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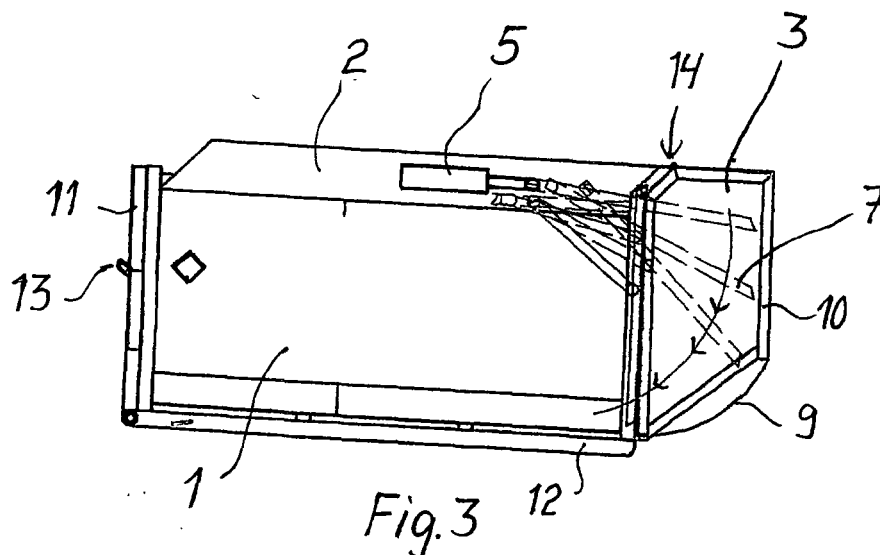
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(54) **Waste collection container**

(57) Waste collection container (1) that is equipped with a lid (4) through which the waste can be placed in the filling space (3) of the container, an unloading hatch (9,10) by opening of which the container can be emptied and a baling press (5,7;15) that is located inside the con-

tainer and with which the waste can be moved and squeezed beginning from the filling space (3) towards the other end of the container. The filling space (3) of the waste container (1), equipped with the lid (4), and the unloading hatches (9,10) are located at the same end of the container.



Description

[0001] The invention relates to a waste container which container is equipped with a filler cap through which the waste can be located in the container and is equipped with an unloading hatch, by opening of which the container can be emptied and is equipped with a baling press that is located inside the container and with which the waste can be moved and squeezed beginning from the filling end towards the other end of the container.

[0002] Previously containers equipped with a baling press are known in which containers there is a lid that can be opened at the other end of the container through which the waste can be located in the collection space. A vertical wall belongs to the baling press which wall squeezes periodically the waste towards the other end of the container with the help of a power unit. After the squeezing the wall comes back behind the collection space in such a way that the waste located in the container piles up in front of the wall. The machinery of the baling press is located at the same end of the container than where the waste is located to it. These kind of containers are taken from the ground to the platform of a car and are transported to the next processing station for the emptying. Due to a vertical, squeezing wall the emptying of the container must be performed at the other end or at the end where the pressing machine packs the waste. The container must thus be taken to the platform of a car from that end where the baling press is located in which case the body of the container must be manufactured to be strong also at the front side of the baling press..

[0003] With the waste container according to the invention problems related to the known solutions can be avoided and characteristic for the waste container according to the invention is that the filling space of the waste container equipped with a lid and the emptying equipment such as hatches are at the same end of the container.

[0004] The advantage of the waste container according to the invention is the fact that the strong body required for moving the container can be made at the other end of the container and the solutions required by the emptying, filling and the baling press can be made at the other end in which case the lifting and moving fasteners of the container and the body supports do not interfere with the placement of the filling, emptying and the baling press and do not interfere with the equipment solutions of these. The lid of the filling space of the waste can be located at the end of the container in such a way that the user can open it while being himself at the end of the container. The machinery of the baling press can be located on top of the container and the hatch that is opened during the emptying can also be located at the filling end. When the waste container is taken to the platform of a car to be emptied, it can be dumped empty from the platform. The baling press solution can advantageously be achieved to be such that it can be moved away from the squeezing line during the emptying. Then the waste

comes loose from the container in an opposite direction compared the direction in which they are moved inside the container with a pressing machine. The baling press machinery can be advantageously organized in this solution on top of the container in which case it is not at the end of the container or at the sides of the container and does not disturb the placing of the filling hole of the waste and the net waste capacity that is larger than in the previous containers can be achieved for the container.

[0005] In the following the invention is described more detailed by referring to the accompanying drawing in which

- Figure 1 shows a waste container as a side view.
- Figure 2 shows the container of the figure 1 diagonally shown.
- Figure 3 shows the container of the figure 1 as a cut view.
- Figure 4 shows the formation of a path of one squeezing plate that moves the waste.
- Figure 5 shows another squeezing and moving mechanism of waste located in the container at the filling position.
- Figure 6 shows the beginning situation of the squeezing.
- Figure 7 shows the bending of the squeezing bucket to a squeezing position.
- Figure 8 shows the squeezing performed by the movement of the bucket.
- Figure 9 shows the final bending of the bucket.

[0006] In the figures 1 and 2 there is a container 1 that realizes the waste container according to the invention. Under the container there are platform construction balks 12 known as such and there is an upright frame 11 at the left end of the container to which upright frame also a link 13 belongs for lifting and moving the container. Thus the left end and the base of the container are strongly made. There is a box-type structure 2 on top of the container 1 which box-type structure includes a waste squeezing machinery. There is a filling space 3 of waste at the right end of the container and there is a lid 4 to be opened at its upper part through which lid the waste is dropped to the container.

[0007] In the figure 3 a baling press associated with the invention is shown as a cut view which baling press comprises a moveable wall 7 for which a such path has been formed that it turns the wall from a horizontal direction to a vertical direction in which case due to this movement the waste located in the filling space is moved towards the left end of the container and also push the waste there in front of them at the same time. The wall is being pushed and drawn with the help of a hydraulic cylinder 5 in such a way that it can be drawn in a horizontal direction away from the line of the filling gap in such a way that from the hole of the lid 4 the waste drops to the space 3 without any hindrance. During the squeezing movement realized with the cylinder 5 the edge of the

wall 7 gets closer the right end of the container and begins to turn down and empties the space 3 and squeezes the waste towards the left end of the container.

[0008] The emptying of the container 1 occurs through the space 3 in which case for example a curved hatch 9 is opened there or a curved hatch 9 and a wall 10 are opened together. These are then advantageously hinged at their upper edge. Also the space 3 as a whole can in one case be hinged at its upper edge, for example at the joining point in which case it turns open.

[0009] In the figure 4 a mechanical control mechanism of the wall 7 is shown as an example in which mechanical control mechanism there is a curved guide rail 6 at the both side walls of the space 3 and there is for example a roll 8 at the wall 7 which roll rolls along the mentioned rail 6 when the wall 7 is being pushed or drawn with a cylinder. With the help of it the wall 7 makes a movement between its horizontal and vertical position. There can be several guide rails so that greater forces can be used when the wall 7 is being moved.

[0010] Series of pictures 5 - 9 shows a bucket 15 as a squeezing element to which bucket a bending movement from a horizontal upper position is given at the first stage with the help of the cylinders 16 and 17, figure 6, at the end of the container down to the upright position, figure 7 in which case the bucket moves the waste being in the filling space 3 to the storage part of the container. With the help of these cylinders and the arm 18 also a rectilinear squeezing movement is made with the bucket 15, figure 8, and also a final bending, figure 9. In the figure 5 the bucket 15 is away at the location of the feed hatch 4. In the figure 6 the bucket 15 has been moved in a horizontal direction first in front of the hatch 4 and after that the bucket 15 is bent to a vertical direction.

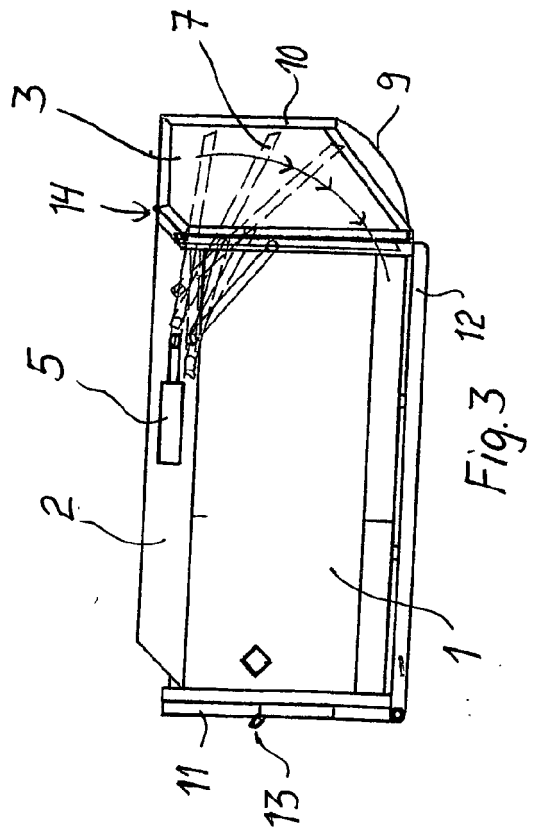
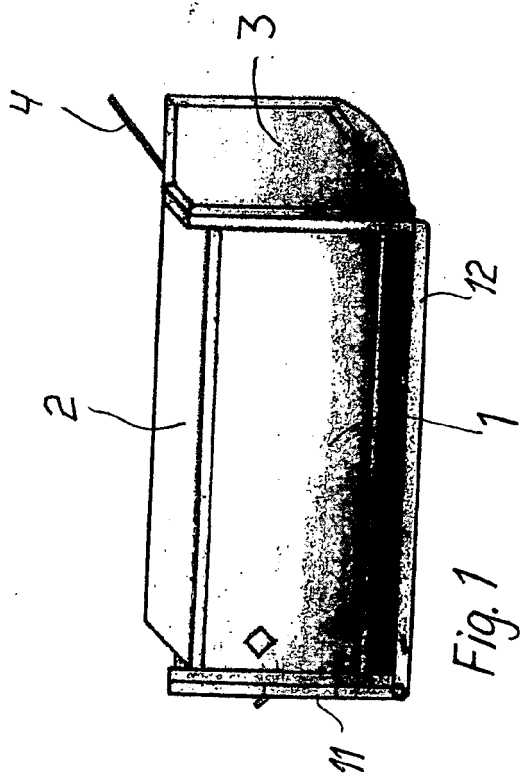
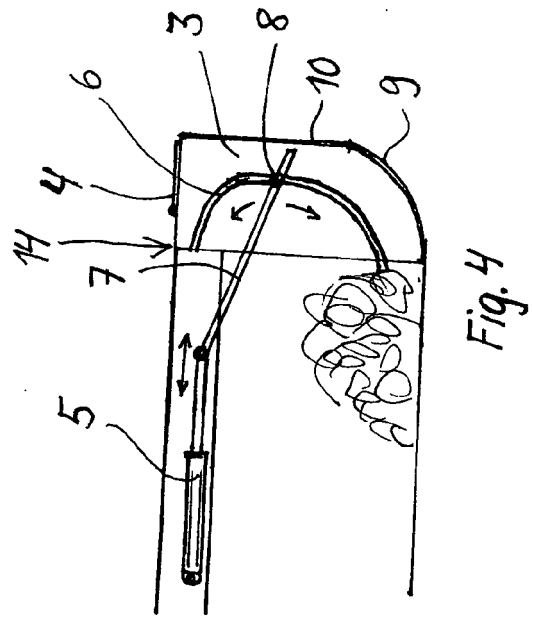
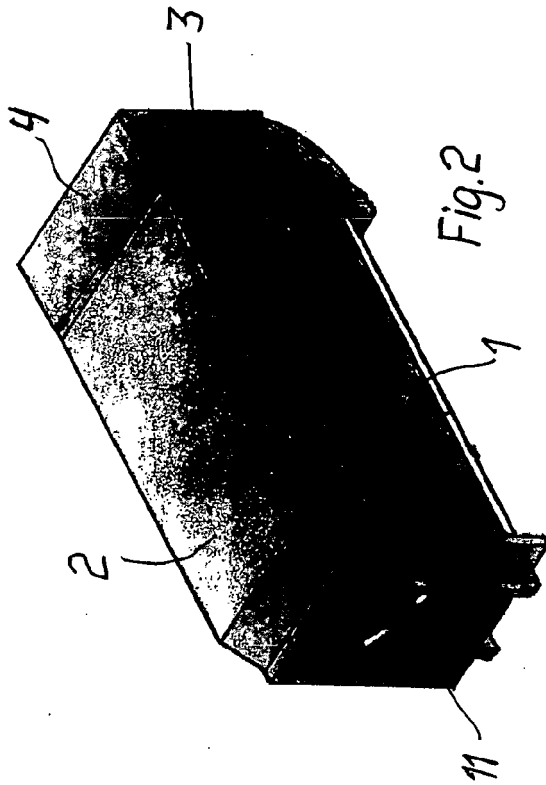
ized in that the wall (7) or the bucket (15) can be moved away at the location of the feed hatch (4).

4. Container (1) according to the claim 1, **characterized in that** the wall (7) is mechanically controlled to perform a working motion and a withdrawing movement with the help of the control devices (6,8); (16, 17, 18).

5. Container (1) according to the claim 1, **characterized in that** the wall (7) or the bucket (15) is adjusted to turn during the working motion essentially from the horizontal position essentially to the vertical position.

Claims

1. A waste container (1) that is equipped with a filler cap (4) through which the waste can be placed to the container, equipped with an unloading hatch (9); (10) by opening of which the container can be emptied and equipped with a baling press (5, 7): (15) that is located inside the container and with which the waste can be moved and squeezed beginning from the filling end (3) towards the other end of the container, **characterized in that** the filling space (3) of the waste container (1) equipped with a lid (4) and the emptying equipment, such as hatches (9), (10) are located at the same end of the container (1).
2. Container (1) according to the claim 1, **characterized in that** a moveable wall (7) or a bucket (15) function as a baling press which bucket can be moved away at the location of the unloading hatch (9), (10).
3. Container (1) according to the claim 2, **character-**



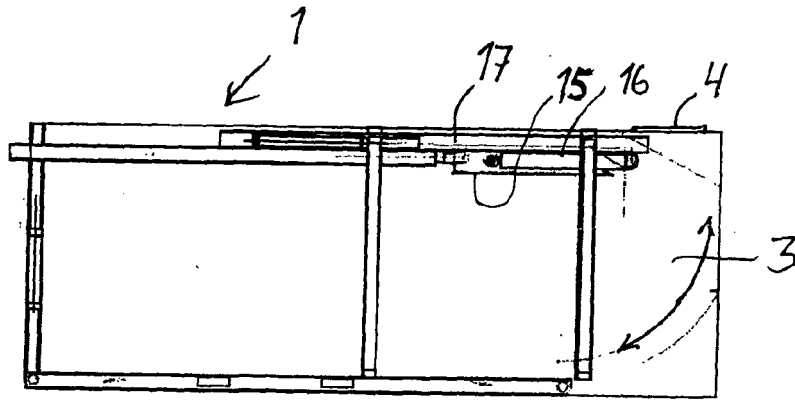


Fig. 5

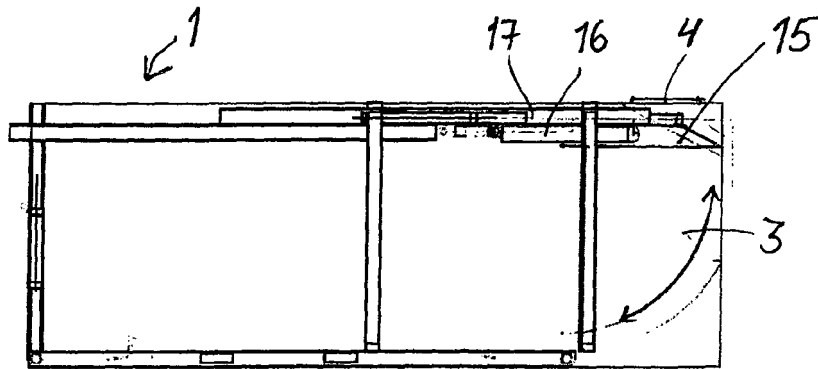


Fig. 6

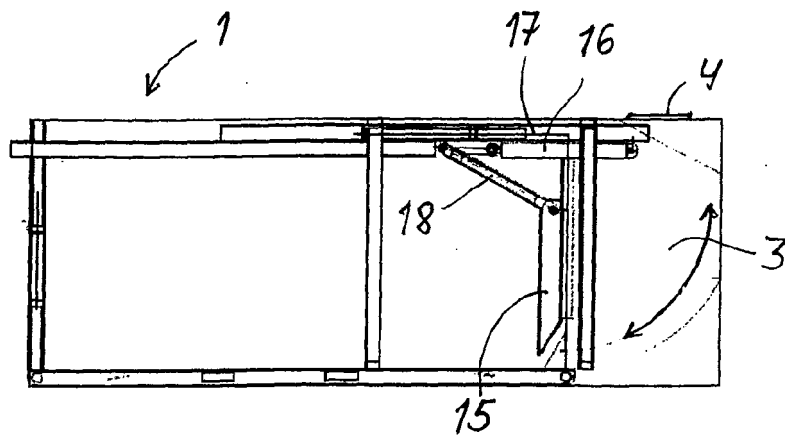
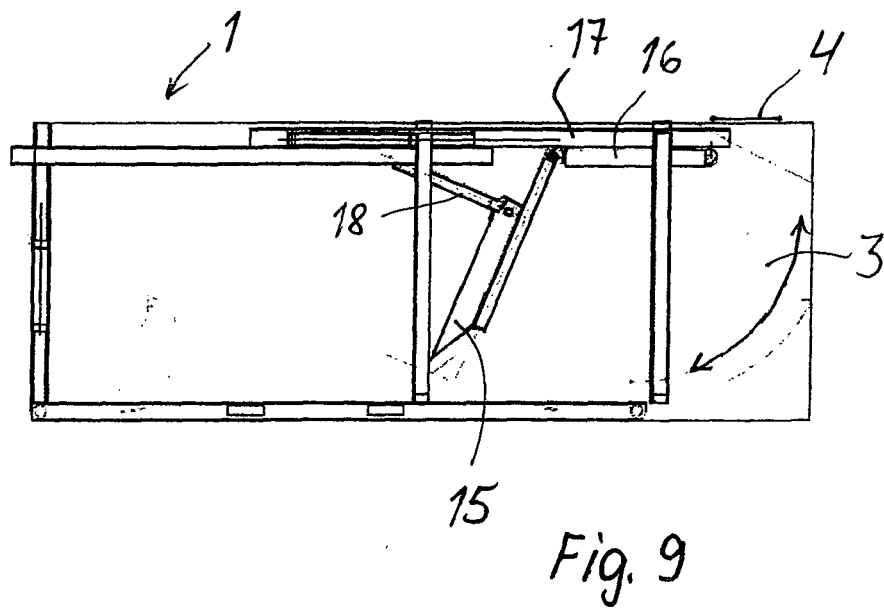
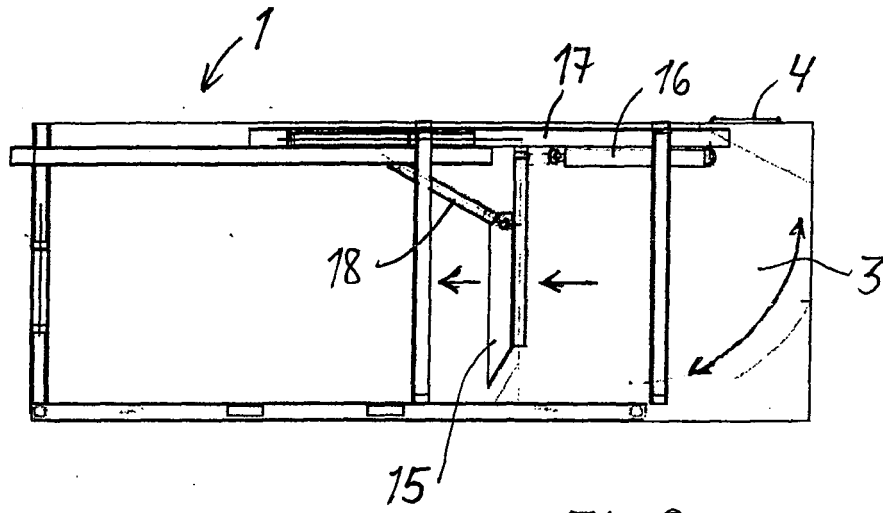


Fig. 7





EUROPEAN SEARCH REPORT

Application Number
EP 10 39 6002

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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
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Place of search		Date of completion of the search	Examiner
The Hague		18 June 2010	Smolders, Rob
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 10 39 6002

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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