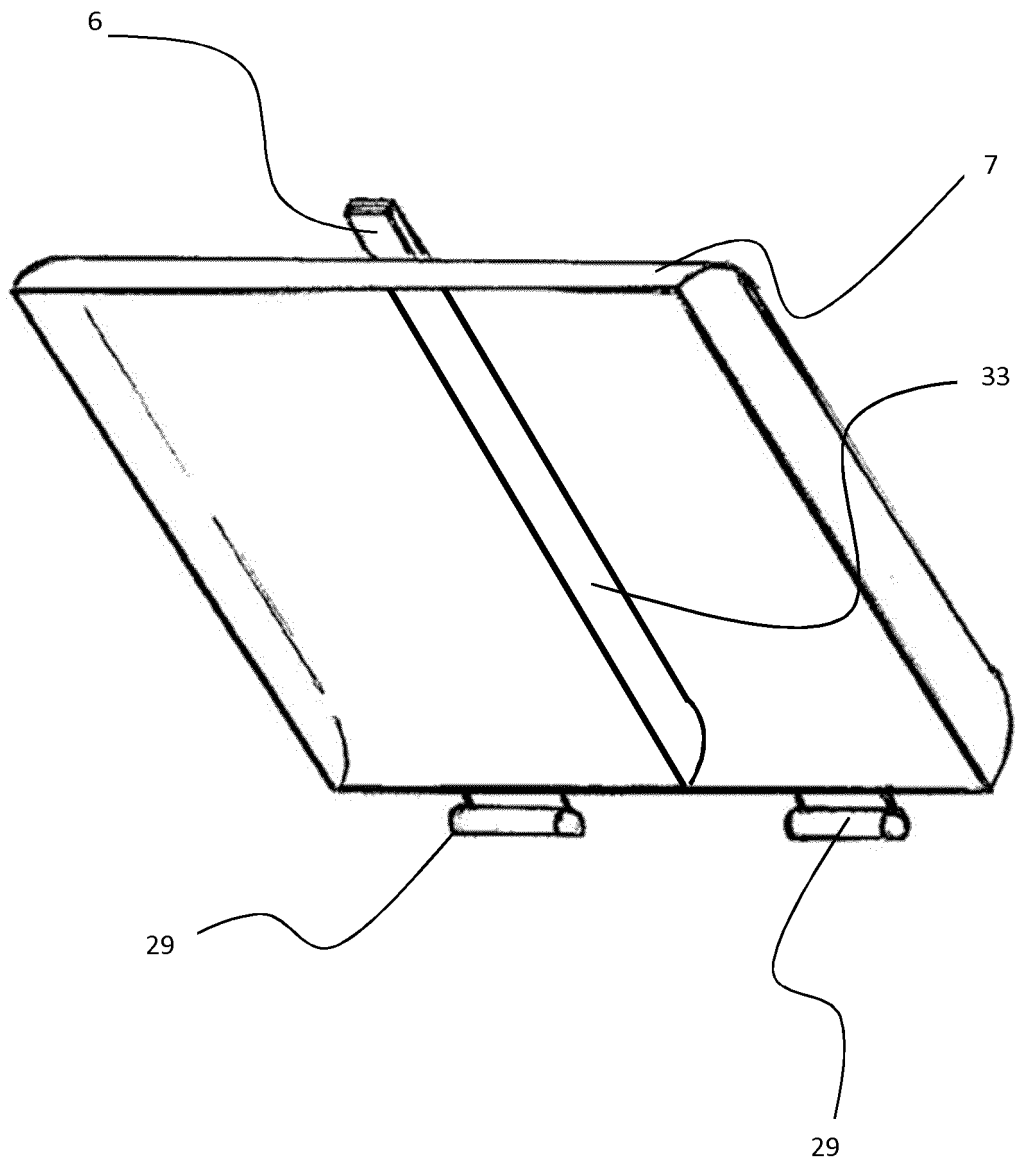


FIGURE 7

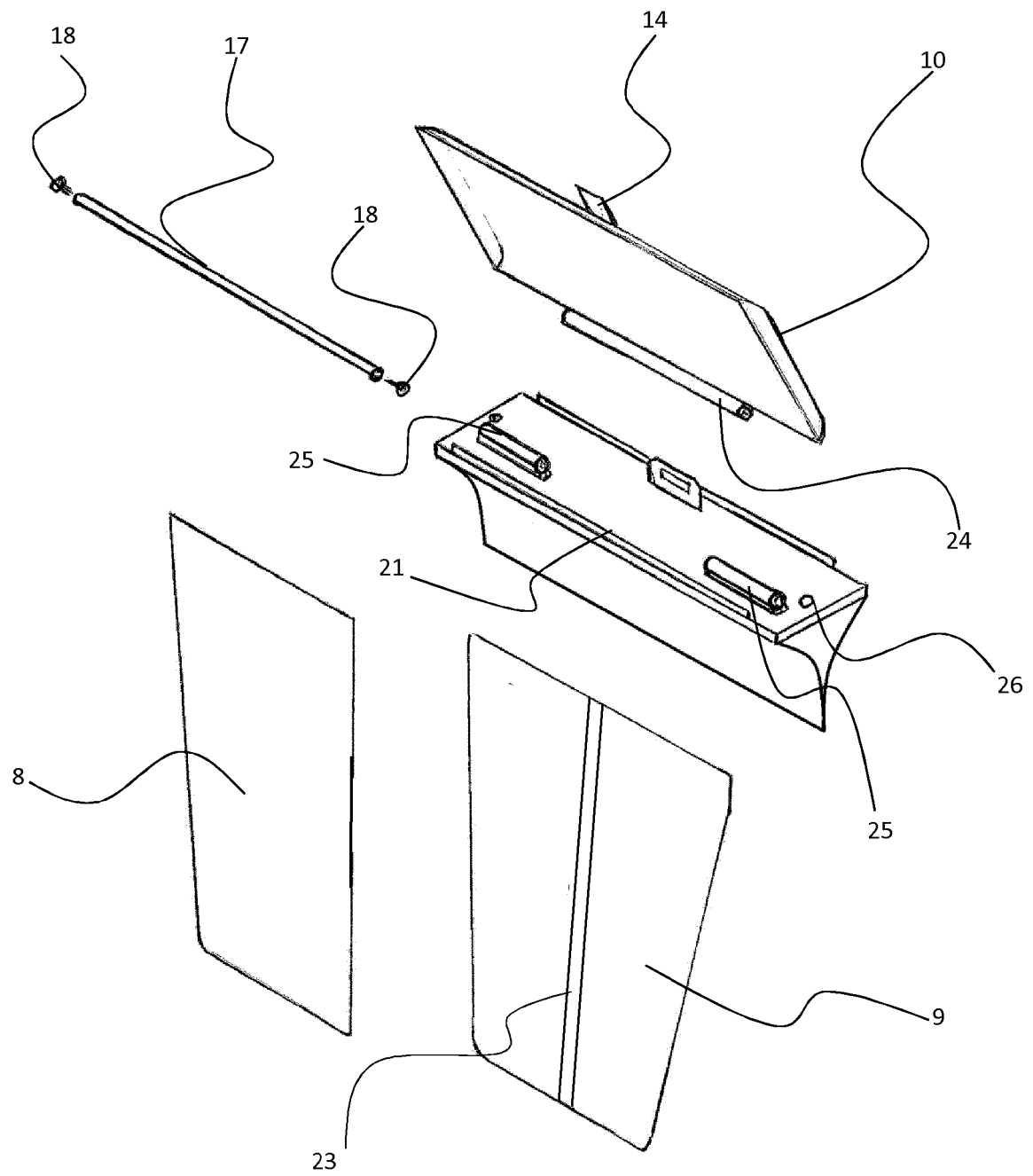


FIGURE 8

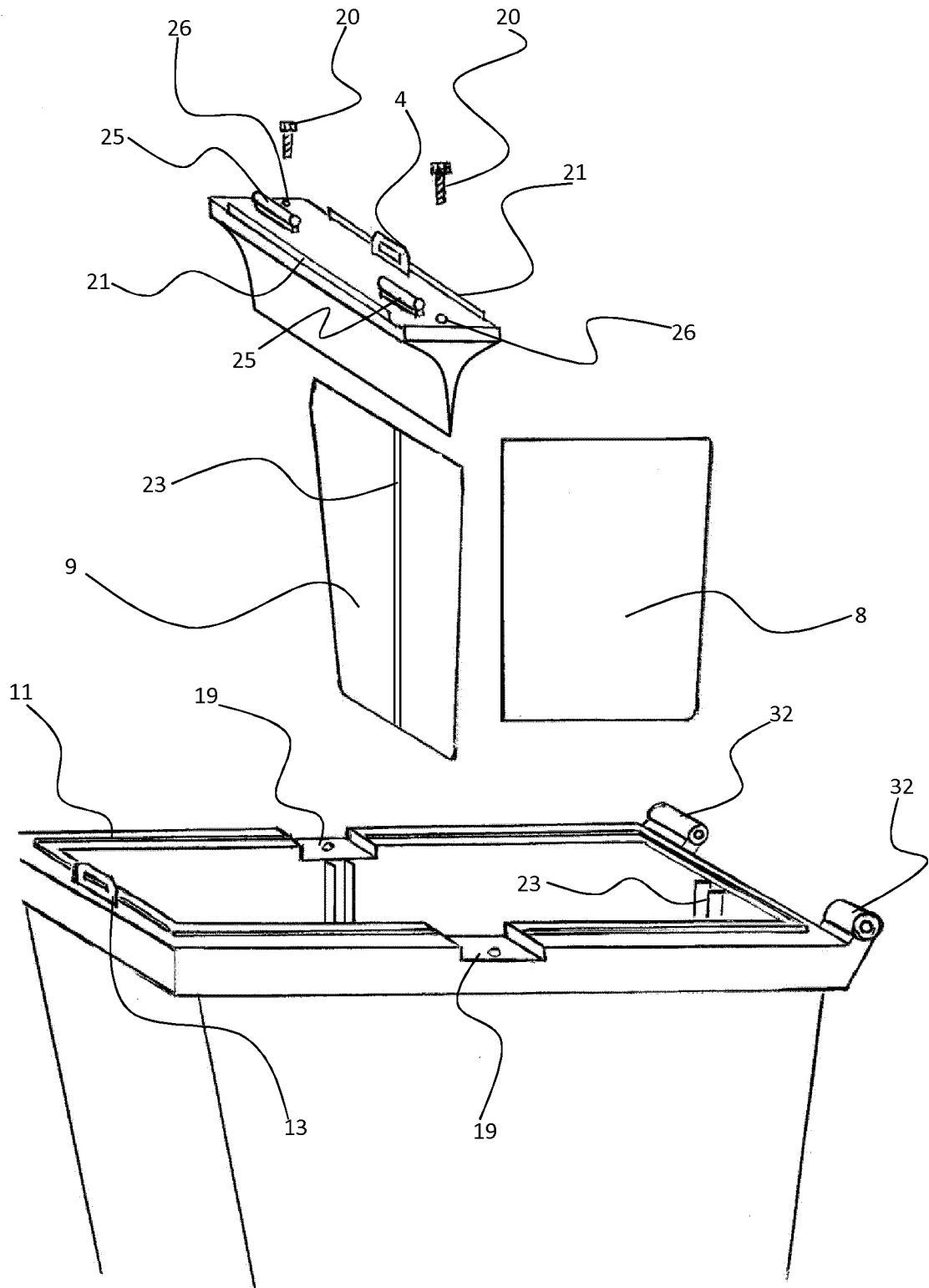


FIGURE 9

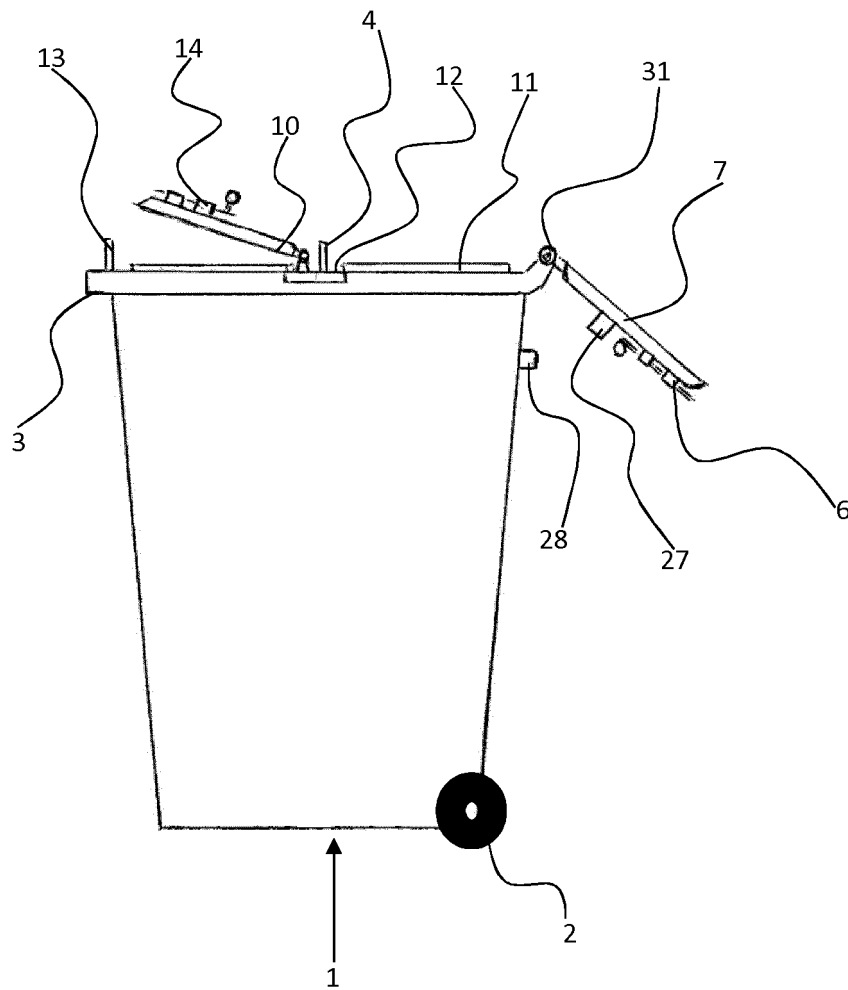


FIGURE 10

REFERENCES CITED IN THE DESCRIPTION

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