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Description

[0001] The present invention relates to a system for disposing of contaminated/dangerous material or of at least one waste, and a carriage for use within the above-mentioned system. A known collection, storage and disposing system according to the preamble of claim 1 is e.g. disclosed in US 4,358,238.

[0002] US 4, 358, 238 also shows a carriage according to the preamble of claim 13.

[0003] On the other hand, US 3,042,238, JP S53 112188U and JP H11 343005A show respective containers having a bottom trap door with wheels mounted on it.

[0004] In specific sectors of the art it is currently unavoidable, in order to dispose of contaminated materials or waste, for a plurality of individuals assigned to the recollection thereof to come into contact with the same, with a clear disadvantage for the health of the operators.

[0005] Taking as an example the health care field, the recollection of bed sheets, medical staff uniforms or the products used in the operating room implies a series of contacts with a plurality of people, a circumstance that increases the possibility that one of these may contract a disease or come into contact with blood or other bodily fluids.

[0006] Therefore, it would be desirable to minimize the possibility of potential contacts with the above-mentioned type of material or waste.

[0007] The present invention therefore has the object of solving the drawbacks of the prior art and, in particular, of providing a system and a carriage suitably designed to avoid that every operator involved in the recollection chain has to access contaminated material, and to ensure that the carriage containing the above-mentioned material may be emptied solely at certain places and in controlled situations.

[0008] Such object is attained by means of a system according to claim 1, and by means of a carriage according to claim 13. The dependent claims show preferred embodiment variants.

[0009] The object of the present invention will now be described in detail, with the aid of the attached drawing tables, wherein:

- Figures 1 and 2 show a schematic view of the system object of the present invention, in accordance with one possible embodiment;
- Figures 3 and 4 show two moments of engagement of the carriage in the emptying station, and figures 3a and 4a illustrate corresponding enlargements of the areas highlighted in such figures;
- Figures 5 and 6 show two sections of the emptying station, where the mobile platform lies respectively in a first and a second position;
- Figures 7 and 8 show perspective views of the carriage in accordance with a first embodiment, respectively with doors closed and open;
- Figures 9a, 9b, 9c show perspective views of the

carriage in accordance with a further embodiment, wherein the left door is progressively opened, and wherein the shelves are shown as liftable/lowerable.

5 **[0010]** With reference to the above-mentioned drawing tables, the reference numeral 1 indicates, in its entirety, a system for disposing of contaminated/dangerous material or of at least one waste.

10 **[0011]** Although in the following description reference will be made almost exclusively to the term "waste", such term will likewise indicate any contaminated/dangerous material, or a specific material, such as bed sheets, white coats, operating room materials, garbage, scraps or the like.

15 **[0012]** Such system 1 comprises a carriage 10 comprising roller means 2 for the displacement thereof, and which delimits a containment compartment 4 configured to receive waste through a filling aperture 6 of the carriage 10.

20 **[0013]** Therefore, such carriage advantageously comprises a carriage casing 18 which delimits the above-mentioned compartment 4, such compartment being delimited at the bottom by an end wall 20 of the carriage 10.

25 **[0014]** In accordance with the embodiments shown in the figures, the roller means 2 are secured to the carriage casing 18, namely to the end wall 20. For example, such means comprise a plurality of wheels, at least one of which is rotatably mounted to the casing or to the above-mentioned wall.

30 **[0015]** In accordance with the embodiments shown in Figures 9, the containment compartment 4 may be divided into a plurality of half-compartments 4', 4" by the interposition of one or more brackets 42. Preferably, at least one of the brackets is rotatably fitted to the carriage casing 18, for example to be lifted or lowered.

35 **[0016]** Furthermore, according to a further embodiment, the containment compartment may be laterally closed by means of one or more swivelling doors 44, 44'. For example, such at least one door may have a vertical rotation axis, as shown, and may be fitted in an articulated manner to the carriage casing 18. Preferably, the door 44, 44' is configured to achieve a rotation of about 270°, so as to overlap at least in part a side wall 46, 46' of such casing 18.

45 **[0017]** In the embodiment shown, the carriage comprises a pair of doors 44, 44' which cooperate centrally to close at least in part the containment compartment 4, for example by the aid of a lever 48 or a lock. In the embodiments shown, the carriage 10 has been represented with the doors open only for clarity of description.

50 **[0018]** Specifically, the doors 44, 44' may also close the filling aperture 6, when laterally accessible to the carriage casing 18.

55 **[0019]** In the embodiment shown in Figure 8, the filling aperture 6 is delimited by an upper wall 50 of the carriage casing 18, and by a containment member 52 (for example a net optionally in metal), secured to the casing 18 and preferably connected to at least one of the side walls 46,

46' (advantageously to both of them).

[0020] Downstream of the containment compartment 4 and in connection therewith, the carriage 10 delimits at least one exit aperture 8 of the waste, closed by a mobile carriage trap-door 12.

[0021] Therefore, the exit aperture - different from the filling aperture 6 - has the purpose of releasing the waste that has progressively accumulated in the containment compartment 8.

[0022] For example, the filling aperture 6 is located in the upper half of the carriage casing, while the exit aperture is located in the lower half thereof, so that the exit of waste through the carriage trap-door 12 takes place essentially by gravity.

[0023] Preferably, the carriage trap-door 12 is fitted to a carriage casing 18 so as to swivel in relation to a rotation axis X. For example the axis X is a substantially horizontal axis.

[0024] According to the present invention, one or more roller means 2 are fitted to the carriage trap-door 12, the latter delimiting at least one portion of the end wall 20 of the carriage 10. According to a preferred variant, the carriage trap-door 12 coincides with the end wall 20.

[0025] In order to hold the carriage trap-door 12 in a closed configuration of the exit aperture 8, the carriage 10 comprises retention means of such trap-door 12.

[0026] According to one embodiment, the retention means comprise a bolt 30, associated with the carriage 10, and in particular a carriage casing 18, which works on a portion 32 of such trap-door 12. For example, the above-mentioned portion 32 is schematised as a pin or a projection.

[0027] The bolt 30 may preferably swivel (about an axis of figure 3a, the latter being advantageously orthogonal to the rotation axis) between a locked configuration of the above-mentioned portion 32 and a release configuration of the same 32 (figure 4a), wherein it is allowed to achieve an open configuration of the carriage trap-door 12, and therefore the exit of the waste.

[0028] Obviously, for the variants that require at least one bracket 32, the waste exit will only affect the portion of the compartment 4 located lower than such bracket or, for a plurality of brackets, placed beneath the vertically lower bracket.

[0029] According to a variant, the bolt 30 may delimit a contact portion 54, the function of which will be clarified below.

[0030] According to a further variant, the bolt 10 comprises return means 36 of the bolt 30, to reposition it elastically to retain the carriage trap-door 12. In the variant shown, the return means act in traction between the upper portion 56 of the bolt and the carriage casing 18. Optionally, such means may however act in thrust between the upper portion 56 and the carriage casing 18.

[0031] The system 1 further comprises at least one emptying station 14 comprising a collection chamber 16 positioned under the carriage 10 which, when the carriage 10 engages the station, is configured to receive the

waste coming out of the exit aperture 8, for example under the action of gravity.

[0032] Therefore, the collection chamber 16 is arranged at a lower level than the carriage, at least partially buried or at a fixed lower level, so that the emptying of the containment compartment 4 quickly follows the opening of the carriage trap-door.

[0033] With reference to Figures 1 and 2, the arrows 58, 60 respectively symbolize an engagement direction of the carriage in the emptying station 14, and an opposite disengagement direction of the carriage from such station. Therefore, when the exit aperture 8 of the waste at least partially overlaps an access mouth 28 to the collection chamber 16, the carriage may be considered engaged or inserted in the emptying station 14.

[0034] The emptying station 14 further comprises release means acting on the retention means to reach an open configuration of the carriage trap-door 12.

[0035] For such reason, as long as the carriage is taken to the emptying station (i.e., until it is distanced from the station 14), the emptying of the containment compartment is virtually impossible, because the release means are located at the station.

[0036] Advantageously, the emptying station 14 comprises at least one support guide 22, 22' or a support member which, when the above-mentioned trap-door 12 is in the open configuration, keeps the carriage 10 suspended above the collection chamber 16. In the embodiment shown, the station 14 comprises a pair of support guides 22, 22', distanced along the thickness of the carriage 10.

[0037] Therefore, the carriage 10 may be inserted along the guide/member or between the pair of guides/members along the engagement direction 58, and may be removed from such station in the opposite direction 60, since the main direction of extension Y of at least one support guide 22, 22' is substantially parallel to such directions 58, 60. Optionally, the plurality of support members may be distanced along a direction parallel to the above-mentioned directions 58, 60.

[0038] In other words, the pair of guides creates a track for insertion/removal, and support of the carriage.

[0039] According to a preferred variant, the pair of support guides 22, 22' acts as a kerb 62 of the carriage casing 18 which preferably peripherally delimits at least in part the exit aperture 8.

[0040] Furthermore, preferably the support guide 22, the support member, one of the guides 22, 22' or one of the members carries the release means of the carriage trap-door 12.

[0041] According to a preferred embodiment, the release means comprise an abutment surface 34 such that, upon insertion the carriage 10 along the guide 22 or in the support member, such abutment surface 34 moves the bolt 30 to release the portion 32 of the carriage trap-door. Preferably, the abutment surface 34 acts on the contact portion 54 of the bolt 30.

[0042] According to a preferred embodiment, the abut-

ment surface 34 is made on an appendage 40, connected and which extends in an inclined manner in relation to a main direction of extension Y of at least one of the support guides 22, 22'.

[0043] In other words, the above-mentioned appendage 40 creates a sort of invitation which favours the insertion of the carriage in the emptying station, for example even when the carriage is affected by the weight of its own content.

[0044] According to an advantageous variant, the emptying station 14 comprises a mobile platform 24, preferably a swivelling platform, which in a first position defines a sliding surface 26 for the roller means 2, and which in a second position opens the access mouth 28 to the collection chamber 16.

[0045] In the embodiment shown in Figures 5 and 6, the mobile platform 24 comprises a substantially L-shaped element, the sliding surface 26 being made on a longer side of the L and wherein said platform is hinged on a shorter side of the L.

[0046] Preferably, the mobile platform 24 is located at the support guide or the support member, and advantageously between the support guides or the support members, for example vertically beneath them.

[0047] Therefore, in the situation shown in figure 2, the mobile platform 24 is positioned firmly to close the access mouth 24 whereby the carriage may be moved to the engagement position of the station, by the sliding movement of the roller means on the sliding surface. At a later step, the mobile platform 24 is moved, for example in a motorised manner, to the second position - removing the support of the roller means - so that the guide 22, 22' or the support member supports the carriage 10.

[0048] Advantageously the mobile platform 24 may swivel about an axis substantially parallel to the rotation axis X of the carriage trap-door 12. Preferably, the mobile platform 24 is operatively connected to motor means 38 which can be controlled to achieve any of the positions described. For example, the motor means may be controlled by a user interacting with a button or a switch (not shown), or through sensor means (not shown) operatively connected to the motor means, configured to detect the engagement position of the carriage at the station and to only later control the activation of the motor means. By way of a non-limiting example, the sensor means may comprise a load cell or a photocell.

[0049] A further object of the present invention is a carriage 10 suitable for being used in a system 1 as described above. As to the preferred features of such carriage, reference should be made to the embodiments mentioned with regard to the system.

[0050] Innovatively, the carriage and the system object of the present invention ensure that the above-mentioned material may be emptied solely at determined places and in controlled situations, but especially entirely avoids the need for handling after introduction into the carriage.

[0051] Advantageously, the carriage and the system object of the present invention may be automated in order

to make the emptying operations efficient and repeatable.

[0052] Advantageously, the carriage object of the present invention has been designed to prevent any tampering of the trap-door aperture, as well any unwanted release of material or outside the relevant emptying station.

[0053] Advantageously, the carriage and the system object of the present invention are malfunction-proof also of the retention means, in that the trap-door is reliably kept closed by means of the plurality of devices described.

[0054] Advantageously, the carriage and the system described have a variable configuration, therefore may be adapted to the specific needs. Furthermore, also the bulkiness is reduced so as to simplify the carriage handling.

[0055] A man skilled in the art may make several changes or replacements of elements with other functionally equivalent ones to the embodiments of the above system and carriage, to meet specific needs.

[0056] In an example not forming part of the present invention, the disposal system may be suspended rather than exploited on the ground. In this case, the carriage is connected to a suspended conveyor that drives the carriage towards the loading station, which is also suspended. In other words, the loading station does not have a mobile platform and the carriage trap-door may be closed for example either with a motorised actuator or by having the carriage slide with the open trap-door along a cam member interacting with the trap-door itself.

[0057] Variants are included within the scope of protection as defined by the following claims.

Claims

1. System (1) for disposing of contaminated/dangerous material or of at least a waste comprising:

- a carriage (10) which defines a containment compartment (4) configured to receive said waste through a filling aperture (6) of the carriage (10);

wherein the carriage (10) defines, downstream of the containment compartment (4) and in communication therewith, at least one exit aperture (8) of the waste, closed by a mobile carriage trap-door (12), and wherein said carriage (10) comprises retention means of said trap-door (12) in a closed configuration of the exit aperture (8);

- at least one emptying station (14) suitable to be engaged by said carriage (10) comprising a collection chamber (16) positioned under the carriage (10) when the carriage (10) engages said station, and which is configured to receive

the waste coming out of the exit aperture (8), for example by gravity;

the emptying station (14) comprising release means acting on the retention means to reach an open configuration of the carriage trap-door (12); said system being **characterized in that** one or more roller means (2) are fitted on the carriage trap-door (12) for a movement of the carriage on wheels, said carriage trap-door defining at least a portion of an end wall (20) of the carriage (10).

2. System according to claim 1, wherein the carriage trap-door (12) is fitted to a carriage casing (18) so as to swivel in relation to a rotation axis (X).
3. System according to claim 1 or 2, wherein the carriage trap-door (12) coincides with the said end wall (20).
4. System according to any of the previous claims, wherein the emptying station (14) comprises at least one guide (22, 22') or a support member which, when said trap-door (12) is in the open configuration, keeps the carriage (10) suspended above the collection chamber (16).
5. System according to any of the previous claims, wherein the emptying station (14) comprises a mobile platform (24), for example motorised, which in a first position defines a sliding surface (26) for the roller means (2), and which in a second position opens an access mouth (28) to the collection chamber (16).
6. System according to claim 4 and according to claim 5, wherein the guide (22, 22') or support member supports the carriage (10) when the mobile platform (24) lies in the second position.
7. System according to claim 2 and according to claim 5, wherein the mobile platform (24) is rotatable around an axis substantially parallel to the rotation axis (X) of the carriage trap-door (12).
8. System according to claim 7, wherein the mobile platform (24) comprises a substantially L-shaped element, the sliding surface (26) being made on a longer side of the L and wherein said platform is hinged on a shorter side of the L.
9. System according to any of the previous claims when dependent on claim 4, wherein the retention means comprise a bolt (30), joined to the carriage (10), which works on a portion (32) of said trap-door (12), and wherein the release means comprise an abutment surface (34) such that, upon insertion of the carriage (10) along the guide (22, 22') or in the sup-

port member, said abutment surface (34) moves the bolt (30) to release said portion (32).

10. System according to claim 9, wherein the abutment surface (34) is made on an appendage (40), connected and which extends in an inclined manner in relation to a main direction of extension (Y) of at least one support guide (22, 22').
11. System according to claim 9 or 10, comprising return means (36) of the bolt (30), to reposition it elastically to retain the carriage trap-door (12), when the carriage (10) is distanced from the emptying station (14), optionally distanced from the abutment surface (34).
12. System according to any of the previous claims when dependent on claim 5, wherein the mobile platform (24) is operatively connected to motor means (38) which can be controlled to achieve any of said positions.
13. Carriage (10) suitable for being used in a system (1) for disposing of contaminated/dangerous material or of at least one waste according to any of the previous claims, said carriage (10) comprising roller means (2) for the movement thereof, and defining a containment compartment (4) configured to receive said waste through a filling aperture (6) of the carriage (10); and wherein the carriage (10) defines, downstream of the container compartment (4) and in communication therewith, at least one exit aperture (8) of the waste, closed by a mobile carriage trap-door (12), and comprising retention means of said trap-door (12) in a closed configuration of the exit aperture (8), wherein said retention means are configured to be released by release means of said system (1) acting on them in order to reach an open configuration of the carriage trap door (12); wherein said system (1) comprises at least one emptying station (14) comprising a collection chamber (16) positioned under the carriage (10), when the carriage (10) engages said station, and which is configured to receive the waste coming out of the exit aperture (8), and wherein said emptying station (14) comprises said release means acting on the retention means to reach an open configuration of the carriage trap-door (12); said carriage being **characterized in that** one or more roller means (2) are fitted on the carriage trap-door (12) for a movement of the carriage on wheels, said carriage trap-door defining at least a portion of an end wall (20) of the carriage (10).

Patentansprüche

1. System (1) zum Entsorgen kontaminierten/gefährlichen Materials oder wenigstens eines Abfalls, umfassend:

- einen Wagen (10), welcher ein Behälterfach (4) definiert, welches dafür eingerichtet ist, den Abfall durch eine Füllöffnung (6) des Wagens (10) aufzunehmen;

wobei der Wagen (10) dem Behälterfach (4) nachgelagert sowie damit in Verbindung stehend wenigstens eine Austrittsöffnung (8) des Abfalls definiert, welche durch eine bewegliche Wagenbodenklappe (12) geschlossen ist, und wobei der Wagen (10) Haltemittel der Bodenklappe (12) in einer geschlossenen Konfiguration der Austrittsöffnung (8) umfasst;

- wenigstens eine Entleerungsstation (14), welche dafür geeignet ist, mit dem Wagen (10) in Eingriff zu gelangen, welche eine Sammelkammer (16) umfasst, welche unter dem Wagen (10) positioniert ist, wenn der Wagen (10) mit der Station in Eingriff steht, und welche dafür eingerichtet ist, den Abfall aufzunehmen, welcher zum Beispiel durch die Schwerkraft aus der Austrittsöffnung (8) herauskommt;

wobei die Entleerungsstation (14) Freigabemittel umfasst, welche auf die Haltemittel wirken, um eine offene Konfiguration der Wagenbodenklappe (12) zu erreichen; wobei das System **dadurch gekennzeichnet ist, dass** ein oder mehrere Rollmittel (2) für eine Bewegung des Wagens auf Rädern an der Wagenbodenklappe (12) angebracht sind, wobei die Wagenbodenklappe wenigstens einen Abschnitt einer Endwand (20) des Wagens (10) definiert.

2. System nach Anspruch 1, wobei die Wagenbodenklappe (12) derart an einem Wagengehäuse (18) angebracht ist, dass sie sich in Bezug auf eine Rotationsachse (X) dreht.

3. System nach Anspruch 1 oder 2, wobei die Wagenbodenklappe (12) mit der Endwand (20) übereinstimmt.

4. System nach einem der vorhergehenden Ansprüche, wobei die Entleerungsstation (14) wenigstens eine Führung (22, 22') oder ein Halterungselement umfasst, welche/welches den Wagen (10) über der Sammelkammer (16) hängend hält, wenn die Bodenklappe (12) in der offenen Konfiguration ist.

5. System nach einem der vorhergehenden Ansprüche, wobei die Entleerungsstation (14) eine bewegliche Plattform (24), zum Beispiel motorisiert, umfasst,

welche in einer ersten Position eine Gleitfläche (26) für die Rollmittel (2) definiert und welche in einer zweiten Position eine Zugriffsmündung (28) zu der Sammelkammer (16) öffnet.

6. System nach Anspruch 4 und nach Anspruch 5, wobei die Führung (22, 22') oder das Halterungselement den Wagen (10) haltert, wenn die bewegliche Plattform (24) in der zweiten Position liegt.

7. System nach Anspruch 2 und nach Anspruch 5, wobei die bewegliche Plattform (24) um eine zu der Rotationsachse (X) der Wagenbodenklappe (12) im Wesentlichen parallelen Achse rotierbar ist.

8. System nach Anspruch 7, wobei die bewegliche Plattform (24) ein im Wesentlichen L-förmiges Element umfasst, wobei die Gleitfläche (26) an einer längeren Seite des L's gebildet ist und wobei die Plattform an einer kürzeren Seite des L's angelenkt ist.

9. System nach einem der vorhergehenden Ansprüche, wenn abhängig von Anspruch 4, wobei die Haltemittel eine mit dem Wagen (10) verbundene Klinke (30) umfassen, welche auf einen Abschnitt (32) der Bodenklappe (12) wirkt, und wobei die Haltemittel eine Anschlagfläche (34) umfassen, so dass die Anschlagfläche (34) bei einem Einführen des Wagens (10) entlang der Führung (22, 22') oder in das Halterungselement die Klinke (30) bewegt, um den Abschnitt (32) freizugeben.

10. System nach Anspruch 9, wobei die Anschlagfläche (34) an einem Fortsatz (40) gebildet ist, welcher verbunden ist und welcher sich in einer geneigten Weise in Bezug auf eine Haupterstreckungsrichtung (Y) wenigstens einer Halterungsführung (22, 22') erstreckt.

11. System nach Anspruch 9 oder 10, umfassend Rückstellmittel (36) der Klinke (30), um sie elastisch zu repositionieren, um die Wagenbodenklappe (12) zu halten, wenn der Wagen (10) von der Entleerungsstation (14) entfernt ist, optional von der Anschlagfläche (34) entfernt ist.

12. System nach einem der vorhergehenden Ansprüche, wenn abhängig von Anspruch 5, wobei die bewegliche Plattform (24) operativ mit Motormitteln (38) verbunden ist, welche gesteuert/geregelt werden können, um jegliche der Positionen zu erreichen.

13. Wagen (10), welcher dafür geeignet ist, in einem System (1) zum Entsorgen kontaminierten/gefährlichen Materials oder wenigstens eines Abfalls nach einem der vorhergehenden Ansprüche verwendet

zu werden, wobei der Wagen (10) Rollmittel (2) für die Bewegung davon umfasst und ein Behälterfach (4) definiert, welches dafür eingerichtet ist, den Abfall durch eine Füllöffnung (6) des Wagens (10) aufzunehmen;

und wobei der Wagen (10) dem Behälterfach (4) nachgelagert sowie damit in Verbindung stehend wenigstens eine Austrittsöffnung (8) des Abfalls definiert, welche durch eine bewegliche Wagenbodenklappe (12) geschlossen ist, und Haltemittel der Bodenklappe (12) in einer geschlossenen Konfiguration der Austrittsöffnung (8) umfasst, wobei die Haltemittel dafür eingerichtet sind, durch Freigabemittel des Systems (1) freigegeben zu werden, welche auf sie wirken, um eine offene Konfiguration der Wagenbodenklappe (12) zu erreichen; wobei das System (1) wenigstens eine Entleerungsstation (14) umfasst, welche eine Sammelkammer (16) umfasst, welche unter dem Wagen (10) positioniert ist, wenn der Wagen (10) mit der Station in Eingriff steht, und welche dafür eingerichtet ist, den Abfall aufzunehmen, welcher aus der Austrittsöffnung (8) herauskommt, und wobei die Entleerungsstation (14) die Freigabemittel umfasst, welche auf die Haltemittel wirken, um eine offene Konfiguration der Wagenbodenklappe (12) zu erreichen; wobei der Wagen **dadurch gekennzeichnet ist, dass** ein oder mehrere Rollmittel (2) für eine Bewegung des Wagens auf Rädern an der Wagenbodenklappe (12) angebracht sind, wobei die Wagenbodenklappe wenigstens einen Abschnitt einer Endwand (20) des Wagens (10) definiert.

Revendications

1. Système (1) de mise au rebut de matériau contaminé/dangereux ou d'au moins un déchet comprenant :

- un chariot (10) qui définit un compartiment de confinement (4) configuré pour recevoir ledit déchet à travers une ouverture de remplissage (6) du chariot (10) ;

dans lequel le chariot (10) définit, en aval du compartiment de confinement (4) et en communication avec celui-ci, au moins une ouverture de sortie (8) du déchet, fermée par une trappe d'accès de chariot mobile (12), et dans lequel ledit chariot (10) comprend des moyens de rétention de ladite trappe d'accès (12) dans une configuration fermée de l'ouverture de sortie (8) ;

au moins une station de vidage (14) adaptée pour être mise en prise par ledit chariot (10) comprenant une chambre de collecte (16) positionnée sous le chariot (10) lorsque le chariot (10) met en prise ladite station, et qui est configurée pour recevoir le déchet sortant de l'ouverture de sortie (8), par exemple par

gravité ;

la station de vidage (14) comprenant des moyens de libération agissant sur les moyens de rétention pour atteindre une configuration ouverte de la trappe d'accès de chariot (12) ;

ledit système étant **caractérisé en ce qu'un** ou plusieurs moyens de roulement (2) sont installés sur la trappe d'accès de chariot (12) pour un déplacement du chariot sur des roues, ladite trappe d'accès de chariot définissant au moins une portion d'une paroi d'extrémité (20) du chariot (10).

2. Système selon la revendication 1, dans lequel la trappe d'accès de chariot (12) est installée sur une enveloppe de chariot (18) de façon à pivoter par rapport à un axe de rotation (X).

3. Système selon la revendication 1 ou 2, dans lequel la trappe d'accès de chariot (12) coïncide avec ladite paroi d'extrémité (20).

4. Système selon l'une quelconque des revendications précédentes, dans lequel la station de vidage (14) comprend au moins un guide (22, 22') ou un organe de support qui, lorsque ladite trappe d'accès (12) est dans la configuration ouverte, garde le chariot (10) suspendu au-dessus de la chambre de collecte (16).

5. Système selon l'une quelconque des revendications précédentes, dans laquelle la station de vidage (14) comprend une plate-forme mobile (24), par exemple motorisée, qui dans une première position définit une surface de glissement (26) pour les moyens de roulement (2), et qui dans une seconde position ouvre un orifice d'accès (28) à la chambre de collecte (16).

6. Système selon la revendication 4 et selon la revendication 5, dans lequel le guide (22, 22') ou l'organe de support supporte le chariot (10) lorsque la plate-forme mobile (24) se trouve dans la seconde position.

7. Système selon la revendication 2 et selon la revendication 5, dans lequel la plate-forme mobile (24) est rotative autour d'un axe sensiblement parallèle à l'axe de rotation (X) de la trappe d'accès de chariot (12).

8. Système selon la revendication 7, dans lequel la plate-forme mobile (24) comprend un élément sensiblement en forme de L, la surface de glissement (26) étant réalisée sur un côté plus long du L et dans lequel ladite plate-forme est reliée par charnière sur un côté plus court du L.

9. Système selon l'une quelconque des revendications précédentes lorsqu'elles dépendent de la revendication 4, dans lequel les moyens de rétention com-

prennent un boulon (30), assemblé au chariot (10), qui travaille sur une portion (32) de ladite trappe d'accès (12), et dans lequel les moyens de libération comprennent une surface de butée (34) de sorte que, lors de l'insertion du chariot (10) le long du guide (22, 22') ou dans l'organe de support, ladite surface de butée (34) déplace le boulon (30) afin de libérer ladite portion (32).

10. Système selon la revendication 9, dans lequel la surface de butée (34) est réalisée sur un appendice (40), raccordé à et qui s'étend de façon inclinée par rapport à une direction d'extension principale (Y) d'au moins un guide de support (22, 22').

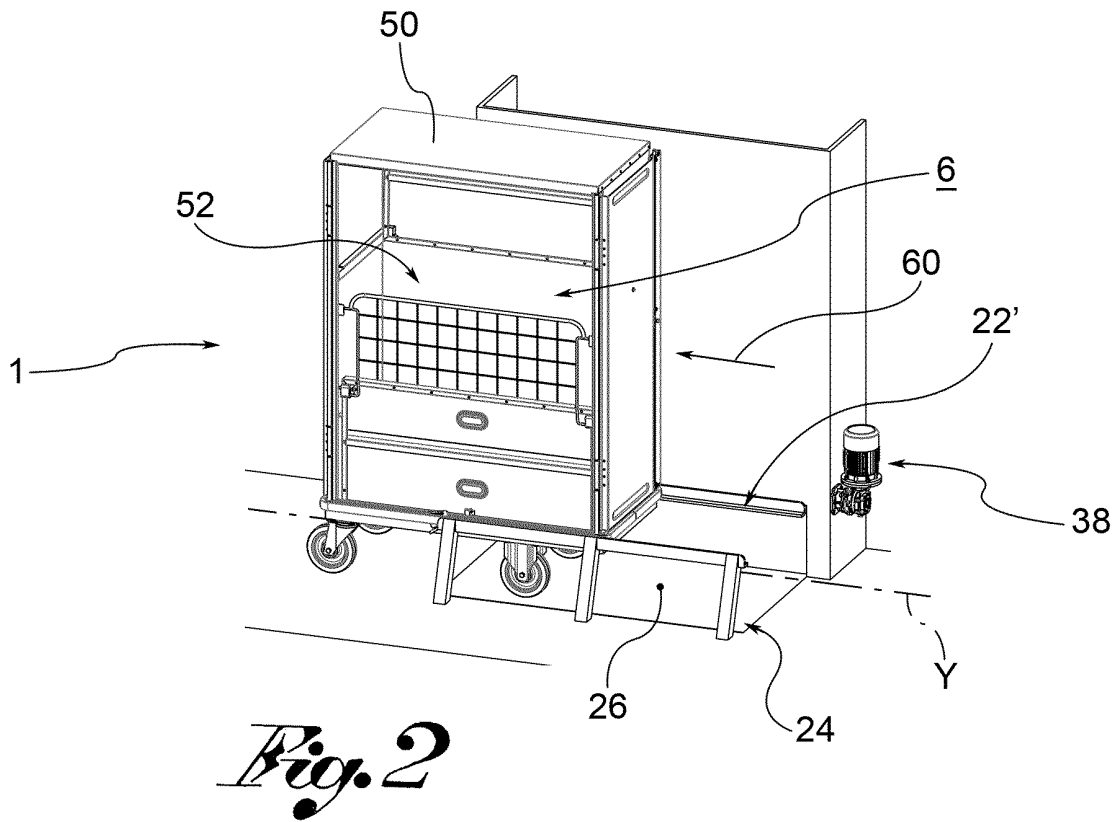
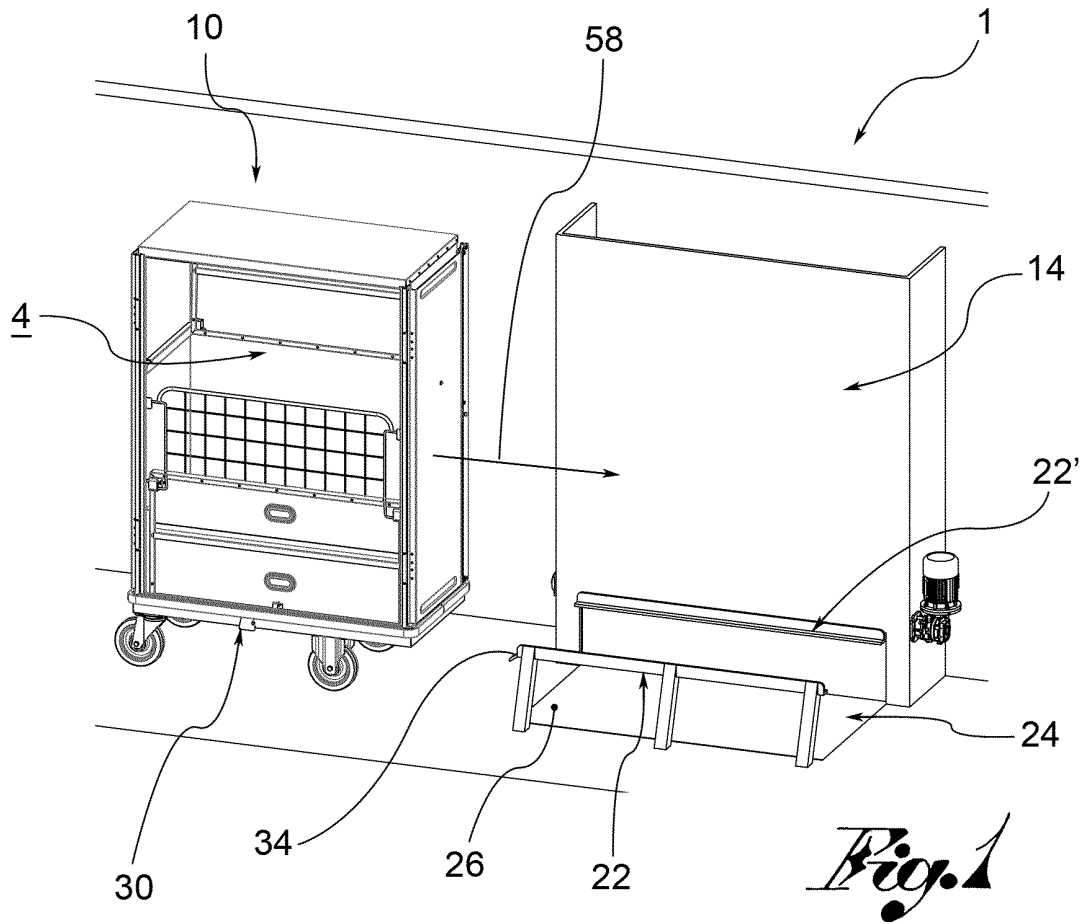
11. Système selon la revendication 9 ou 10, comprenant des moyens de rappel (36) du boulon (30), pour le repositionner élastiquement afin de retenir la trappe d'accès de chariot (12), lorsque le chariot (10) est à distance de la station de vidage (14), facultativement à distance de la surface de butée (34).

12. Système selon l'une quelconque des revendications précédentes lorsqu'elles dépendent de la revendication 5, dans lequel la plate-forme mobile (24) est raccordée opérationnellement à des moyens de moteur (38) qui peuvent être commandés pour parvenir à l'une quelconque desdites positions.

13. Chariot (10) adapté pour être utilisé dans un système (1) de mise au rebut de matériau contaminé/dangereux ou d'au moins un déchet selon l'une quelconque des revendications précédentes, ledit chariot (10) comprenant des moyens de roulement (2) pour son déplacement, et définissant un compartiment de confinement (4) configuré pour recevoir ledit déchet à travers une ouverture de remplissage (6) du chariot (10) ;
et dans lequel le chariot (10) définit, en aval du compartiment de confinement (4) et en communication avec celui-ci, au moins une ouverture de sortie (8) du déchet, fermée par une trappe d'accès de chariot mobile (12), et comprenant des moyens de rétention de ladite trappe d'accès (12) dans une configuration fermée de l'ouverture de sortie (8), dans lequel lesdits moyens de rétention sont configurés pour être libérés par des moyens de libération dudit système (1) agissant sur eux afin d'atteindre une configuration ouverte de la trappe d'accès de chariot (12) ;
dans lequel ledit système (1) comprend au moins une station de vidage (14) comprenant une chambre de collecte (16) positionnée sous le chariot (10), lorsque le chariot (10) met en prise ladite station, et qui est configurée pour recevoir le déchet sortant de l'ouverture de sortie (8), et dans lequel ladite station de vidage (14) comprend lesdits moyens de libération agissant sur les moyens de rétention pour atteindre une configuration ouverte de la trappe d'accès

cès de chariot (12) ;

ledit chariot étant **caractérisé en ce qu'un** ou plusieurs moyens de roulement (2) sont installés sur la trappe d'accès de chariot (12) pour un déplacement du chariot sur des roues, ladite trappe d'accès de chariot définissant au moins une portion d'une paroi d'extrémité (20) du chariot (10).



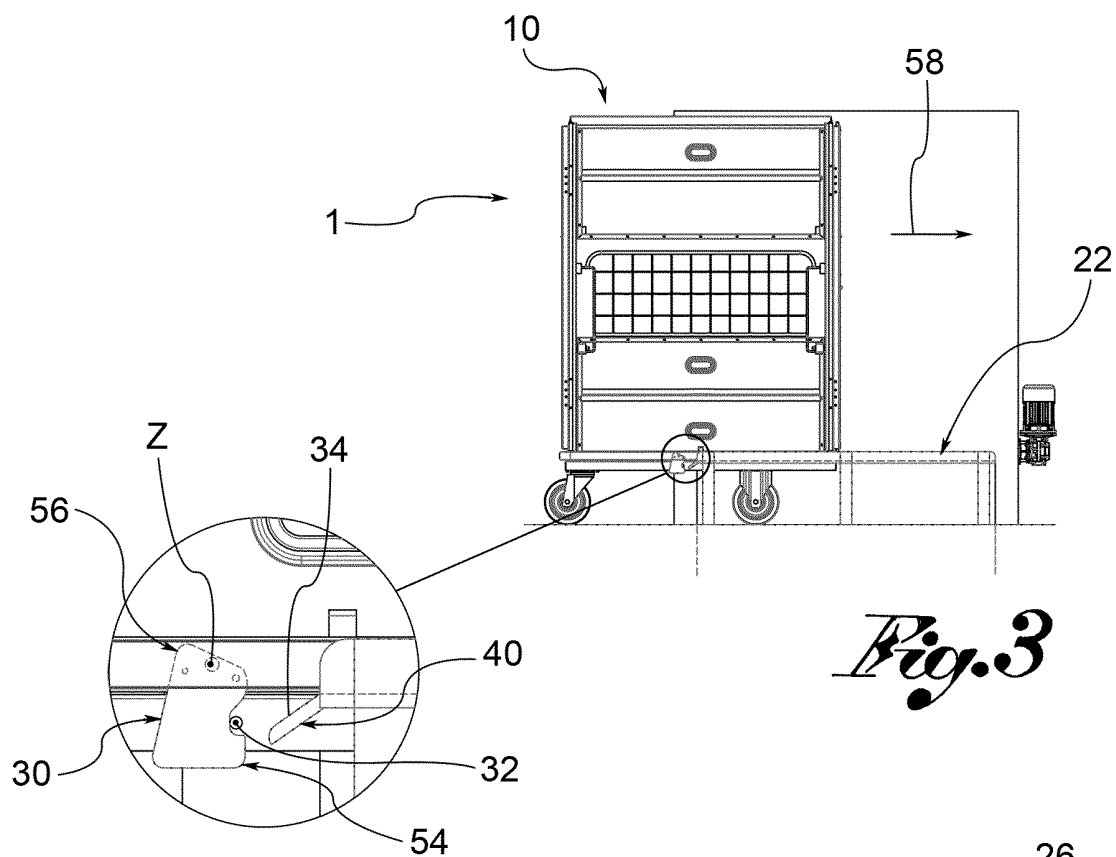


Fig. 3 a

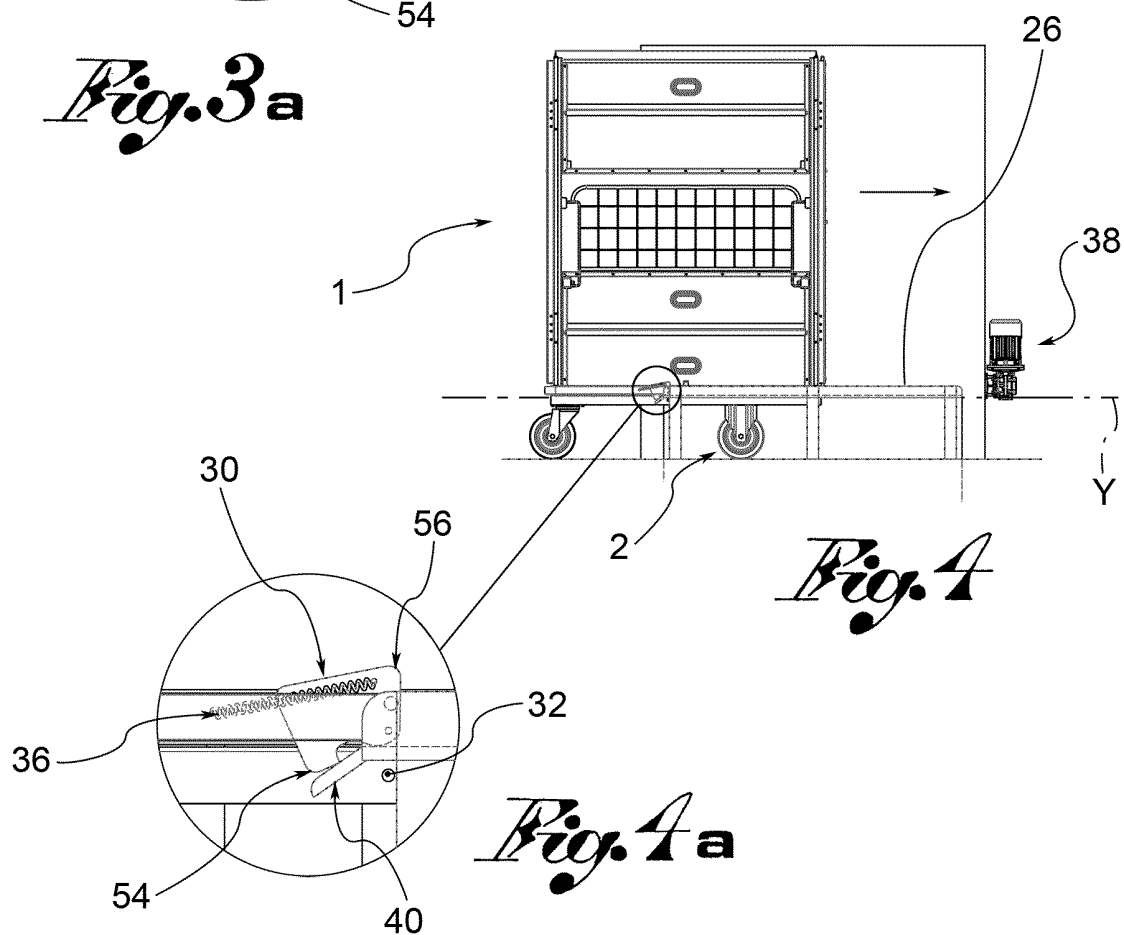


Fig. 4

Fig. 4 a

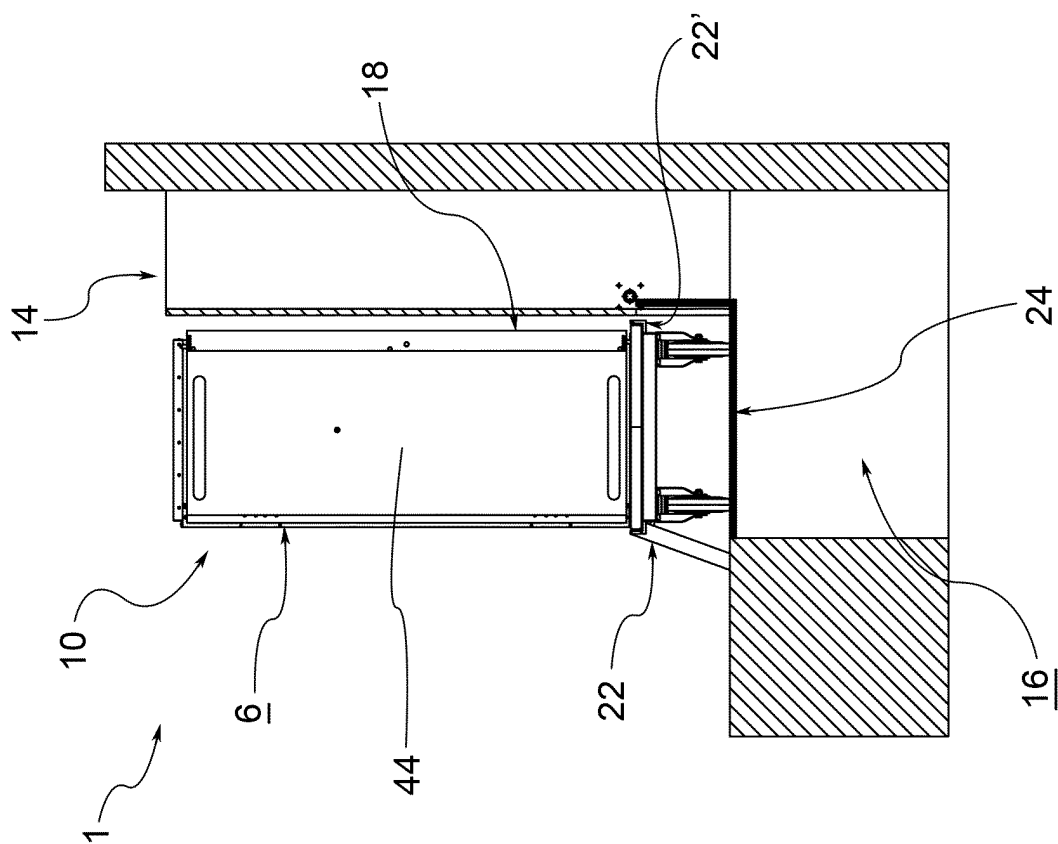


Fig. 5

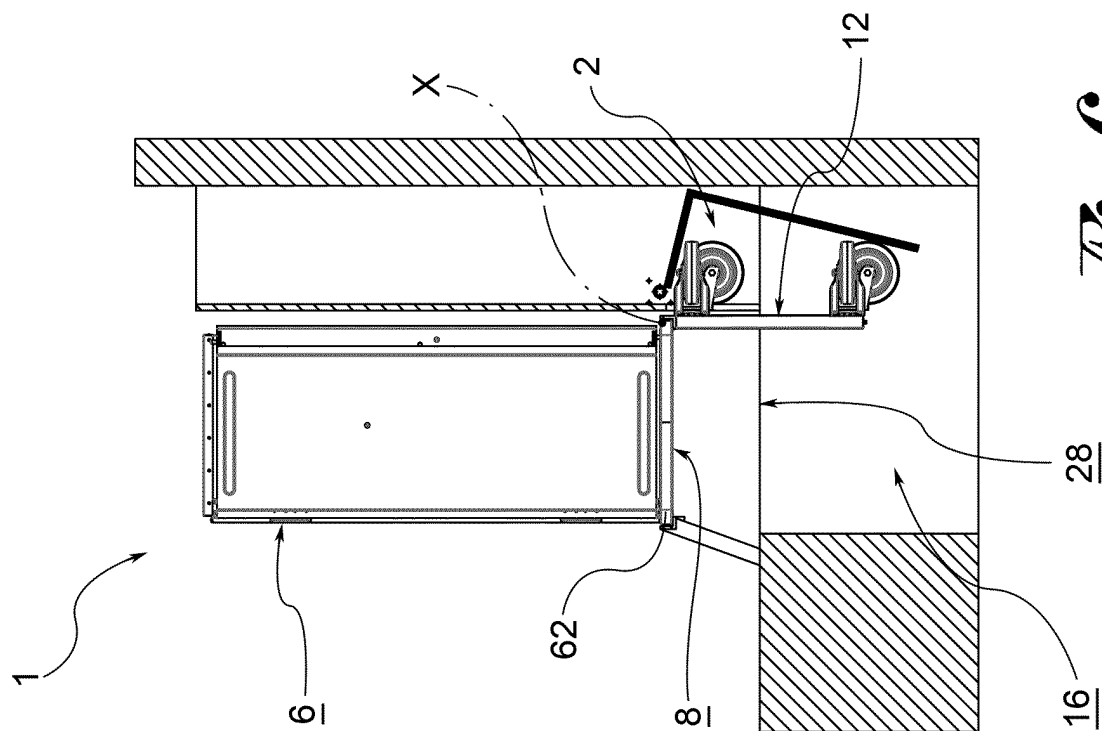


Fig. 6

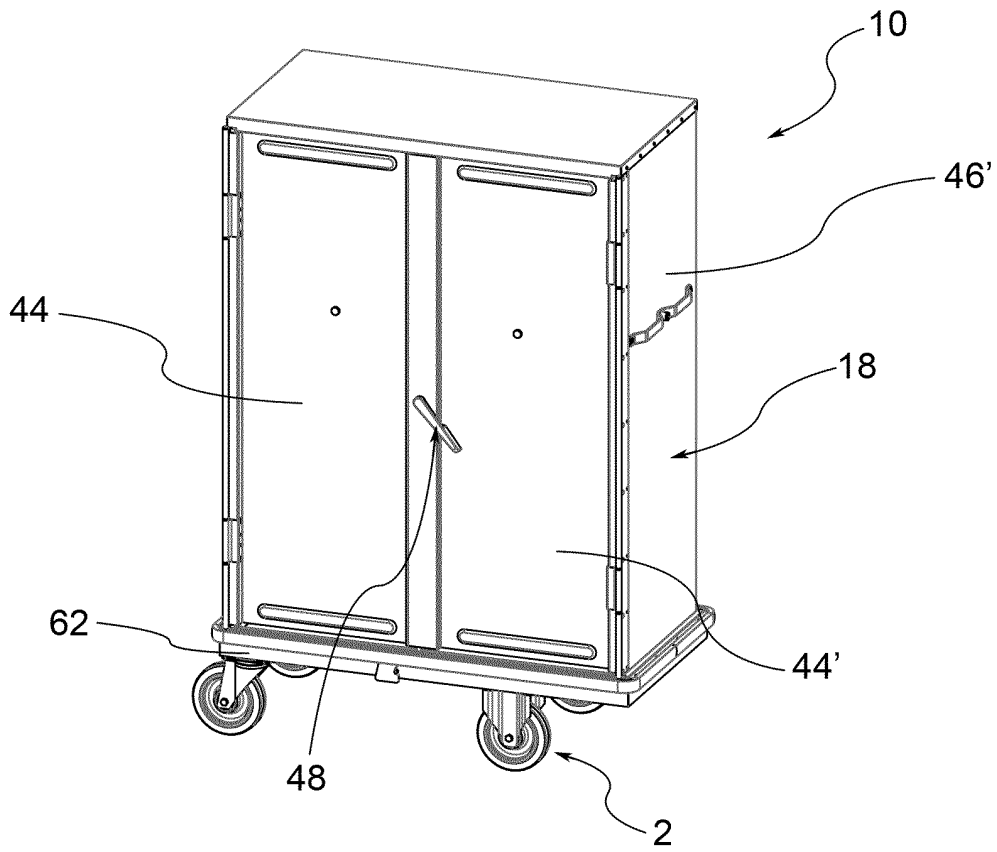


Fig. 7

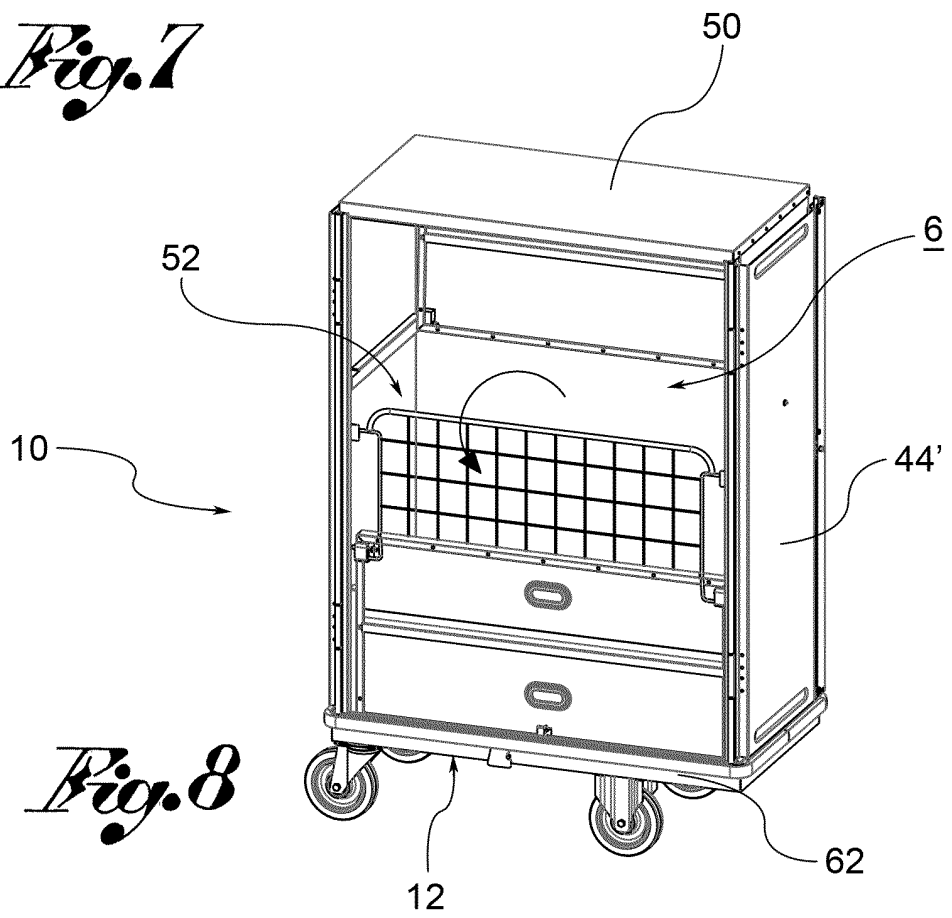
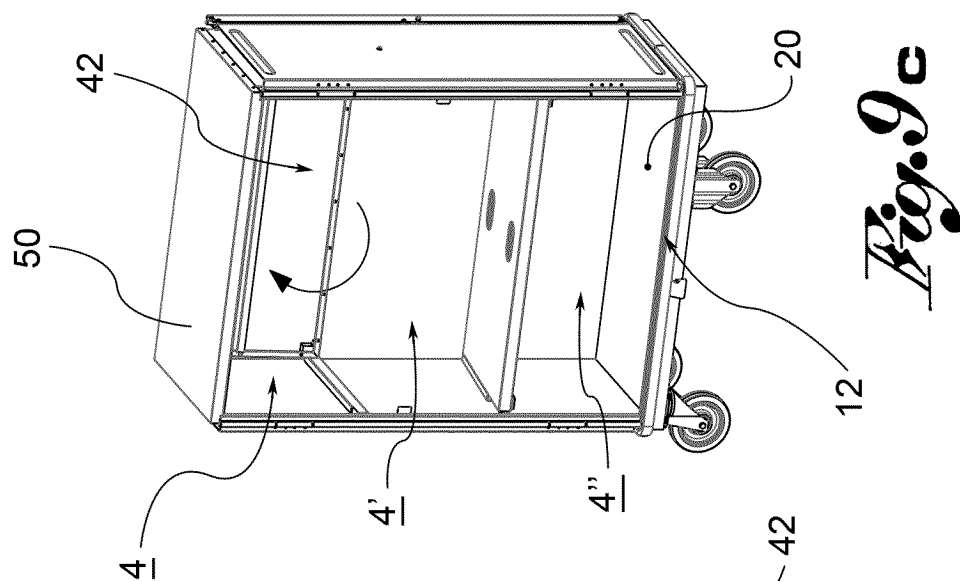
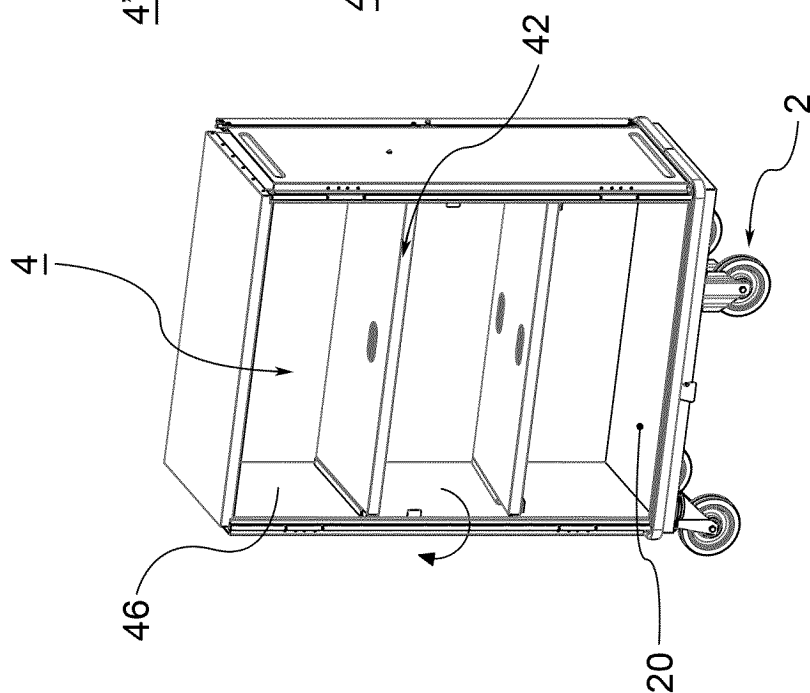
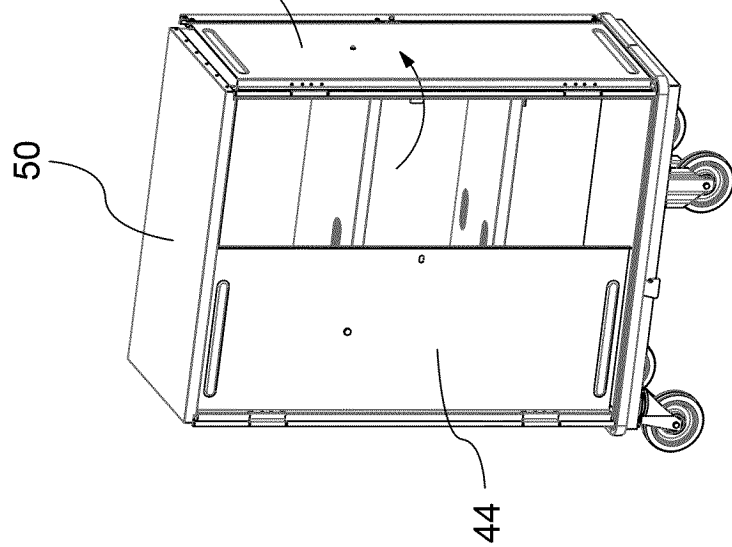


Fig. 8



REFERENCES CITED IN THE DESCRIPTION

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