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(54) **COMPRESSION MECHANISM FOR COMPRESSING RESIDUAL MATERIALS**

(57) The invention relates to a compression mechanism (3) for compressing residual materials which can be introduced into the compression mechanism via an inlet (5).

The invention furthermore relates to a system (1) comprising such a compression mechanism (3), in which a residual materials container, more particularly a standard residual materials container (10), can be placed under the outlet (7) of the compression mechanism.

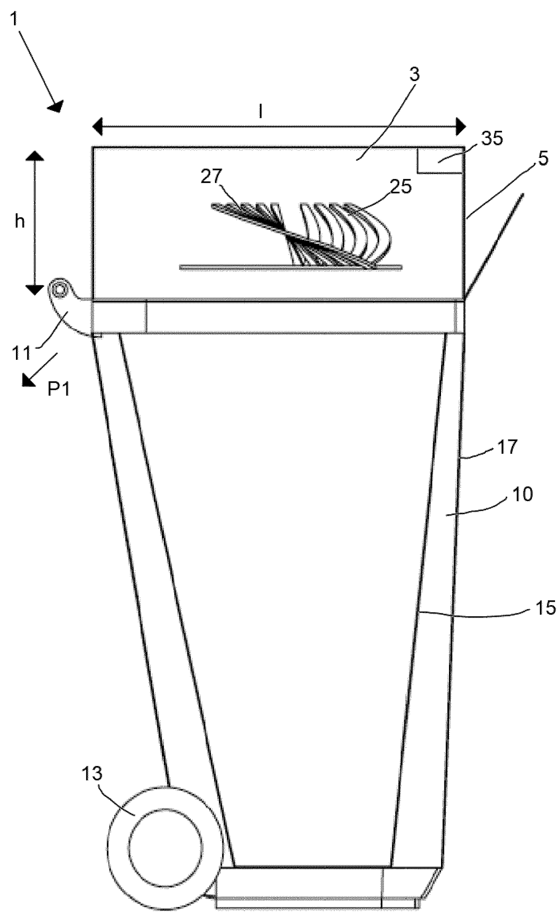

Fig. 1

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Description

[0001] The invention relates to a compression mechanism for compressing residual materials which can be introduced into the compression mechanism via an inlet.

[0002] The invention further relates to a system comprising such a compression mechanism.

[0003] It is an object of the present invention to provide a compression mechanism by means of which it is possible to compress residual materials in a simple and efficient way, so that the volume of the residual materials is minimized.

[0004] This object is achieved by the compression mechanism as defined in claim 1. Via an inlet, the residual materials can be introduced into the compression mechanism which is provided with a first pressure-exerting element and a second pressure-exerting element which are both arranged above the outlet of the compression mechanism, in which each pressure-exerting element is provided with a first pressure-exerting element part and a second pressure-exerting element part which encloses an obtuse angle with the first pressure-exerting element part, in which the residual materials to be introduced into the inlet can be supported and/or the residual materials discharged via the outlet can be retained by the first pressure-exerting element parts and, in addition, the first and second pressure-exerting elements are moveable with respect to each other, in which the residual materials can be moved through the outlet and/or compressed, as the pressure-exerting elements move with respect to each other, by means of the second pressure-exerting element parts which move towards each other. By means of the compression mechanism, the volume of the residual materials can be reduced, as a result of which a larger amount of residual materials can be stored in a volume. In addition, the compression mechanism is simple in terms of construction, as a result of which it is relatively low-maintenance and can be made relatively compact. Due to the obtuse angle which the second pressure-exerting element parts and the first pressure-exerting element parts enclose, two inclined faces are created which move towards each other when at least one of the pressure-exerting elements is moved, in such a way that a relatively large downward force can be exerted on the residual materials in the direction of the outlet. If a collecting volume, which is placed under the outlet, is filled with residual materials, the relatively large downward force provided by the inclined faces will push the residual materials through the outlet and compress them in the collecting volume. The first pressure-exerting element parts ensure that the residual materials compressed in the collecting volume cannot move back up. Furthermore, it is possible for the first pressure-exerting element parts to form a temporary support for the residual materials introduced into the compression mechanism via the inlet, which support is cancelled by moving the pressure-exerting elements with respect to each other, in which the residual materials are simultaneously pushed down through the outlet by means of the second pressure-exerting element parts moving towards each other in order to compress the residual materials in the collecting volume.

[0005] It is possible for the first and the second pressure-exerting element part in a pressure-exerting element to be bent with respect to each other, in which the obtuse angle is produced between for example two virtual tangent lines of the bent first pressure-exerting element part and the bent second pressure-exerting element part. If only one of the pressure-exerting elements is bent, the obtuse angle is provided between a virtual tangent line of the bent pressure-exerting element part and the unbent other pressure-exerting element part. A bent or curved shape of one of the pressure-exerting element parts can be produced in different ways. Thus, it is for example possible to produce a partly parabolically bent shape, viewed from a side view.

[0006] The obtuse angle which the second pressure-exerting element parts and the first pressure-exerting element parts enclose is between 100 and 170 degrees, preferably between 120 and 160 degrees. In this way, it is possible to maximize the force to be applied to the residual materials in the direction of the outlet by means of the compression mechanism and to adapt it to the type of residual materials to be compressed. The residual materials may comprise household refuse, such as packaging, in particular plastic, metal and drinks packaging (PMD, Plastic bottles and flasks, Metal packaging and Drink cartons). The first pressure-exerting element parts may extend substantially parallel to an opening which is defined by the outlet. Due to the obtuse angle, the second pressure-exerting element parts extend from the first pressure-exerting element parts in a direction facing away from the outlet. The compression mechanism may comprise more than two pressure-exerting elements in order to increase the compression force on the residual materials and/or to ensure that the residual materials do not tilt and/or turn or move in an undesirable direction during compression of the residual materials. One of the pressure-exerting elements has to be moveable to a minimal degree, whereas the other(s) can be stationary.

[0007] Because of the simple construction of the compression mechanism, the smallest dimension of the compression mechanism may extend vertically (height), as a result of which a relatively compact compression mechanism may be provided. The horizontal dimensions (length and width) of the compression mechanism are preferably determined by a standard residual materials container which can be placed under the outlet of the compression mechanism as a collecting volume for the residual materials.

[0008] At least one of the first and second pressure-exerting elements may be rotatably moveable about an axis in order to move the residual materials through the outlet and/or to compress them. With such a rotational movement of the pressure-exerting elements with respect to each other, the first pressure-exerting element part may at least partly comprise the shape of at least a part of a circle. These circular or annular first pressure-exerting element parts may form the temporary support for the residual materials introduced via the inlet. The second pressure-exerting element may at least partly extend upwards from the first pressure-exerting element part about the axis of rotation, for example as a helix. In addition to a helix, other shapes are also possible. By rotating at least one of the pressure-exerting elements, the temporary support formed by the first pressure-exerting element parts disappears. Furthermore, by rotating at least one of the pressure-exerting elements, the inclined faces formed by the second pressure-exerting elements are moved against the residual materials, in which case continued rotation results in a force being exerted on the residual materials in the direction of the outlet by the inclined faces. By temporarily removing the temporary support which blocks the outlet, the residual materials can be pushed through the outlet by means of the second pressure-exerting element parts moving towards each other. When at least one of the pressure-exerting elements is rotated, first the support disappears as a result of the first pressure-exerting element parts moving away from each other in order thus to provide an opening for the residual materials, so that these may be pushed through the outlet, wherein after the first pressure-exerting element parts have been moved apart to their greatest extent, the first pressure-exerting element parts are moved towards each other again in order to provide the support for residual materials which are newly to be introduced into the compression mechanism via the inlet. Upon rotation, the second pressure-exerting element parts move the opposite way, that is to say the pressure-exerting element parts initially move towards each other and subsequently move away from each other.

[0009] The second pressure-exerting element comprises a larger radius than the first pressure-exerting element, so that the pressure-exerting elements are able to rotate over 360 degrees next to each other in opposite directions.

[0010] Furthermore, it is possible for at least one of the first and second pressure-exerting elements to be moveable in a straight line between a first position and a second position and vice versa in order to move the residual materials through the outlet and/or to compress them by means of the inclined faces provided by the second pressure-exerting element parts. If both pressure-exerting elements are designed to be moveable, then they are moved towards each other and away from each other in opposite directions in order to perform the compression function of the compression mechanism.

[0011] It is a further object of the present invention to provide a system by means of which to compress residual materials in a residual materials container in a simple and efficient way, so that the volume of the residual materials in the residual materials container is minimized and the content of the residual materials container is used to its maximum.

[0012] This object is achieved by the system as defined in claim 12. The system comprises the above-described compression mechanism, in which a residual materials container can be placed under the outlet of the compression mechanism. The residual materials container may be a standard residual materials container which is produced in accordance with a specific standard, such as for example follows from a European Standard, EN 840. This standard concerns two-wheeled mini-containers, which standard has been adopted in the Netherlands as NEN-EN 840, in Belgium as NBN-EN 840. These mini-containers comprise a volume between 120 and 240 litres and are made from high-density polyethylene (HDPE).

[0013] For use with the system, the residual materials container may be provided with an inner container which is made from a material which is better able to withstand the forces exerted by the compression mechanism in operation than the material (HDPE) from which the walls of the standard residual materials container are made. The inner container may be made of, for example, a metal or a fibre-reinforced plastic.

[0014] Only at the top is the inner container provided with an opening which permits access to the inner container. The conical shape of the inner container may correspond with the conical shape of the standard residual materials container in order to maximize the volume of the inner container. It is also possible to design the conical shape of the inner container differently from the conical shape of the standard residual materials container in order to make the inner container stronger in terms of design than the standard residual materials container. The distance between the inner wall and bottom of the standard residual materials container and the inner container is very small, for example less than 10 cm. This distance may be smaller near the opening of the standard residual materials container than near the bottom of the standard residual materials container. The inner container may furthermore be designed in such a manner that it is installable in the residual materials container so as to be manually removable. It is possible to design the inner container in such a way that it is installable in the standard residual materials container by means of a clamping force.

[0015] The system may be provided with a housing in order to provide a closable space for the residual materials container, in which the system is furthermore provided with an airtight disposal lock to the inlet of the compression mechanism. In this way, it is possible to provide a system in which the residual materials container can be isolated from its surroundings, so that disagreeable odours can be minimized, in particular if the residual materials container is being used for garden and food waste (organic residual stream). The disposal lock also makes it possible for more than one household to make use of the residual materials container, in particular if the disposal lock is lockable, for example via RFID, in order to gain access to the system. Using RFID access enables the system to record who throws away residual materials and, optionally, to determine the amount of residual materials this individual or household throws away by means of a weighing unit.

[0016] To prevent the residual materials introduced into the compression mechanism from not reaching the residual materials container, the outlet of the compression mechanism may be connected to the residual materials container by means of a coupling unit. Furthermore, it is possible to design the coupling unit in such a manner that the residual materials container and the compression mechanism can be coupled to each other in an airtight manner. In this way, it is possible to prevent any odours from escaping from the residual materials container so that disagreeable odours caused by the residual materials container can be reduced. In order to further reduce the disagreeable odours, the system may be provided with a cooling system for cooling the residual materials container and/or at least one ozone generator. The cooling system may be accommodated in the housing of the system, while an outlet of the ozone generator may be situated in the disposal lock in order to pass ozone into the disposal lock. In addition, an ozone generator may be provided in the coupling unit and/or in the compression mechanism in order to inject ozone into the residual materials container.

[0017] The compression mechanism and the system will now be explained in more detail with reference to exemplary embodiments which are illustrated in the figures.

Fig. 1 shows a diagrammatic side view of the system comprising a compression mechanism and a standard residual materials container (mini-container in accordance with NEN-EN 840);

Figs. 2a-e show diagrammatic perspective views of pressure-exerting elements of a compression mechanism.

[0018] In the figures, identical parts are denoted by the same reference numerals.

[0019] Fig. 1 shows a diagrammatic view of a system 1 for processing residual materials. The residual materials may be packaging, for example plastic, metal and/or drinks packaging (PMD). The system 1 comprises a compression mechanism 3 which is provided with an inlet 5 and an outlet 7. The compression mechanism 3 may be supported by a frame (not shown) or the like. A residual materials container 10 can be placed under the outlet 7 of the compression mechanism 3. The residual materials container 10 is a standard residual materials container, in particular a mini-container in accordance with NEN-EN 840. The residual materials container 10 comprises a handle bar 11 and two wheels 13 by means of which the residual materials container 10 can be moved in the direction indicated by arrow P1 by tilting it by means of the handle bar 11.

[0020] The residual materials to be processed by means of the compression mechanism 3 comprise household refuse, such as packaging, preferably plastic, metal and drinks packaging (PMD). Plastic, metal and drinks packaging is a residual material stream whose volume can be greatly reduced by compression.

[0021] For use in the system, the residual materials container 10 is provided with an inner container 15 which is designed to make the inner container 15 better able to withstand the forces exerted by the compression mechanism in operation, than the shape of the residual materials container 10 and/or the inner container 15 is made from a material which is better able to withstand the forces exerted by the compression mechanism in operation than the material from which the residual materials container 10 is made.

[0022] The conically shaped inner container 15 is installable in the residual materials container 10 so as to be manually removable. The distance between the inner wall of the residual materials container 10 and the inner container 15 is shown greatly enlarged in order to illustrate the inner container 15 and this distance may be significantly smaller in practice, for example the greatest distance between the inner container 15 and the residual materials container 10 measured near the bottom of the residual materials container 10 may be less than 10 cm. By keeping the distance between the inner container 15 and the residual materials container 10 small, the collecting volume of the inner container 15 can be maximized. If desired, the outer wall of the inner container 15 may be provided with ribs (not shown) by means of which the inner container 15 rests on the inner wall of the residual materials container 10. In order to prevent the inner container 15 from becoming detached from the residual materials container during emptying of the residual materials container 10, in particular emptying of the inner container 15, it is also possible to opt for a form-fitted connection instead of a frictional connection between the residual materials container 10 and the inner container 15.

[0023] On its upper side, the inner container 15 is provided with an opening which provides access to the inner container 15. The dimensions of the opening of the inner container 15 correspond with or are greater than the dimensions of the opening of the outlet 7 of the compression mechanism 3. In this way, it is ensured that the residual materials which are moved through the opening of the outlet 7 end up in the residual materials container 10 situated underneath.

[0024] The compression mechanism 3 will be explained in greater detail by means of Figs. 1 and 2a-e.

[0025] The compression mechanism 3 is used for compressing residual materials which can be introduced into the compression mechanism 3 via an inlet 5 and which is provided with a first pressure-exerting element 25 as well as a second pressure-exerting element 27, which are both arranged above the outlet 7 of the compression mechanism 3. Each pressure-exerting element 25, 27 is a strip, for example a metal strip.

[0026] Furthermore, each pressure-exerting element 25, 27 is provided with a first pressure-exerting element part 25a, 27a and a second pressure-exerting element part 25b, 27b which encloses an obtuse angle α with the first pressure-exerting element part 25a, 27a. The obtuse angle α is between 155 and 160 degrees. The first pressure-exerting element parts 25a, 27a extend parallel to the opening which is defined by the outlet 7, which opening is situated in a horizontal plane during normal use of the compression mechanism 3 and the system 1. The second pressure-exerting element parts 25b, 27b extend from the first pressure-exerting element parts 25a, 27a in a direction facing away from the outlet 7. Each first pressure-exerting element part 25a, 27a is designed to form a single piece with the second pressure-exerting element part 25b, 27b.

[0027] The illustrated compression mechanism 3 comprises four first pressure-exerting elements 25 and five second pressure-exerting elements 27.

[0028] The first pressure-exerting element parts 25a, 27a may form a temporary horizontal support surface for the residual materials to be introduced via the inlet 5. However, it is also possible for the residual materials which are introduced via the inlet 5 to not be (temporarily) supported by the first pressure-exerting element parts 25a, 27a and to fall directly through the outlet 7 into the container 10.

[0029] The first and second pressure-exerting elements 25, 27 are moveable in opposite directions with respect to each other, more particularly rotatable, in which case the residual materials can be moved through the outlet 7 and/or compressed, as the pressure-exerting elements 25, 27 move with respect to each other, by means of the second pressure-exerting element parts 25b, 27b which move towards each other.

[0030] Figs. 2a-e show the first and second pressure-exerting elements 25, 27 only in a first position in which the residual materials can be placed on the first pressure-exerting element parts 25a, 27a via the inlet 5. In the first position, the first pressure-exerting element parts 25a, 27a form the support for the residual materials to be introduced via the inlet 5. While the pressure-exerting elements 25, 27 move with respect to each other, the support disappears temporarily due to the first pressure-exerting element parts 25a, 27a moving apart and at the same time the residual materials are moved through the outlet and/or compressed by moving the second pressure-exerting element parts 25b, 27b towards each other. The first pressure-exerting element parts 25a, 27a can be moved from the position illustrated in Figs. 2a-e opposite to each other over 180 degrees, after which the support has disappeared completely, in which case the first pressure-exerting element parts 25a, 27a are returned to the position shown in Figs. 2a-e when they are rotated through 180 degrees again. The same applies to the first pressure-exerting element parts 25a, 27a which form a single piece with the second pressure-exerting element parts 25b, 27b and which initially move towards each other from the position shown in Figs. 2a-e and then move away from each other and return to the position shown in Figs. 2a-e.

[0031] In the illustrated exemplary embodiment, the first and second pressure-exerting elements 25, 27 are rotatably movable about an axis. However, it is also possible for at least one of the first and second pressure-exerting elements (not shown) to be moveable in a straight line between a first position and a second position and vice versa, so that residual materials can be moved through the outlet 7 and/or compressed by moving the second pressure-exerting element parts towards each other. In such an embodiment (not shown), the pressure-exerting elements may be plate-like and may extend parallel to each other and may be moved past each other in a straight line (without rotation) in order to reach the position for moving and/or compressing the residual materials through the outlet 7 by means of the inclined faces of the second pressure-exerting element parts which faces have been moved towards each other.

[0032] In the illustrated variant, each first pressure-exerting element part 25a, 27a has the shape of at least a part of a circle, and each second pressure-exerting element 25b, 27b extends from the first pressure-exerting element part 25a, 27a upwards about an axis in a curved and/or bent manner, for example in the form of a helix as illustrated in the figures. Furthermore, the second pressure-exerting elements 27 define a larger radius than the first pressure-exerting elements 25 which are situated directly next thereto and are movable past the latter.

[0033] If the residual materials container 10 is largely filled with compressed residual materials, the residual materials which rebound and return upwards through the outlet 7 can be blocked by means of the first pressure-exerting element parts 25a, 27a. The first pressure-exerting element parts 25a, 27a may thus have a double function, namely, on the one hand, supporting the residual materials introduced via the inlet 5 of the compression mechanism 3 and, on the other hand, retaining the residual materials pushing up via the outlet 7 in the residual materials container 10.

[0034] By means of the compression mechanism 3, the volume of the residual materials can be reduced, as a result of which a larger amount of residual materials can be stored in the residual materials container 10.

[0035] By the obtuse angle α which the second pressure-exerting element parts 25b, 27b and the first pressure-exerting element parts 25a, 27a enclose, two inclined faces 31, 33 are provided which are partly interrupted by the strips and which are moved towards each other by moving at least one of the pressure-exerting elements 25, 27 in such a way that the inclined faces 31, 33 exert a relatively large downward force on the residual materials in the direction of the outlet 7. The relatively large downward force will compress the residual materials via the outlet 7 in the residual materials container 10.

[0036] The temporary support formed by the first pressure-exerting element parts 25a, 27a is removed by moving the pressure-exerting elements 25, 27 with respect to each other, resulting in the first pressure-exerting element parts 25a, 27a being moved apart and forming an opening towards the outlet 7. At the same time, the residual materials are pushed down through the outlet 7 by the second pressure-exerting element parts 25b, 27b moving towards each other, in order to compress the residual materials in the residual materials container 10.

[0037] The length l and width (not shown in Fig. 1) dimensions of the compression mechanism are determined by and/or correspond to the length and width dimensions of the standard container 10. The smallest dimension h of the compression mechanism 3 extends vertically. In this way, a very compact compression mechanism 3 can be produced.

[0038] The system 1 may furthermore be provided with a housing (not shown) in order to provide a closable space for the residual materials container. The system 1 may also comprise an airtight disposal lock (not shown) to the inlet 5 of the compression mechanism 3. This disposal lock may be locked and may be openable by means of a key or RFID.

[0039] Furthermore, the outlet 7 of the compression mechanism 3 may be connected to the residual materials container 10 by means of a coupling unit (not shown).

[0040] The system 1 may be provided with a cooling system (not shown) and/or at least one ozone generator 35.

[0041] Preferably, at least one of the pressure-exerting elements is moved by means of a drive mechanism. However, it is also conceivable for one or various pressure-exerting elements to be moved by hand, for example by means of a rotating movement to be performed by an operator.

[0042] A residual material-processing system for compressing residual materials, which system is provided with a standard residual materials container which is produced in accordance with a standard, for example European standard EN 840, in which the residual material-processing system is provided with a compression mechanism comprising an outlet under which the standard residual materials container can be placed, in which the residual material-processing system is furthermore provided with an inner container which is installable in the standard residual materials container, in which the inner container is designed so that the inner container is better able to withstand the forces exerted by the compression mechanism in operation than the standard residual materials container and/or is made from a material which is better able to withstand the forces exerted by the compression mechanism in operation than the material from which the (side) walls of the standard residual materials container are made. This residual material-processing system may be provided with a compression mechanism described in this document or any other compression mechanism. The advantage of this residual material-processing system is that no changes have to be made in the logistics for emptying the residual materials container, whereas the residual materials can be compressed by a compression mechanism with maximum force in order to achieve a volume reduction without the standard residual materials container being damaged. These forces are absorbed by the stronger inner container which, in addition, can easily be replaced with a new inner container in case of damage. In this way, the service life of the standard residual materials container can be extended, in particular if it is used in combination with a compression mechanism. In the residual material-processing system, the inner container is preferably normally only provided with an opening which provides access to the inner container at the top side, that is to say the side turned towards the outlet of the compression mechanism. The conical shape of the inner container may correspond with the conical shape of the standard residual materials container, but preferably the inner container has a more conical shape than the standard residual materials container. The distance between the inner wall of the standard residual materials container and the inner container is very small, for example less than 10 cm, in order to maximize the internal volume of the inner container. Incidentally, this distance may vary in the vertical direction, between the bottom of the standard residual materials container and the opening of the standard residual materials container. Preferably, the distance is smaller near the opening of the standard residual materials container than at the bottom of the standard residual materials container. The inner container may furthermore be designed in such a way that it is installable in the residual materials container so as to be manually removable. It is possible to design the inner container in such a way that it is installable in the standard residual materials container by means of a clamping force. It is also possible to opt for a form-fitted connection instead of a frictional connection between the residual materials container 10 and the inner container 15, thus reducing the risk of the inner container becoming detached, for example during emptying. The inner container may, for example, be made from a metal or a fibre-reinforced plastic. This residual material-processing system may furthermore have other features/properties of the system as described in this document and in particular defined in the attached claims.

[0043] A storage device for organic waste flow which is provided with a housing which can be cooled by means of a cooling unit in order to provide a space which is closed off from the surroundings for a residual materials container, for example a standard residual materials container which is produced in accordance with a standard, for example European standard EN 840, in which the storage device is furthermore provided with a disposal lock near the inlet of the storage device, which disposal lock can be opened by means of a key and/or chip (RFID), is airtight in the closed position and is furthermore provided with an ozone generator for generating ozone in the disposal lock. By means of such a storage device, which can be used for several households, it is possible to prevent, or at least greatly reduce, disagreeable odours caused by the organic waste flow. Such a hygienic storage device will greatly stimulate the organic residual materials separation behaviour of the users, in particular in high-rise blocks where several users/households use one and the same storage. The disposal lock may be locked by means of, for example, a key or via RFID. If desired, the storage device may be provided with a compression mechanism, for example a compression mechanism as described in this document, but it is also possible to construct the storage device without a compression mechanism. The cooling system may be incorporated in the housing of the storage device. It is also possible to provide further ozone generators in the storage device, for example an ozone generator for supplying ozone to the inside of the residual materials container.

Claims

1. Compression mechanism for compressing residual materials which can be introduced into the compression mechanism via an inlet and which is provided with a first pressure-exerting element and a second pressure-exerting element which are both arranged above an outlet of the compression mechanism, in which each pressure-exerting element is provided with a first pressure-exerting element part and a second pressure-exerting element part which encloses an obtuse angle with the first pressure-exerting element part, in which the residual materials to be introduced into the inlet can be supported and/or the residual materials discharged via the outlet can be retained by the first pressure-exerting element parts and, in addition, the first and second pressure-exerting elements are moveable with respect to each other, in which the residual materials can be moved through the outlet, as the pressure-exerting elements move with respect to each other, by means of the second pressure-exerting element parts which move towards each other.

2. Compression mechanism according to claim 1, in which the obtuse angle is between 100 and 170 degrees, preferably between 120 and 160 degrees.

3. Compression mechanism according to claim 1 or 2, in which the smallest dimension of the compression mechanism extends vertically.

4. Compression mechanism according to any of the preceding claims, in which the first pressure-exerting element parts extend substantially parallel to an opening defined by the outlet.

5. Compression mechanism according to any of the preceding claims, in which the second pressure-exerting element parts extend from the first pressure-exerting element parts in a direction facing away from the outlet.

6. Compression mechanism according to any of the preceding claims, in which the compression mechanism comprises at least three pressure-exerting elements.

7. Compression mechanism according to any of the preceding claims, in which the first pressure-exerting element part and the second pressure-exerting element part are made as a single piece.

8. Compression mechanism according to any of the preceding claims, in which each pressure-exerting element is a strip or at least a part of a tube.

9. Compression mechanism according to any of the preceding claims, in which at least one of the first and second pressure-exerting elements is rotatably moveable about an axis or at least one of the first and second pressure-exerting elements is moveable in a straight line between a first position and a second position and vice versa.

10. Compression mechanism according to any of the preceding claims, in which each first pressure-exerting element part comprises at least partly the shape of at least a part of a circle, and each second pressure-exerting element extends at least partly upwards from the first pressure-exerting element part about the axis of rotation, for example as a helix, preferably the second pressure-exerting element defines a larger radius than the first pressure-exerting element.

11. Compression mechanism according to any of the preceding claims, in which a support can be formed by the first pressure-exerting element parts for the residual materials to be introduced into the inlet, in which the support temporarily disappears while the pressure-exerting elements move with respect to each other for moving and/or compressing the residual materials through the outlet by means of at least one of the second pressure-exerting element parts.

12. System comprising a compression mechanism according to any of the preceding claims, in which a residual materials container can be placed under the outlet of the compression mechanism.

13. System according to claim 12, in which the residual materials container is a standard residual materials container which, for use in the system, is provided with an inner container which is made from a material which is better able to withstand the forces exerted by the compression mechanism in operation than the material from which the (side) walls of the standard residual materials container are made, and/or in which the residual materials container is a standard residual materials container which, for use in the system, is provided with an inner container, in which the inner container has a shape such that it is better able to withstand the forces exerted by the compression mechanism in operation than the standard residual materials container.

14. System according to claim 13, in which the inner container is installable in the residual materials container so as to be manually removable, and/or, in which the inner container is only provided with an opening at the top side which provides access to the inner container.

15. System according to any of the preceding claims 12-14, in which the system is provided with a housing in order to provide a closable space for the residual materials container, in which the system is furthermore provided with an airtight disposal lock to the inlet of the compression mechanism, preferably the disposal lock is lockable, for example via RFID, and/or
the outlet of the compression mechanism is connected to the residual materials container by means of a coupling unit, and/or
the system is provided with a cooling system and/or at least one ozone generator.

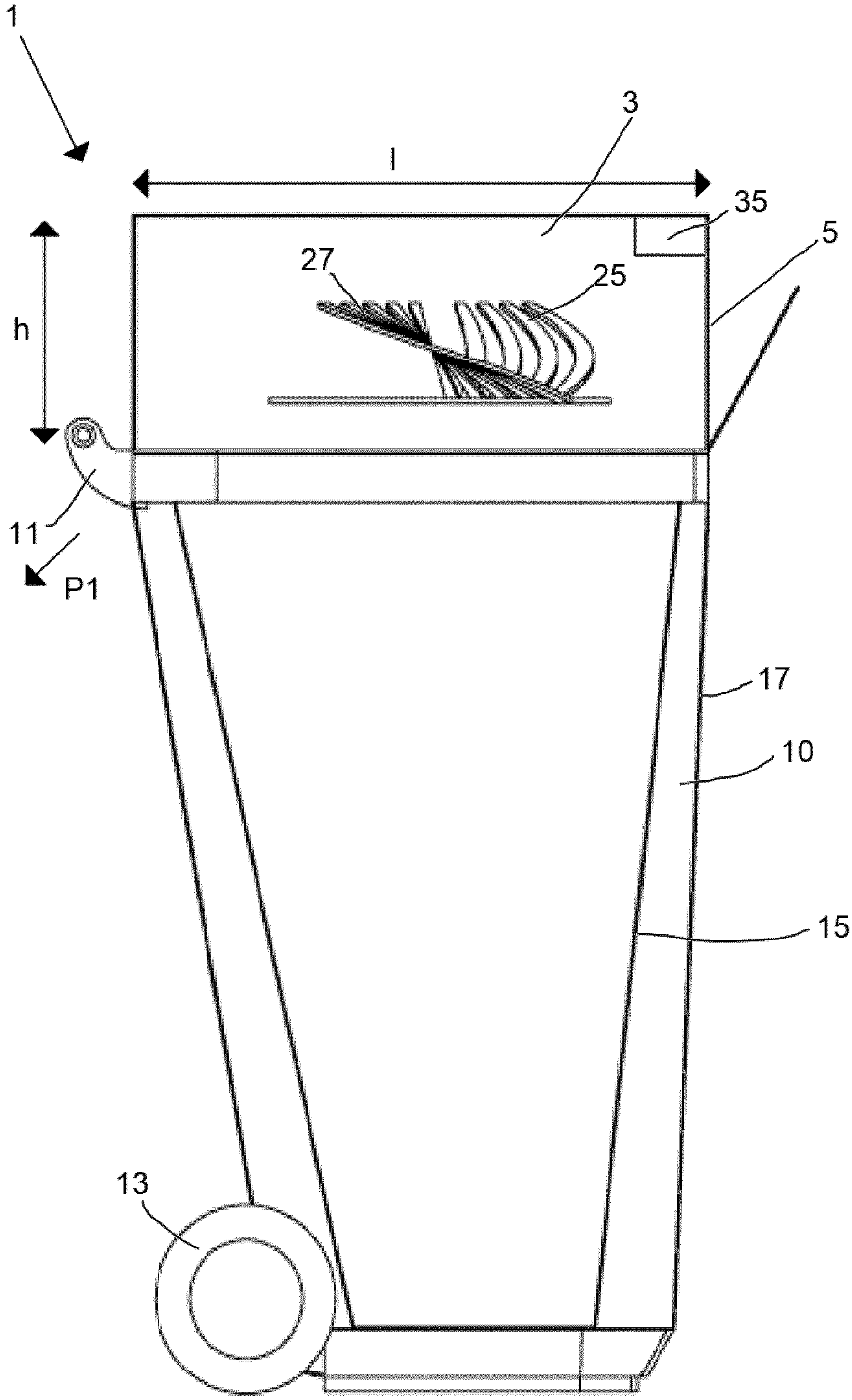

Fig. 1

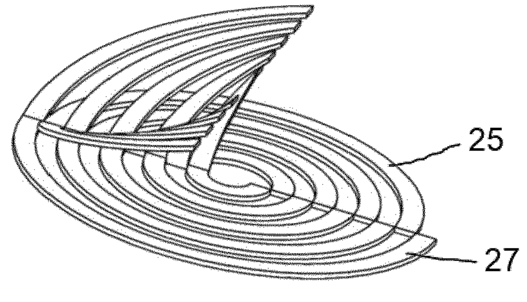

Fig. 2a

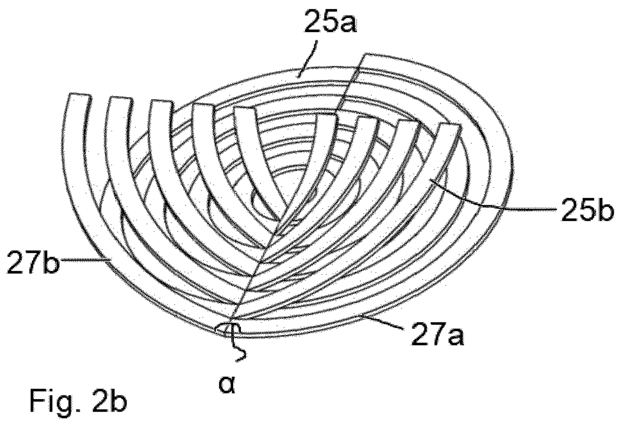

Fig. 2b

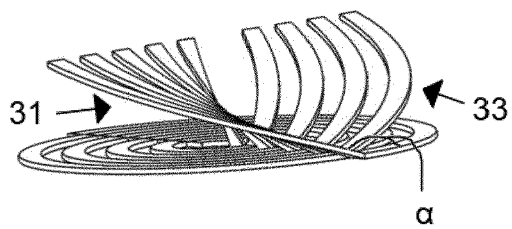

Fig. 2c

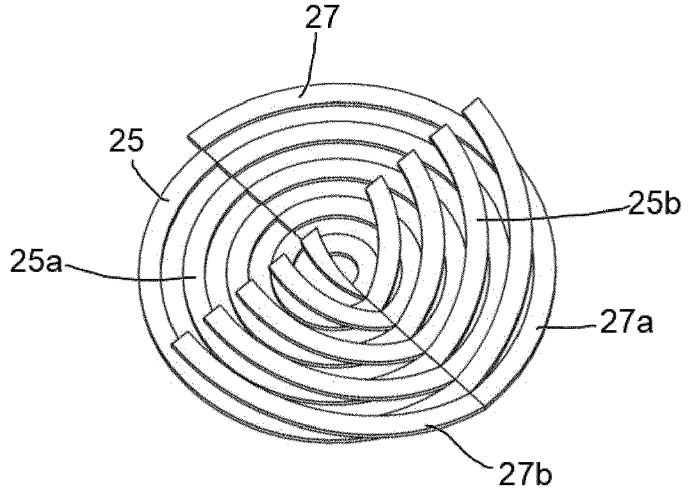

Fig. 2d

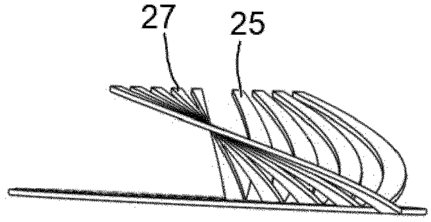

Fig. 2e

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EUROPEAN SEARCH REPORT

Application Number
EP 18 15 3692

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2014/041538 A1 (PARMAR VIJAY [CA]) 13 February 2014 (2014-02-13) * paragraph [0035]; figures 6A-C * -----	1-6,8,9, 11-15	INV. B65F1/14 B30B9/30
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TECHNICAL FIELDS SEARCHED (IPC)

B65F
B30B

The present search report has been drawn up for all claims

1

Place of search	Date of completion of the search	Examiner
The Hague	20 June 2018	Luepke, Erik

CATEGORY OF CITED DOCUMENTS

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