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(54) **AN APPARATUS FOR A COMPARTMENTALISED WHEELIE BIN WITH INTERLOCKING LIDS**

VORRICHTUNG FÜR IN FÄCHER UNTERTEILTEN MÜLLEIMER MIT VERRIEGELUNGSDECKELN

DISPOSITIF POUR UNE POUBELLE À ROULETTES COMPARTIMENTÉE AVEC COUVERCLES SE VERROUILLANT MUTUELLEMENT

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Description

Field of the invention

[0001] The present invention relates to an apparatus according to the preamble of claim 1, for the efficient sorting of waste and recyclable materials in one unit.

[0002] Refuse containers, wheeled refuse containers or wheelie bins as they are commonly known are used often to transport waste and recyclables from the household to the kerbside for collection. The bins are typically emptied by a truck with either an arm with jaws or a comb-like apparatus with a clamp. Multiple wheelie bins or containers such as sacks or plastic boxes are used to segregate the different waste materials prior to collection causing clutter on the pavements and necessitating the lifting of unspecified weights, both of which can be hazardous. Paper can be particularly heavy when wet. Terraced housing estates with narrow streets are vulnerable to the above issues to a greater degree because of the lack of space.

Object of the invention

[0003] It is therefore the object of the present invention to remove these hazards and allow waste to be recycled at source in one unit while maintaining the ease of use and mobility of existing wheelie bins. The apparatus according to the invention may be made from any suitable material such as metal or plastics. Typically the material is corrosion resistant and can be sourced from recycled materials.

[0004] US6050442 discloses an apparatus for retaining waste according to the precharacterising portion of claim 1.

Brief Summary

[0005] The present invention relates to an apparatus for retaining waste as detailed in claim 1, said apparatus being configured for a container according to claim 6. Advantageous features are provided in dependent claims.

Brief Description of the Drawings

[0006]

Figure 1 shows a side view of the invention and contains aspects of the lids (A3 & A4), wheels (Figure A8), T-piece (A5), reinforced lifting section (A2), wheel axles (A9) and pivot bar (A10) around which the lids operate. Figure 2 shows the handles (B11) and reinforcing ribs (B10).

Figure 3 shows a plan view of the bin body and shows the handles (B11), reinforced lifting section (A2), wheel housings (C12) and axle housings (C13), locating channel (C15) and T-piece block retaining slot (C14). Figure 4 shows a cutaway of the bin showing the wheeled refuse container (A1) with the wet side lid (A3) in the open position resting on the closed dry side lid (A4). The open lid is prevented from pivoting by the top of the T-piece (A5) which will only allow the lids to pivot when both are fully open.

Figure 5 shows a side view of the bin with the wet lid (A3) in the open position resting on the closed lid (A4). Figure 6 shows both lids (A3, A4) in a closed aspect with the sections F3 and F4. The sections F3 and F4 comprise projecting members 30. The pivot bar (A10) can also be seen.

Figure 7 shows the top section of the T-piece water drainage channels (J1), retaining block (J2) and pivot bar holes (J3). Figure 8 shows a side view of the T-piece assembly with drainage channels (J1), retaining block (J2), pivot bar holes (J3), securing bolt holes (J10) and upper part of dividing piece (A6).

Figure 9 shows a front view of the T-piece (A5) assembly with drainage channels (J1), retaining block (J2), pivot bar holes (J3), securing bolt holes (J10) and dividing piece (A6). Figure 10 shows lids (A3 and A4) and a section of the main body.

Figure 11 shows a lid in the interlocked/closed position and a section of the main body. The figure is cutaway to show a recessed handle (P1) and the distance it travels (X) before buffering against the bin body. A lip A20 can also be seen interlocking with the lid in this aspect. The reinforced lifting section (A2) can be seen cutaway with the reinforcing ribs (B10) also visible.

Figure 12 shows a side view of the bin body with the drainage angle of the rim (Y)-

Figure 13 shows the two lids interlocking with one (A4) in the open aspect and the other (A3) in the closed aspect. The T-piece (A5) can also be seen and the section that restricts the open lid from pivoting during emptying is denoted by (Z).

Detailed Description of the Invention

[0007] In the Figures there is shown a lid assembly and a dividing piece A6 and a drainage channel J1. The lid assembly comprises two lids A3, A4 mounted either side of a pivot bar A10. For the purposes of discussion, each lid A3, A4 has an end which is proximal with respect to the pivot bar A10 and an end which is distal from the hinge.

[0008] Each lid is designed with a female lip (Figure 4 D1) at the distal rim. Each lid has a hinge section at the proximal end through which the pivot bar A10 is threaded.

A hinge aperture 40 is in a slotted configuration in order to allow both rotation of the lid about the hinge axis and movement of the lid substantially in the plane of the lid (Figure 5). The pivot bar A10 is mounted and secured on a T-piece A5 which has retaining blocks J2 at either end for this purpose. Drainage channels J1 run on either side of the pivot bar A10 and these channels also accommodate projecting members 30 at the proximal end of each lid A3, A4 when in both the open and closed positions. Furthermore the drainage channels J1 are designed to prevent pivotal movement of the lids A3, A4 when they are in the secured position. Each lid A3, A4 may also have one or more recessed handles P1 in a wedge shaped configuration tapered towards the proximal end of the lid A3, A4 which may also act as supporting and strengthening ribs. When both lids A3, A4 are in the closed configuration, the proximal ends interlock (Figure 6). The T-piece A5 sits on top of the dividing piece A6 (Figure 8). Each lid (A3, A4) may be colour coded for identification purposes.

[0009] A wheeled refuse container A1 is designed to accommodate the lid assembly described above. Two T-piece block retaining slotsC14 are incorporated into the rim of the bin aperture to accommodate the retaining blocks J2 of the lid assembly. A locating channel C15 to accommodate the dividing piece A6 is located on the internal walls and floor of the bin, thereby allowing the T-piece A5 and dividing piece A6 to be connected to the bin in a watertight and secure manner. The bin has four wheels A8 mounted just above the base and are placed so as to be raised off the ground when the bin is in the upright position The wheels A8 are secured to the wheeled refuse container A1 with axles A9 which are threaded through moulded housings C13 in the floor of the bin and run the width of the bin base. The bin body has handles B11 placed at either end to allow the bin to be moved from either end by tilting the bin onto a pair of wheels at the relevant end. These handles B11 may be incorporated in the reinforced lifting section A2. The bin body also has two male lips A20 to accommodate the female lips D1 at the distal end of each lid A3, A4. The bin has reinforced lifting sections A2 to allow it to be utilised by standard bin lifting equipment. The bin may be tapered for stacking to allow for ergonomic transportation of large quantities.

[0010] Either lid A3, A4 may be opened by drawing it substantially horizontally away from the hinge before raising said lid. A butt end 20 of the recessed handle P1 on the lid A3, A4 may act as a buffer against the bin wall to prevent unnecessary wear or stress to the hinge (Figure 11). The lid A3, A4 may then be then lowered with respect to the hinge so that the end of the hinge slots furthest from the main body of the lid rests in the drainage channels of the T-piece to brace the lid in the open position for filling the relevant partition of the container. The lid A3, A4 may be secured in the closed position by lowering it on to the wheeled refuse container A1 and pushing it substantially horizontally towards the hinge, so that the female lip D1 of the lid receives the male lip A20 of the rim of the container A1. The rim of the wheeled refuse container A1 is angled so that both lids A3, A4 are inclined downwards towards the hinge to allow rain to flow towards the drainage channels J1 on the T-piece A5 and also to prevent standing water on the lids or in the recessed handles P1 (Figure 12). When one lid A3 is opened fully it lies flat on the other closed lid A4 and their respective hinges interlock (Figure 13). When the closed lid A4 is in the secure position with its female lip D1 engaged with the male lip A20 and the pivot bar A10 is positioned at the end of the hinge slot nearest the main body of the closed lid. The open lid A3 is also secured in position by the combination of the interlocking hinges and the position of the pivot bar A10. The open lid A3 is also prevented from pivoting by the T-piece A5 between the drainage channels J1 which is designed to accommodate the slotted hinge sections of the lids. Reinforcing ribs B10 may be used on the bin for secure operation and longevity. The lid assembly and container may be made from metal or plastic or a combination of both or any other materials that fulfil the necessary requirements and standards.

Claims

1. An apparatus for retaining waste, recyclables or other materials separably, the apparatus being configured for a wheeled refuse container (A1), the apparatus comprising;

   two opposing interconnecting lids (A3, A4), arranged either side of a central axis, each interconnecting lid having projecting members (30) projecting from the lid substantially in the plane of the lid, the projecting members (30) having apertures (40) allowing the lid (A3, A4) to rotate around a hinge axis of a hinge, and wherein the projecting members (30) of each lid (A3, A4) alternate with the members of the opposing lid with respect to the hinge axis, a female lip (D1) at the distal rim of each lid (A3, A4) on the side opposite the hinge axis being downwardly and inwardly curved to receive a complimentary male lip (A20) on a rim of said container (A1) to secure the lid (A3, A4) in the closed position;
   a dividing piece (A6), shaped and formed to fit said container (A1), to define two compartments in the container (A1); and configured to be fitted securely in complementary locating channels (C15) located on the internal walls and floor of said container (A1) in a watertight way,
   and further comprising a pivot bar (A10), which acts as said hinge axis for the interconnecting lids (A3, A4), housed in the dividing piece (A6), which allows the two opposable interconnecting lids (A3, A4), each covering a compartment of

the two compartments of said container (A1) which are set either side of the pivot bar (A10), to pivot for locking and/or opening the lids (A3, A4) against the male lip (A20) on the container (A1) rim so as to keep each compartment of the container's contents protected from the rain when closed,
characterised in that:

the apertures (40) are slotted allowing the lids (A3, A4) to move and slide perpendicular to the hinge axis substantially in the plane of the lids (A3, A4),
each lid (A3, A4) further comprises one or more recessed handles (P1) extending downwards in a substantially wedge-like recess, deepening towards the female lip (D1) at the distal rim of the lid, the recessed handles (P1) being sufficiently wide to allow them to act as handles for drawing the lid (A3, A4) outward from the hinge in the substantially horizontal orientation, the recessed handles (P1) further acting as buffers to prevent stress or damage to the slotted hinge apertures (40) as the lid (A3, A4) is drawn horizontally outwards from the hinge during opening,
atop of the dividing piece (A6) is attached a T-piece (A5) with drainage channels (J1) on either side and retaining blocks (J2) at either end also shaped and formed to fit T-piece block retaining slots (C14) on the rim of the container (A1) aperture, the retaining blocks comprising securing bolt holes (J10), the drainage channels (J1) being positioned lower but parallel to the hinge axis to receive the inner end of the slotted hinge apertures on a lid to secure the lids (A3, A4) when it is in the open position, the channels being wide enough to catch water runoff when the lids (A3, A4) are drawn substantially horizontally away from the hinge.

2. An apparatus according to claim 1, in which the dividing piece (A6) and the T-piece (A5) are manufactured in two separate components.

3. An apparatus according to claim 1, in which the dividing piece (A6) and the T-piece (A5) are manufactured as a single component.

4. An apparatus according to any of claims 1 to 3, in which the plane of the lids (A3, A4) in the closed position rises from the horizontal as the lids (A3, A4) extend away from the hinge, in an amount sufficient to compensate for the deviation of the recessed handles (P1) from the plane of the lids (A3, A4), so as to prevent the pooling of water in the recessed handles (P1).

5. An apparatus according to any of claims 1 to 4, which is made from metal or plastics or any combination of these materials.

6. A wheeled refuse container (A1) comprising the apparatus of any of claims 1 to 5, comprising:

complementary locating channels (C15) located on the internal walls and the floor of the container (A1) for securing and fastening the dividing piece (A6) in a watertight way;
two T-piece block retaining slots (C14) on the rim of the container (A1) aperture for accommodating the retaining blocks (J2);
male lips (A20) extending outwards from sides of the rim of the container (A1) parallel to the hinge axis, which are received by the female lip (D1) at the distal rim of the lid (A3, A4) in the closed position such as to secure the lid (A3, A4) when in the closed position and during handling of the container (A1) and to further prevent ingress of water into the container (A1);
handles (B11) mounted on the sides of the container (A1) furthest from the hinge, the handles (B11) being mounted below the lip of the container (A1), four wheels (A8) positioned at the base of the container (A1), substantially at each corner of the base, each wheel (A8) being raised off the ground when the container (A1) is in the upright position, but two of which come into contact with the ground when the container (A1) is tipped, to allow the container (A1) to be moved when held by its handles (B11); and
a reinforced lifting section (A2) underneath the lips of the container (A1), allowing the container (A1) to be emptied with standard wheelie bin lifting equipment, the reinforced lifting section (A2)comprising the handles (B11) for the tipping and manipulation of the container (A1).

7. A container (A1) according to claim 6, further comprising a housing for accommodating chip technology for the tracking and weighing of the contents of said container (A1).

8. A container (A1) as claimed in claim 6 or 7, which is made from metal or plastics or any combination of these materials.

Patentansprüche

1. Vorrichtung zum separaten Auffangen von Abfall, Wertstoffen oder anderen Materialen, wobei die Vorrichtung für einen Müllbehälter (A1) mit Rädern konfiguriert ist, wobei die Vorrichtung Folgendes um-

fasst;
zwei gegenüberliegende, miteinander verbundene Deckel (A3, A4), die auf jeder Seite einer zentralen Achse angeordnet sind, wobei jeder der miteinander verbundenen Deckel vorstehende Elemente (30) aufweist, die im Wesentlichen auf der Ebene des Deckels von dem Deckel vorstehen, wobei die vorstehenden Elemente (30) Öffnungen (40) aufweisen, die es dem Deckel (A3, A4) erlauben, um eine Scharnierachse eines Scharniers zu rotieren, und wobei die vorstehenden Elemente (30) jedes Deckels (A3, A4) und die Elemente des gegenüberliegenden Deckels in Bezug auf die Scharnierachse alternieren, wobei eine Aufnahmelippe (D1) an dem distalen Rand jedes Deckels (A3, A4) auf der gegenüberliegenden Seite der Scharnierachse nach unten und nach innen gewölbt sind, um eine komplementäre Einstecklippe (A20) auf einem Rand des Behälters (A1) aufzunehmen, um den Deckel (A3, A4) in der geschlossenen Position zu sichern;
ein Trennstück (A6), das so geformt und gebildet ist, dass es für den Behälter (A1) passt, um zwei Fächer in dem Behälter (A1) zu definieren; und dazu konfiguriert, wasserdicht und sicher in komplementäre Aufnahmekanäle (C15) zu passen, die sich auf an den inneren Wänden und dem Boden des Behälters (A1) befinden, und ferner eine Schwenkstange (A10) umfassend, die als die Scharnierachse für die miteinander verbundenen Deckel (A3, A4) dient und in dem Trennstück (A6) untergebracht ist, was es den zwei gegenüberliegenden, miteinander verbundenen Deckeln (A3, A4), von denen jeder ein Fach von den zwei Fächern des Behälters (A1), die jeweils auf einer Seite der Schwenkstange (A10) angeordnet sind, abdeckt, erlaubt, zu schwenken, um die Deckel (A3, A4) gegen die Einstecklippe (A20) an dem Rand des Behälters (A1) zu verriegeln und/oder zu öffnen, um jedes Fach der Inhalte des Behälters vor dem Regen zu schützen, wenn es geschlossen ist,
dadurch gekennzeichnet, dass:

die Öffnungen (40) geschlitzt sind, sodass es den Deckeln (A3, A4) erlaubt ist, sich im Wesentlichen auf der Ebene der Deckel (A3, A4) senkrecht zu der Scharnierachse zu bewegen und zu gleiten,
jeder Deckel (A3, A4) ferner einen oder mehrere ausgesparte Griffe (P1) umfasst, die sich im Wesentlichen eine keilförmige Aussparung hinab erstrecken, die sich zu der Aufnahmelippe (D1) an dem distalen Rand des Deckels hin vertieft, wobei die ausgesparten Griffe (P1) ausreichend weit sind, um es ihnen zu erlauben, als Griffe zum Herausziehen des Deckels (A3, A4) aus dem Scharnier in der im Wesentlichen horizontalen Ausrichtung zu dienen, wobei die ausgesparten Griffe (P1) ferner als Puffer dienen, um eine Belastung oder einen Schaden an den geschlitzten Scharnieröffnungen (40) zu verhindern, wenn der Deckel (A3, A4) während des Öffnens horizontal aus dem Scharnier gezogen wird, auf dem Trennstück (A6) ein T-Stück (A5) mit Drainagekanälen (J1) auf jeder Seite und Auffangblöcke (J2) an jedem Ende angebracht sind, die ebenfalls so geformt und gebildet sind, dass sie in T-Stück-Blockauffangschlitze (C14) an dem Rand der Öffnung des Behälters (A1) passen, wobei die Auffangblöcke Löcher (J10) für Sicherheitsbolzen umfassen, die Drainagekanäle (J1) niedriger, aber parallel zu der Scharnierachse positioniert sind, um das innere Ende der geschlitzten Scharnieröffnungen an einem Deckel aufzunehmen, um die Deckel (A3, A4) zu sichern, wenn er sich in der offenen Position befindet, wobei die Kanäle weit genug sind, um einen Wasserabfluss aufzufangen, wenn die Deckel (A3, A4) im Wesentlichen horizontal von dem Scharnier weggezogen sind.

2. Vorrichtung nach Anspruch 1, wobei das Trennstück (A6) und das T-Stück (A5) als zwei separate Komponenten hergestellt sind.

3. Vorrichtung nach Anspruch 1, wobei das Trennstück (A6) und das T-Stück (A5) als eine einzelne Komponente hergestellt sind.

4. Vorrichtung nach einem der Ansprüche 1 bis 3, wobei sich die Ebene der Deckel (A3, A4), während sich die Deckel (A3, A4) weg von dem Scharnier erstrecken, in der geschlossenen Position in einem Maß aus der Horizontale erhebt, das ausreicht, um die Abweichung der ausgesparten Griffe (P1) von der Ebene der Deckel (A3, A4) zu kompensieren, sodass das Ansammeln von Wasser in den ausgesparten Griffen (P1) verhindert wird.

5. Vorrichtung nach einem der Ansprüche 1 bis 4, die aus Metall oder Kunststoffen oder einer Kombination aus diesen Materialien gefertigt ist.

6. Müllbehälter (A1) mit Rädern, der die Vorrichtung nach einem der Ansprüche 1 bis 5 umfasst, Folgendes umfassend:

komplementäre Aufnahmekanäle (C15), die sich an den inneren Wänden und dem Boden des Behälters (A1) befinden, um das Trennstück (A6) wasserdicht zu sichern und zu befestigen;
zwei T-Stück-Blockauffangschlitze (C14) an dem Rand der Öffnung des Behälters (A1), um die Auffangblöcke (J2) zu beherbergen;
Einstecklippen (A20), die sich von Seiten des Randes des Behälters (A1) parallel zu der Scharnierachse nach außen erstrecken und von der Aufnahmelippe (D1) an dem distalen Rand

des Deckels (A3, A4) in der geschlossenen Position aufgenommen werden, sodass der Deckel (A3, A4) gesichert wird, wenn er sich in der geschlossenen Position befindet und während der Behälter (A1) benutzt wird, und um ferner ein Eindringen von Wasser in den Behälter (A1) zu verhindern;

Griffe (B11), die an den Seiten des Behälters (A1) montiert sind, die am weitesten von dem Scharnier entfernt sind, wobei die Griffe (B11) unterhalb der Lippe des Behälters (A1) montiert sind, vier Räder (A8) an der Basis des Behälters (A1) und im Wesentlichen an jeder Ecke der Basis positioniert sind, wobei jedes Rad (A8) vom Boden erhoben wird, wenn sich der Behälter (A1) in der aufrechten Position befindet, aber zwei davon mit dem Boden in Berührung treten, wenn der Behälter (A1) gekippt wird, um es dem Behälter (A1) zu erlauben, bewegt zu werden, wenn er an seinen Griffen (B11) gehalten wird; und

einen verstärkten Hebeabschnitt (A2) unter den Lippen des Behälters (A1), der es dem Behälter (A1) erlaubt, mit einer Standardausrüstung für das Heben von Mülleimern mit Rädern, geleert zu werden, wobei der verstärkte Hebeabschnitt (A2) die Griffe (B11) zum Kippen und Handhaben des Behälters (A1) umfasst.

7. Behälter (A1) nach Anspruch 6, ferner ein Gehäuse zum Beherbergen von Chiptechnologie zum Nachverfolgen und Wiegen des Inhalts des Behälters (A1) umfassend.

8. Behälter (A1) nach einem der Ansprüche 6 oder 7, der aus Metall oder Kunststoffen oder einer Kombination aus diesen Materialien gefertigt ist.

Revendications

1. Dispositif pour retenir les déchets, les matières recyclables ou d'autres matériaux séparément, le dispositif étant configuré pour un conteneur à ordures à roues (A1), le dispositif comprenant ;

deux couvercles d'interconnexion opposés (A3, A4), agencés de chaque côté d'un axe central, chaque couvercle d'interconnexion ayant des éléments saillants (30) faisant saillie à partir du couvercle sensiblement dans le plan du couvercle, les éléments saillants (30) ayant des ouvertures (40) permettant au couvercle (A3, A4) de tourner autour d'un axe de charnière d'une charnière, et dans lequel les éléments saillants (30) de chaque couvercle (A3, A4) alternent avec les éléments du couvercle opposé par rapport à l'axe de charnière, une lèvre femelle (D1) sur le rebord distal de chaque couvercle (A3, A4) du côté opposé à l'axe de charnière étant courbée vers le bas et vers l'intérieur pour recevoir une lèvre mâle complémentaire (A20) sur un rebord dudit conteneur (A1) pour fixer le couvercle (A3, A4) en position fermée ;

une pièce de séparation (A6), façonnée et formée pour s'adapter audit conteneur (A1), afin de définir deux compartiments dans le conteneur (A1) ; et configurée pour être fixée solidement dans des canaux de positionnement complémentaires (C15) situés sur les parois internes et le fond dudit conteneur (A1) d'une manière étanche à l'eau,

et comprenant en outre une barre pivotante (A10), qui agit comme ledit axe de charnière pour les couvercles d'interconnexion (A3, A4), logés dans la pièce de séparation (A6), qui permet aux deux couvercles d'interconnexion opposés (A3, A4), chacun recouvrant un compartiment des deux compartiments dudit conteneur (A1) qui sont placés de part et d'autre de la barre pivotante (A10), pour pivoter afin de verrouiller et/ou d'ouvrir les couvercles (A3, A4) contre la lèvre mâle (A20) sur le rebord du conteneur (A1) de manière à protéger chaque compartiment du contenu du conteneur de la pluie lorsqu'il est fermé,

caractérisé en ce que :

les ouvertures (40) sont fendues permettant aux couvercles (A3, A4) de se déplacer et de coulisser perpendiculairement à l'axe de charnière sensiblement dans le plan des couvercles (A3, A4), chaque couvercle (A3, A4) comprend en outre une ou plusieurs poignées encastrées (P1) s'étendant vers le bas dans un évidement sensiblement en forme de coin, s'approfondissant vers la lèvre femelle (D1) sur le rebord distal du couvercle, les poignées encastrées (P1) étant suffisamment larges pour leur permettre d'agir comme des poignées pour tirer le couvercle (A3, A4) vers l'extérieur de la charnière dans l'orientation sensiblement horizontale, les poignées encastrées (P1) agissant en outre comme tampons pour éviter toute contrainte ou tout dommage aux ouvertures de charnière fendues (40) lorsque le couvercle (A3, A4) est tiré horizontalement vers l'extérieur de la charnière lors de l'ouverture,

au sommet de la pièce de séparation (A6) est fixé une pièce en T (A5) avec des canaux de drainage (J1) de chaque côté et des blocs de retenue (J2) à chaque extrémité également façonnée et formée pour s'adapter aux fentes de retenue de bloc en T (C14) sur le rebord de l'ouverture du conteneur (A1), les blocs de retenue comprenant des trous de boulons de fixation (J10), les canaux de drainage (J1) étant positionnés en dessous mais parallèlement à l'axe de charnière pour recevoir l'extrémité intérieure des ouvertures de charnière fendues sur un cou-

vercle afin de fixer les couvercles (A3, A4) lorsqu'il est en position ouverte, les canaux étant suffisamment larges pour capturer l'écoulement de l'eau lorsque les couvercles (A3, A4) sont tirés sensiblement horizontalement loin de la charnière.

2. Dispositif selon la revendication 1, dans lequel la pièce de séparation (A6) et la pièce en T (A5) sont fabriquées en deux composants séparés.

3. Dispositif selon la revendication 1, dans lequel la pièce de séparation (A6) et la pièce en T (A5) sont fabriquées en tant que composant unique.

4. Dispositif selon l'une quelconque des revendications 1 à 3, dans lequel le plan des couvercles (A3, A4) en position fermée s'élève depuis l'horizontale lorsque les couvercles (A3, A4) s'étendent loin de la charnière, en une quantité suffisante pour compenser la déviation des poignées encastrées (P1) par rapport au plan des couvercles (A3, A4), de manière à éviter l'accumulation d'eau dans les poignées encastrées (P1).

5. Dispositif selon l'une quelconque des revendications 1 à 4, qui est constitué de métal ou de plastique ou de toute combinaison de ces matériaux.

6. Conteneur à ordures à roues (A1) comprenant le dispositif selon l'une quelconque des revendications 1 à 5, comprenant :

des canaux de positionnement complémentaires (C15) situés sur les parois internes et le fond du conteneur (A1) pour fixer et attacher la pièce de séparation (A6) d'une manière étanche à l'eau ;
deux fentes de retenue de bloc de pièce en T (C14) sur le rebord de l'ouverture du conteneur (A1) pour loger les blocs de retenue (J2) ;
des lèvres mâles (A20) s'étendant vers l'extérieur des côtés du rebord du conteneur (A1) parallèlement à l'axe de charnière, qui sont reçues par la lèvre femelle (D1) sur le rebord distal du couvercle (A3, A4) en position fermée de manière à fixer le couvercle (A3, A4) lorsqu'il est en position fermée et pendant la manipulation du conteneur (A1) et pour empêcher davantage l'entrée d'eau dans le conteneur (A1) ;
des poignées (B11) montées sur les côtés du conteneur (A1) les plus éloignées de la charnière, les poignées (B11) étant montées sous la lèvre du conteneur (A1), quatre roues (A8) étant positionnées à la base du conteneur (A1), sensiblement à chaque coin de la base, chaque roue (A8) étant soulevée du sol lorsque le conteneur (A1) est en position verticale, mais deux d'entre elles entrent en contact avec le sol lorsque le conteneur (A1) est basculé, pour permettre le déplacement du conteneur (A1) lorsqu'il est maintenu par ses poignées (B11) ; et
une section de levage renforcée (A2) sous les lèvres du conteneur (A1), permettant de vider le conteneur (A1) avec un équipement de levage de poubelle à roulettes standard, la section de levage renforcée (A2) comprenant les poignées (B11) pour le basculement et la manipulation du conteneur (A1).

7. Conteneur (A1) selon la revendication 6, comprenant en outre un boîtier pour recevoir la technologie de puce pour le suivi et la pesée du contenu dudit conteneur (A1).

8. Conteneur (A1) selon la revendication 6 ou 7, qui est constitué de métal ou de plastique ou de toute combinaison de ces matériaux.

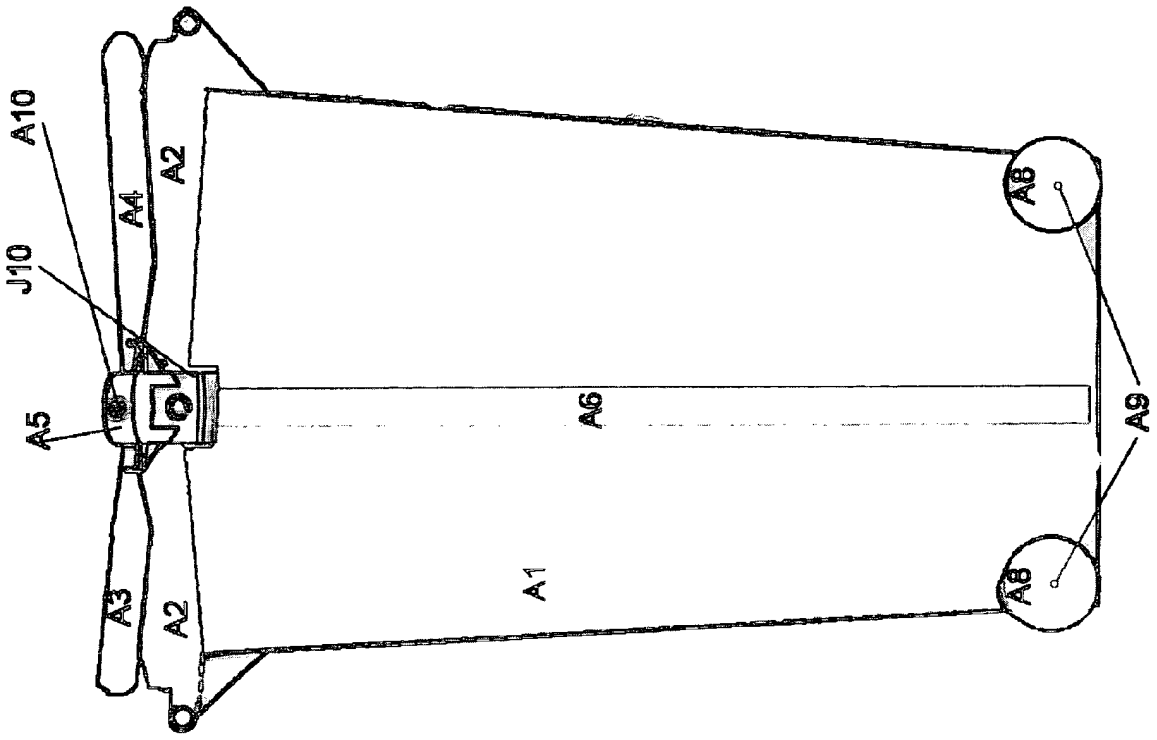


Figure 1

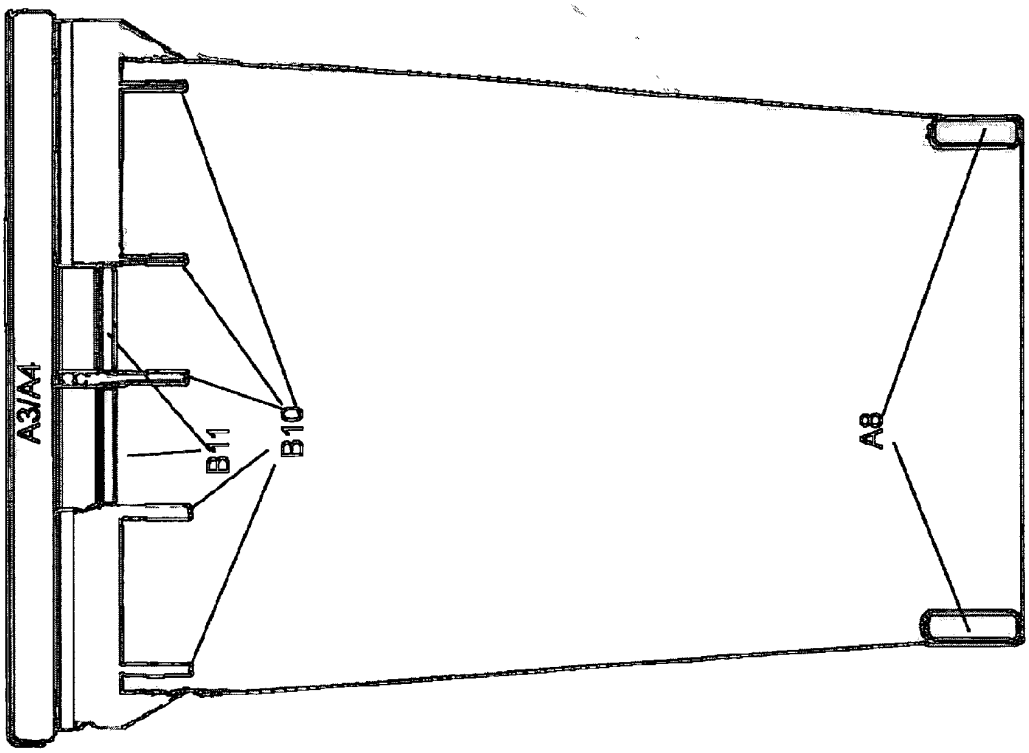
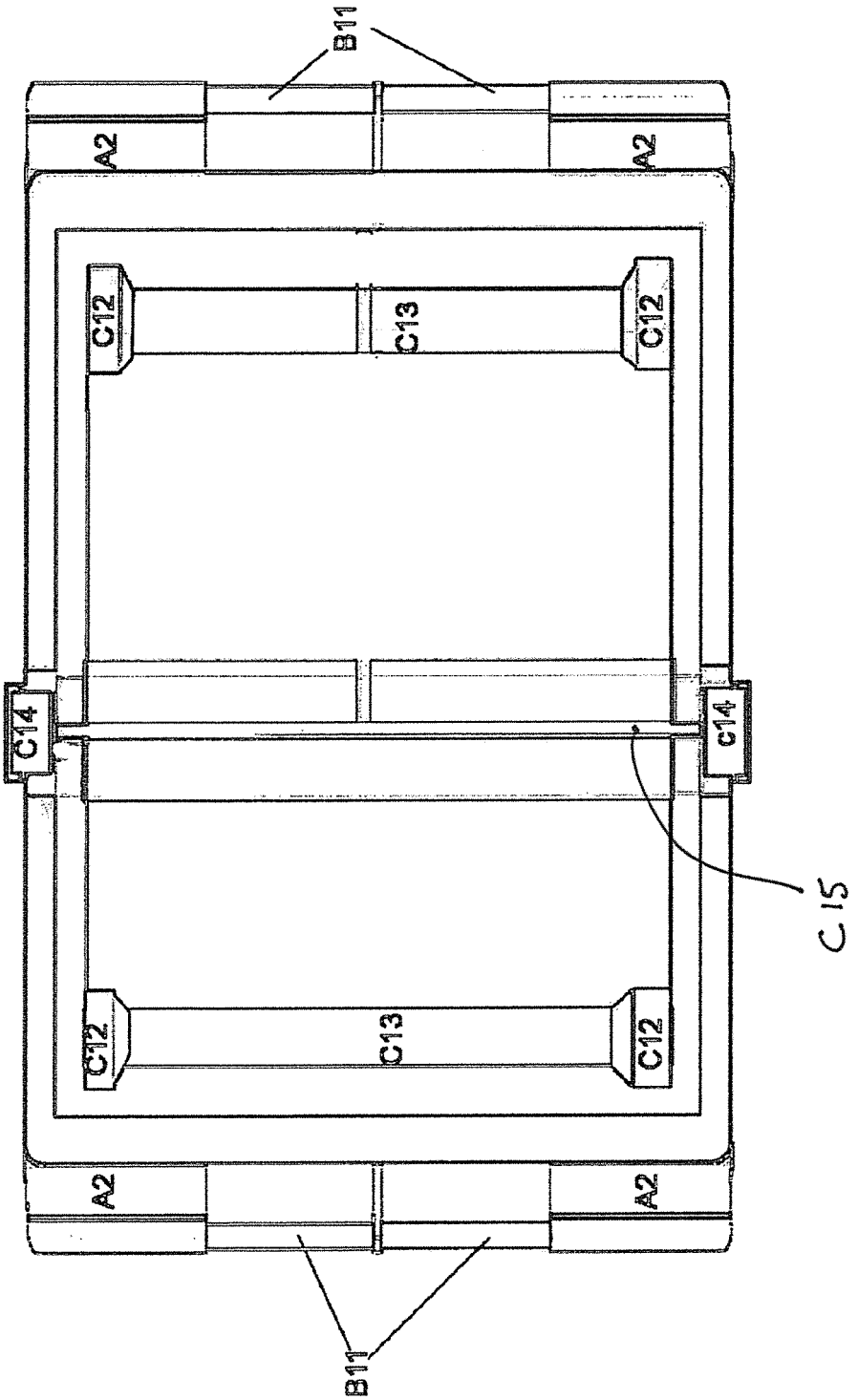


Figure 2



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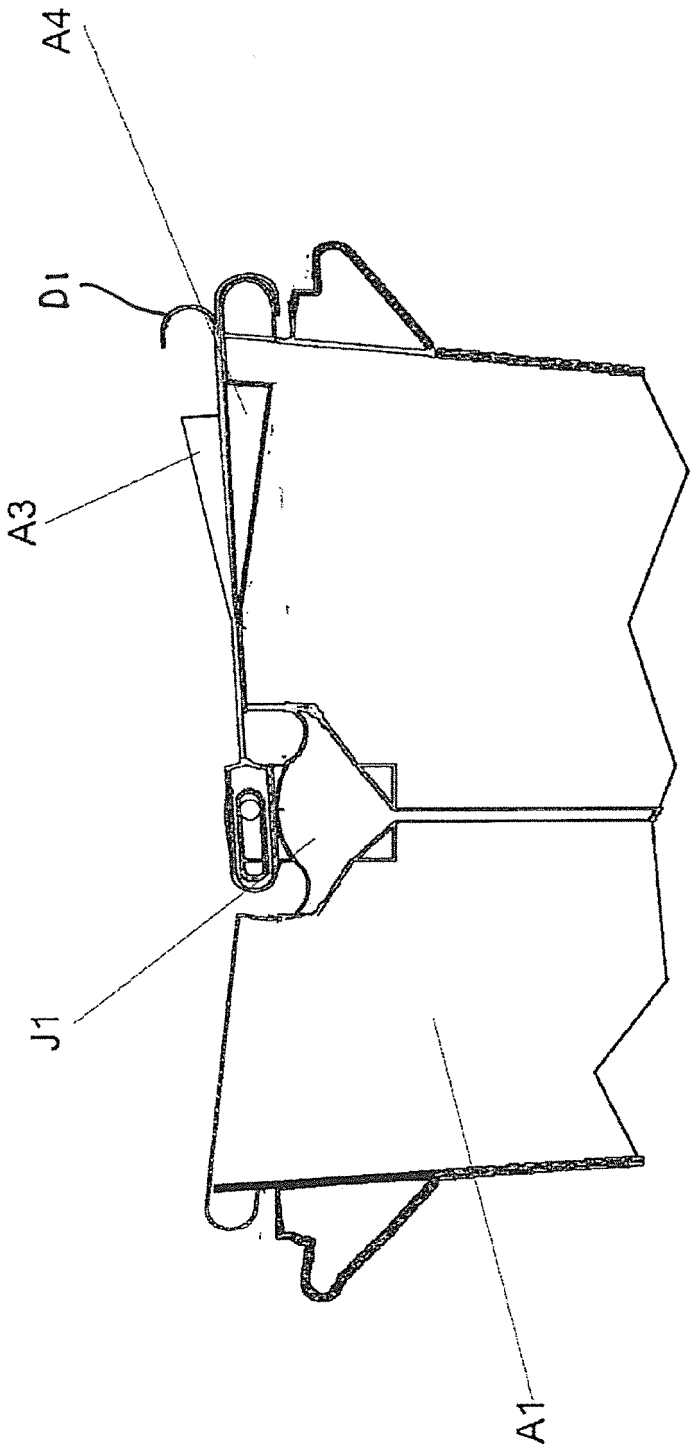
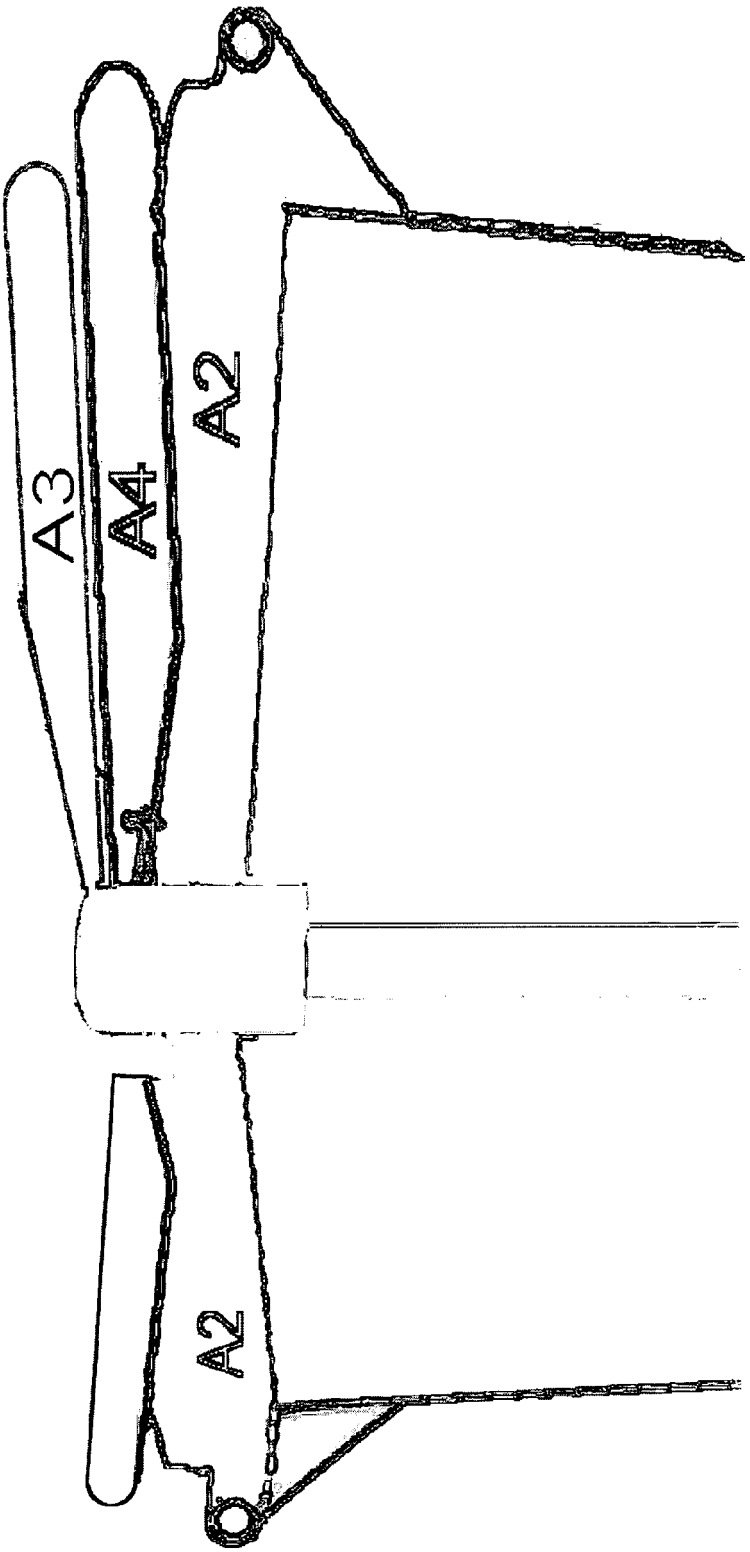


Figure 4

Figure 5



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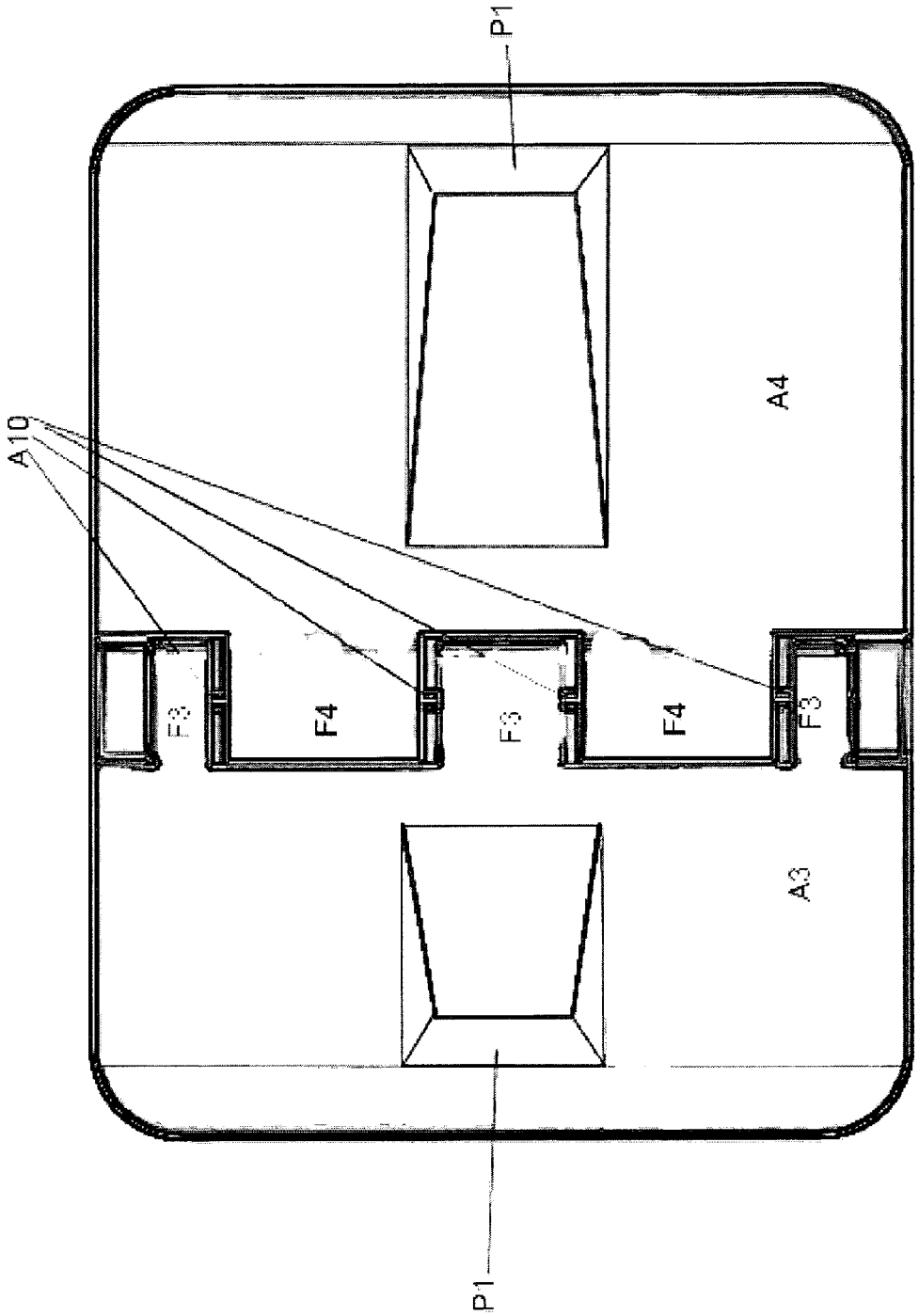


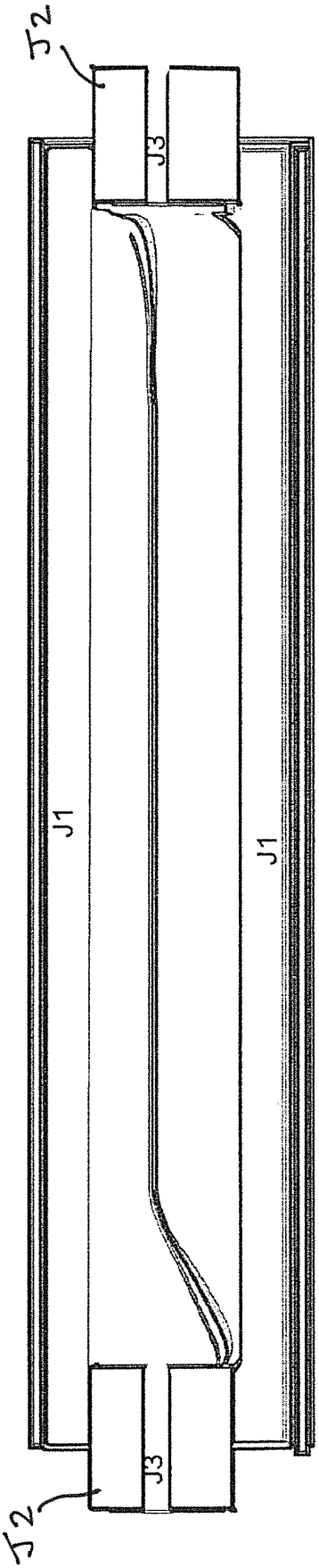
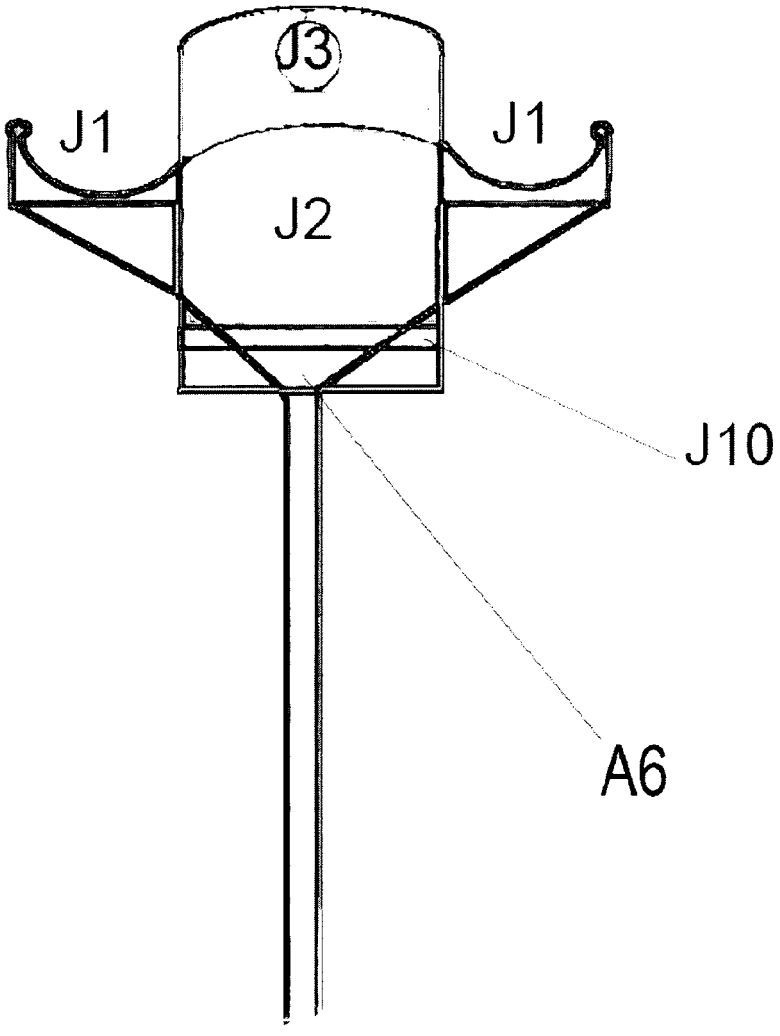


Figure 7

Figure 8



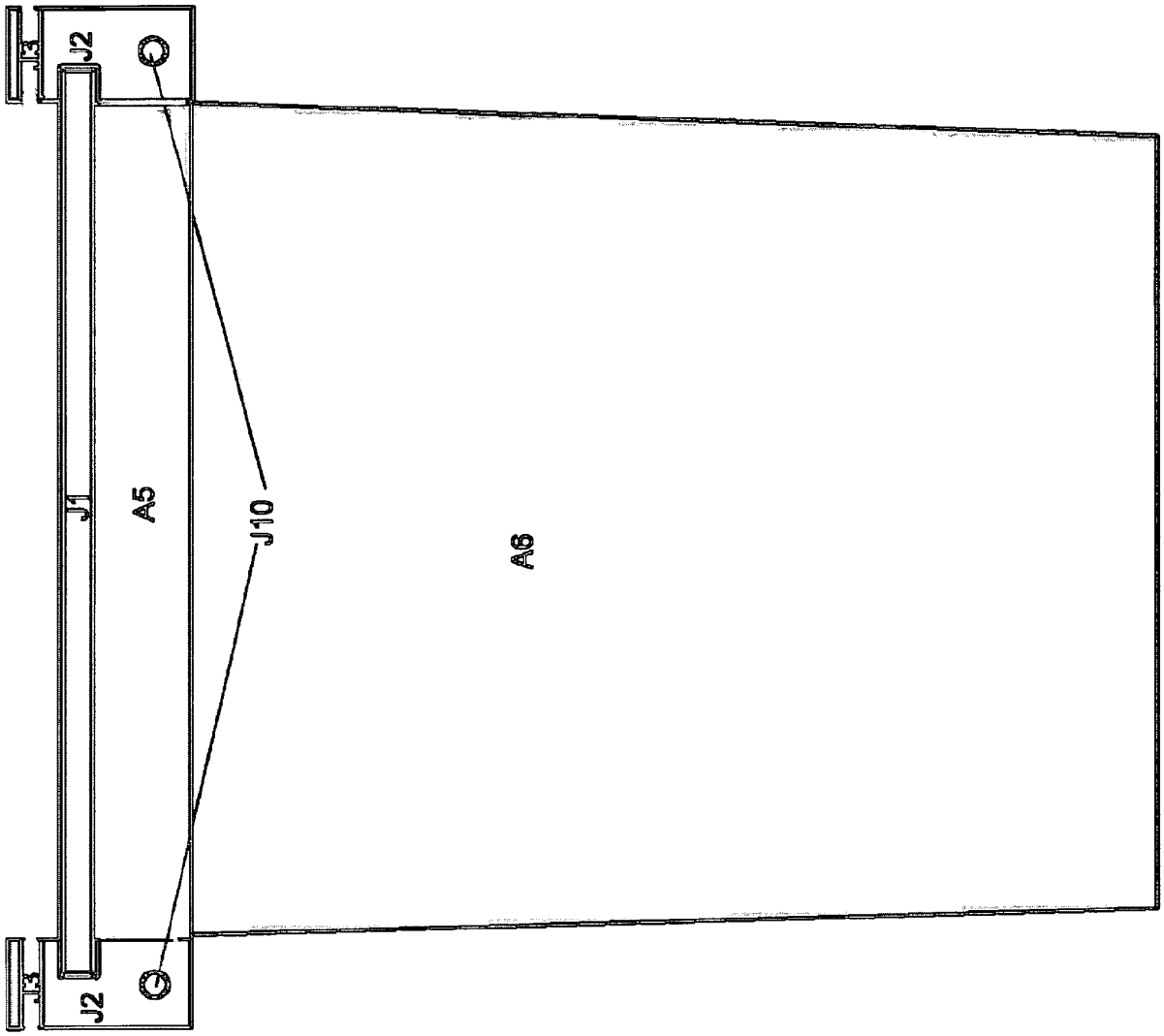
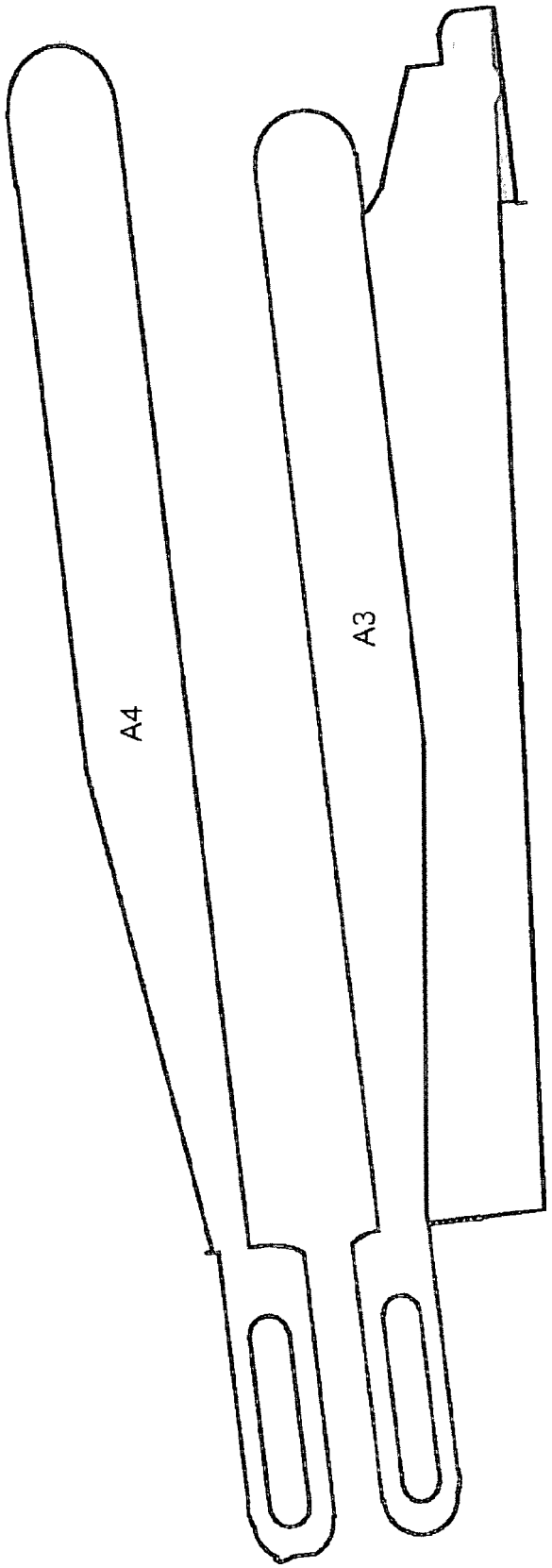


Figure 9

Figure 10



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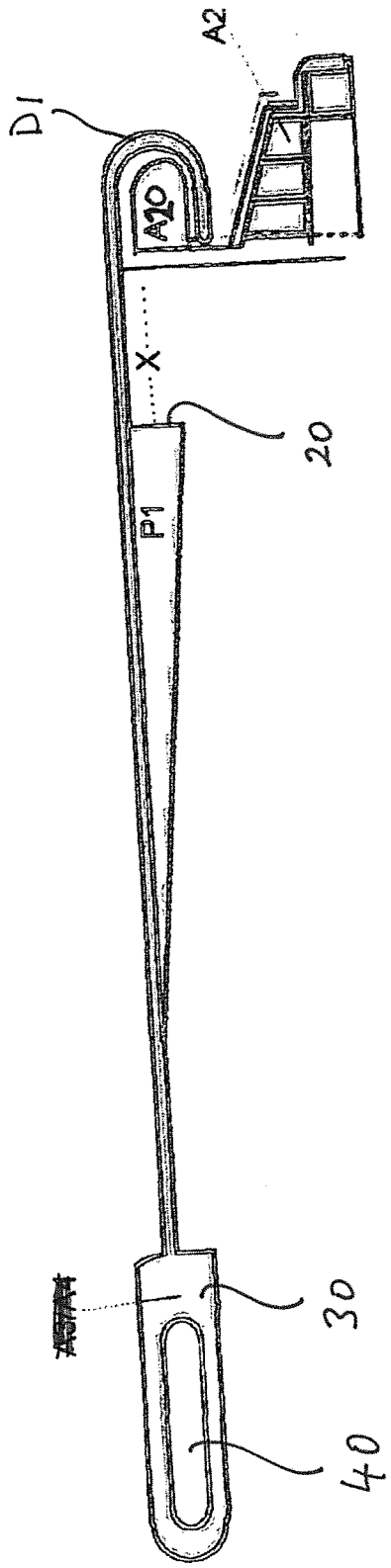

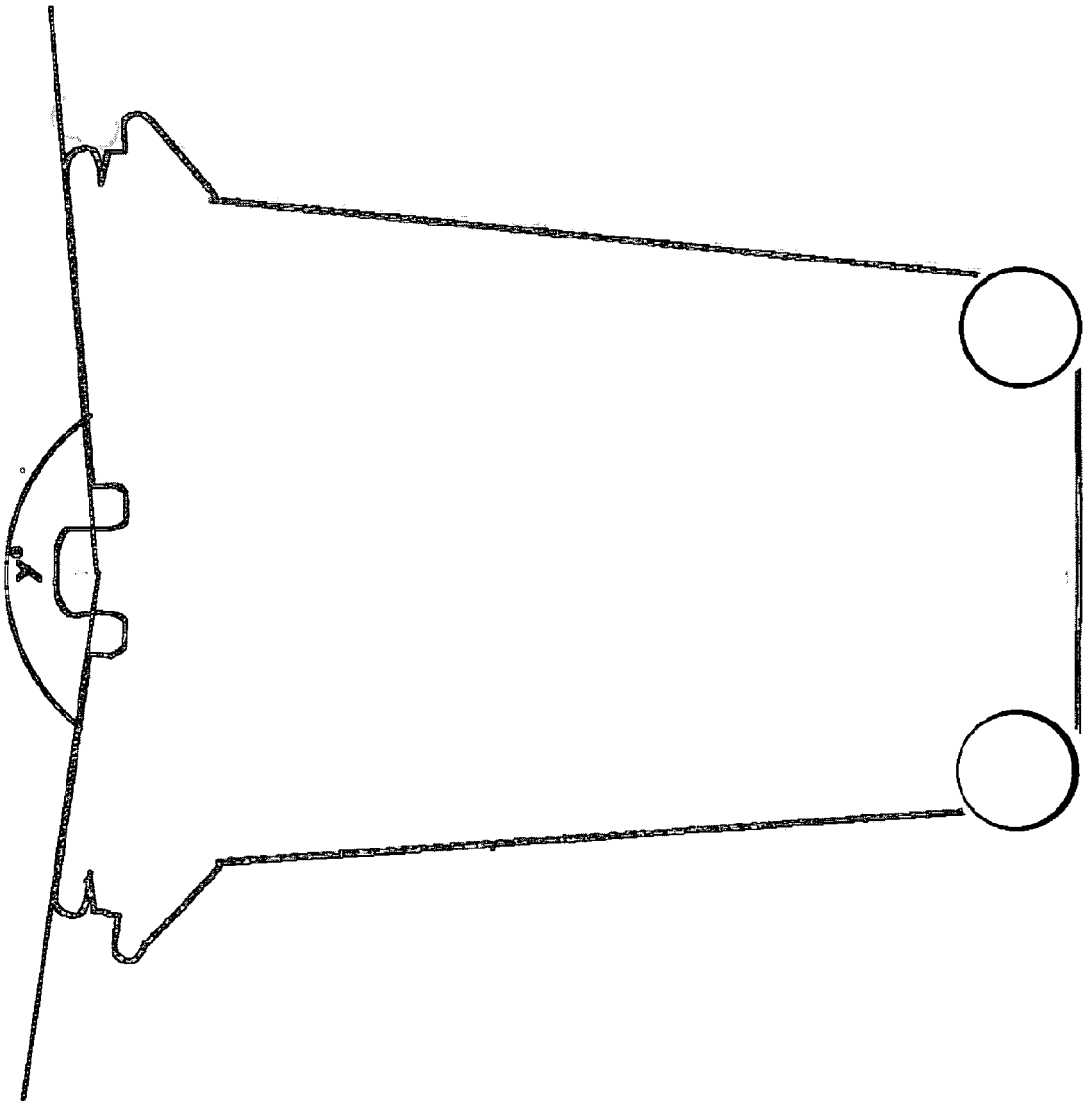

Figure 12

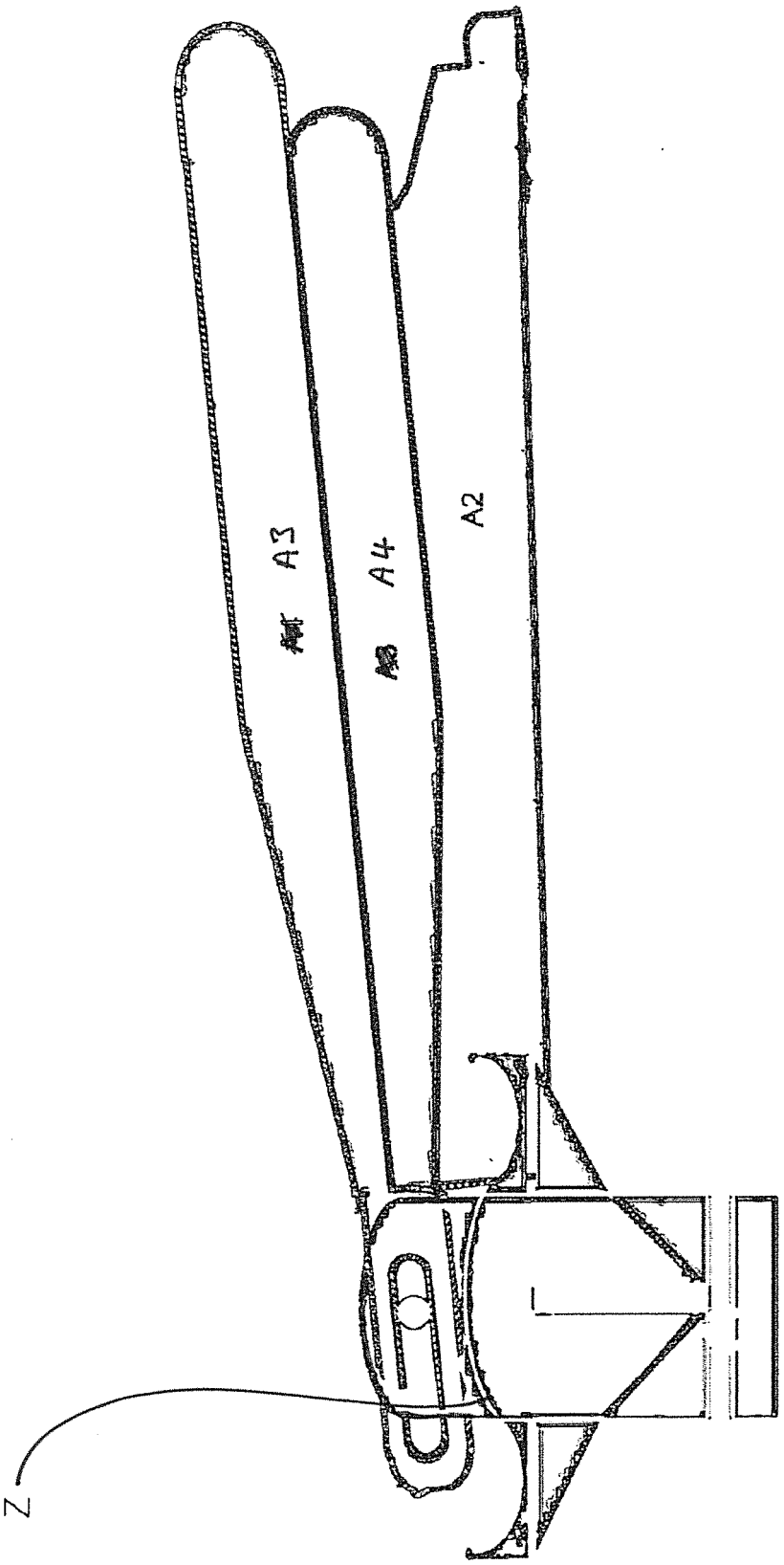

Figure 13

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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