(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 602 599 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
07.12.2005 Bulletin 2005/49

(51) Int Cl.[7]: **B65F 1/06**, B65F 1/16

(21) Application number: **05076077.6**

(22) Date of filing: **10.05.2005**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR LV MK YU

(30) Priority: **11.05.2004 NL 1026164**

(71) Applicant: **All Care B.V.**
3905 KX Veenendaal (NL)

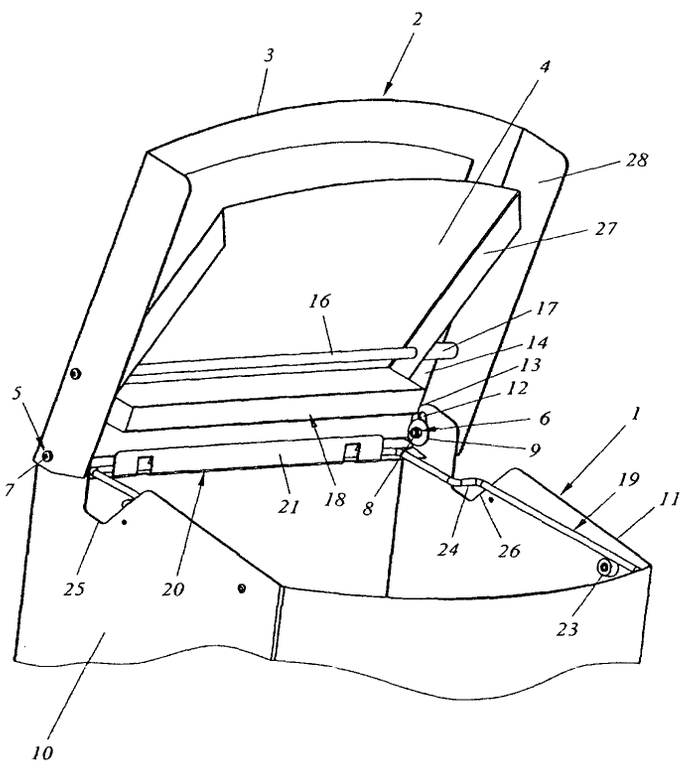
(72) Inventor: **Aalbers, Johannes**
3902 EJ Veenendaal (NL)

(74) Representative: **Lips, Hendrik Jan George**
HAAGSCH OCTROOIBUREAU
Breitnerlaan 146
2596 HG Den Haag (NL)

(54) Container with two-part lid

(57) The invention relates to a container (1) having a two-part lid (2), in which a first lid part (3) of the two-part lid (2) is connected to the container (1) and a second lid part (4) is connected to the first lid part (3), in which said first lid part (3) can be brought to a first, closed position and into a second, opened position in relation to the container (1) and the second lid part (4) can be brought to a first, closed position and to a second opened position in relation to said first lid part (3). By translation of the pivot points (5,6) of said first lid part (3), it will abut against a stop in the second, opened position, in which during said translation and in the end position, the rear edge of the first lid part (3) will not move beyond the container rear wall.

FIG. 1



EP 1 602 599 A2

Description

[0001] The present invention relates to a container having a two-part lid.

[0002] Such containers, that are used as wastepaper basket, for example, are known in several embodiments. In order to empty these containers, which in most cases will be removing a rubbish bag from the container, the lid should be removed from the container completely. Subsequently, the lid should be put down in order to have two hands available for removing said rubbish bag and for being able to put a new rubbish bag into the container. Especially having to put down the lid means in practice that contaminations of any nature can be transferred to the environment and that the lid and/or that which the lid is put down on, could get damaged. It is obvious that this is highly undesirable, in particular with institutions where the highest possible degree of hygiene should be practised such as e.g. in hospitals.

[0003] The object of the invention is to provide a container having a two-part lid in which the disadvantage indicated above can be prevented. Accordingly, the invention provides for, that a first lid part of the two-part lid is connected to the container and a second lid part is connected to the first lid part, in which said first lid part can be brought to a first, closed position and into a second, opened position in relation to the container and the second lid part can be brought to a first, closed position and to a second opened position in relation to said first lid part. According to a further elaboration, it is provided for that the first lid part is connected to the container with at least one movable pivot point and that a stop is provided which will be engaged by the first lid part in the second, opened position.

[0004] Thus, it is achieved that the lid can be brought into an opened position in its entirety, in which the pivot point of the first lid part is moved in such a way that the lid will engage a stop and will remain in the opened position. This has the great advantage that there is enough free room to allow for removing the rubbish bag from the container, while the lid remains connected to the container and need not be put down anywhere loose from said container.

[0005] According to a further elaboration it is provided for, that a movable pivot point is represented by a spindle portion received in a slotted opening, said slotted opening being shaped such that on opening said first lid part, apart from a rotation, said pivot point also experiences a translation having vertical and horizontal components. There, the lid can be moved forward and rearward, in which the inner side of the lid will engage a stop and/or a flanged portion of the rear edge of first lid part will engage a stop. An important advantage is that owing to said translation, the rear edge of said first lid part will not move beyond the rear edge of said container, so that the container can be located against a wall or be attached to it.

[0006] According to a further elaboration, it is provided for that at least part of the container wall, e.g. the rear wall and/or a rearwardly facing portion of at least one side wall of the container represents the stop for said first lid part in the second, opened position.

[0007] A yet further elaboration provides for that the first lid part has its rear side provided with a flanged edge portion forming a stop together with a flanged edge portion of the container wall. This stop can replace aforementioned stop or be an addition to it, allowing for more stability to said first lid part in the second, opened position.

[0008] In case of a container having a completely or partly circular cross-section, the rear wall and side wall respectively are meant to be understood as the portion where the pivot point or pivot points of the first lid part are located and the portions of the container wall connecting to it.

[0009] The second lid part is completely or partly enclosed by the first lid part, with the circumference of the second lid part, seen from above, being completely or partly situated within the outer circumference of the container. There, the first lid part mounts a horizontal spindle around which said second lid part can rotate in relation to said first lid part. The horizontal spindle is spaced from the edge or edges of said second lid part extending in parallel to said spindle. With such an embodiment, in which however a round or elliptical second lid portion is provided, said spindle will be located on or near the axis of said second lid part. Instead of one single spindle, one could also provide two separate pivot portions being situated on one pivot line.

[0010] Preferably, the horizontal spindle is mounted near the rear edge of the second lid part extending in parallel to it, with the portion between the horizontal spindle and adjacent rear edge of the second lid part being made heavier. This has the advantage that the opening for the material to be put into the container can be much larger than in case of a central horizontal spindle mounted centrally in the second lid portion, the heavier portion providing for that the second part will always return to the first, closed position in relation to the first lid part.

[0011] According to another elaboration it is preferably further provided for, that the portion between the horizontal spindle and the adjacent rear edge of the second lid part is made heavier by flanging the plate material said second lid part is made of. This is a particularly simple and economic way of weighting this portion of the second lid part. Such a weighting can obtain an amply sufficient weight by multiple flanging of the plate material. It is also possible to mount a separate weight against the first lid part or incorporating it within the flange.

[0012] Further, it is provided for that the flange near the rear edge of the second lid part is dimensioned such, and the horizontal spindle is positioned such, that the second lid part, from a maximally inwardly rotated position, in which the second lid part will have its front side

abutting the inside of the container, will return to the closed position in relation to said first lid part, in which the first lid part is in the first, closed position and also that when the first lid part is in the second, opened position, the second lid part will remain in or near the closed position in relation to the first lid part or will return to it. Thus, one achieves that after material has been brought in the container, the lid will always close automatically and that in case of a completely opened lid the second lid part will continue connecting to the first lid part and thus will not be in the way on removing a rubbish bag from the container or bringing one into it.

[0013] According to a further elaboration a bracket is provided from which a rubbish bag can be suspended, in which said bracket is mounted near the upper edge at the inside of the container and extends at least along a portion of the circumference. There, the bracket can be rotated around an axis extending parallel to the horizontal spindle of said second lid part and/or parallel to the pivot axis of said first lid part. Therefore, the bracket can be brought upward in a direction above the edge of the container corresponding to the pivoting direction of first and second lid parts.

[0014] Further, it is provided for that at least one supporting cam, and preferably a number of supporting cams, are mounted at the inside of the container, onto which said bracket can come to bear. Apart from providing the required support for the bracket, these supporting cams also provide for that the rubbish bag folded over the bracket will be clamped between said bracket and the supporting cams. By manufacturing the supporting cams of a material having sufficient friction, such as e.g. rubber, some supporting cams will already suffice. According to a further elaboration, the supporting cams will be formed by pressing them into the container wall material from the outside.

[0015] Said second lid part can additionally be provided with an operating lever, which allows for that direct contact with the lid and therefor contact with possible contaminations on the lid can be kept to a minimum.

[0016] In the following, the invention will be further explained by way of the example illustrated in the drawing, in which:

fig. 1 illustrates a perspective view of the top of a container with a two-part lid;
fig. 2 illustrates a pivot point of the two-part lid in more detail;
fig. 3 illustrates a detail of a pivot point with a closed two-part lid, seen from the rear of the container; and
fig. 4 illustrates a cross-section across a vertical plane from the rear side to the front side of the container, with the two-part lid being closed.

[0017] Fig. 1 illustrates a container 1 having a two-part lid, with the lid 2 comprising a first lid part 3 and a second lid part 4. The first lid part 3 has pivot points 5, 6 with container 1, which are substantially composed of bolts 7, nuts 8 and plate rings 9. The bolts 7 project through openings 12 mounted in the side walls 10, 11. Openings 12 are slotted, the slot in the example having a curve.

[0018] The curve of the slotted opening 12 is such that on opening the first lid part, pivot points 5, 6 move downward with firstly a forward component of motion and then a rearward component of motion. This movement allows for bringing first lid part 3 along the rounded edge portion 13 of side wall 11 as well as along the corresponding edge portion of side wall 10, see also figs. 2 and 3. There, the inside 14 of first lid part 3 will come to bear against straight edge portion 15 connecting to round edge portion 13 and which can represent a stop for first lid part 3. Basic-ally, this could suffice, which however is not preferred. Preferably, slanting flank 31 of edge portion 20 is employed as a stop, see figs. 3 and 4, onto which the flanged rear edge 29 will come to bear in the second, opened position of the first lid part.

[0019] Second lid part 4 is mounted in first lid part 3 by the spindle 16, in which spacer sleeves 17 between the flanged side edges 27, 28 of first and second lid parts 3 and 4, respectively keep these at a distance from one another. At the rear side, second lid part 4 is provided with a flanged edge 18 serving as a counterweight for returning said second lid part to the second, closed position. If necessary, flanged edge 18 can be additionally made heavier.

[0020] Further, a bracket 19 intended for suspending rubbish bags is mounted the container 1. At the rear side of container 1, the bracket 19 is mounted in a flanged edge portion 20 of container 1. The bracket 19 extends behind the vertical flank 21 of edge portion 20, or the extremities of bracket 19 enclose said bracket across a predetermined distance, see also fig. 4. Tabs 22 have been punched from the vertical flank 21 of edge portion 20, behind which tabs said bracket 19 will be clamped. Bracket 19 bears on two supporting cams 23 mounted at the inside of container 1, so that the bracket 19 can not be moved further downward. Preferably, said supporting cams 23 are made of rubber, so that a rubbish bag stretched around the bracket 19 can be clamped tightly between bracket 19 and supporting cams 23. The side portions of bracket 19 are provided with angles 24 protruding inwards and forming a stretching frame for a rubbish bag together with the further bracket portion situated at the front side of the container. In conjunction with supporting cams 23, this allows a rubbish bag to be tightly and fixedly stretched.

[0021] Recesses 25, 26 have been made in the side walls 10, 11 which firstly offer a passage for the spindle 16 having spacer sleeves 17 and secondly allow enough room for stretching a rubbish bag around bracket 19 and removing it from said bracket.

[0022] Fig. 3 illustrates the rear side of container 1 with first lid part 3 in more detail. Lid part 3 has a flanged rear edge 29 providing for additional strength of first lid part 3 and is intended for engaging the stop, slanting

flank 31. Between rear edge 29 and side edge 28, a recess 30 has been made in order to have enough room available for bringing first lid part 3 to the second opened position in which the inside 14 of first lid part 3 will come to bear against or along straigth edge portion 15. In case of a completely opened first lid part 3, rear edge 29 will come bear against the stop, slanting flank 31 (see also fig. 4) of edge portion 20.

[0023] The cross-section according to fig. 4 provides a clear view of the mutual positioning of the two-part lid 2, the pivot points 5, 6 and the slotted reces 12 in which the pivot points are movable. Further, the bracket 19 having the supporting cams 23 is clearly illustrated as well as the mounting of bracket 19 between the vertical flank 21 and tabs 22 of flanged edge portion 20 of the rear wall of container 1. Second lid part 4 is rotatable around spindle 16 in which the flanged edge 18 moves upward as lid part 4 rotates inward. There, flanged edge 18 is mounted such that it can move upward freely along the adjacent edge of first lid part 3. Lid part 4 can then be opened completely without any restrictions until it engages the inside of the rear wall of container 1. By having second lid part 4 extend farther than the opening in first lid part 3 in at least one location, the front side of said second lid part 4 is prevented from moving upward any further than the top plane of said first lid part.

[0024] The second lid part 4 further mounts an operating lever 32 just beyond the spindle 16. The operating lever 32 then allows for bringing second lid part 4 down in a simple way either by hand or with the arm.

[0025] Finally, it can be seen that on bringing first lid part 3 to the second, opened position, due to the path of movement of the pivot points, lid part 3 will not move beyond the rear wall of the container. This allows for positioning the container directly against a wall or suspending it from a wall.

Claims

1. Container having a two-part lid, **characterized in that** a first lid part of the two-part lid is connected to the container and a second lid part is connected to the first lid part, in which said first lid part can be brought to a first, closed position and into a second, opened position in relation to the container and the second lid part can be brought to a first, closed position and to a second, opened position in relation to said first lid part.

2. Container according to claim 1, **characterized in that** the first lid part is connected to the container with at least one movable pivot point and that a stop is provided which will be engaged by the first lid part in the second, opened position.

3. Container according to claim 2, **characterized in that** a movable pivot point is represented by a spindle portion received in a slotted opening, said slotted opening being shaped such that on opening said first lid part, apart from a rotation, said pivot point also experiences a translation having vertical and horizontal components.

4. Container according to claims 1-3, **characterized in that** at least a part of the container rear wall or a free rearwardly facing portion of at least one side wall represents the stop for the first lid part in the second, opened position.

5. Container according to claim 4, **characterized in that** the first lid part has its rear side provided with a flanged edge portion forming a stop together with a flanged edge portion of the container wall.

6. Container according to claims 1-5, **characterized in that** the second lid part is completely or partly enclosed by the first lid part, with the circumference of the second lid part, seen from above, being completely or partly situated within the outer circumference of the container with the first, closed position of said first lid part.

7. Container according to claim 6, **characterized in that** the first lid part is provided with a horizontal spindle to which said second lid is mounted, in such a way that said second lid part can rotate in relation to said first lid part, and the horizontal spindle is spaced from the edges of said second lid part extending in parallel to said spindle.

8. Container according to claim 7, **characterized in that** the horizontal spindle onto which the second lid part is rotatably mounted is situated near the rear edge of the second lid part extending in parallel to it, in which the portion between the horizontal spindle and adjacent rear edge of the second lid part has been made heavier.

9. Container according to claim 8, **characterized in that** the portion between the horizontal spindle and the adjacent rear edge of the second lid part is made heavier by flanging the plate material said second lid part is made of.

10. Container according to claim 9, **characterized in that** the flange near the rear edge of the second lid part is dimensioned such, that the second lid part can be rotated inward across at least 90°.

11. Container according to claim 10, **characterized in that** the flange near the rear edge of the second lid part is dimensioned such, and the horizontal spindle is positioned such, that the second lid part, from a maximally inwardly rotated position, in which the second lid part will have its front side abutting the

inside of the container, will return to the closed position in relation to said first lid part, in which the first lid part is in the first, closed position.

12. Container according to claim 10, **characterized in that** with the first lid part in the second, opened position, the second lid part will remain in or near the closed position in relation to the first lid part or will be returned to it.

13. Container according to claims 1-12, **characterized in that** a bracket is mounted in the container near the upper edge and extends at least along a portion of the circumference.

14. Container according to claim 13, **characterized in that** the bracket can be rotated around an axis extending parallel to the horizontal spindle of said second lid part and/or extending parallel to the pivot axis of said first lid part.

15. Container according to claims 13-14, **characterized in that** at least one supporting cam for the bracket is mounted at the inside of the container.

16. Container according to claims 13-15, **characterized in that** the bracket comprises a front portion and two side portions, with said side portions are offset inwards at a distance from said front portion.

17. Container according to claims 13-16, **characterized in that** recesses in the container wall have been made at the level of the offsets in the side portions of the bracket.

18. Container according to claims 1-17, **characterized in that** an operating lever has been mounted on the second lid part.

FIG. 1

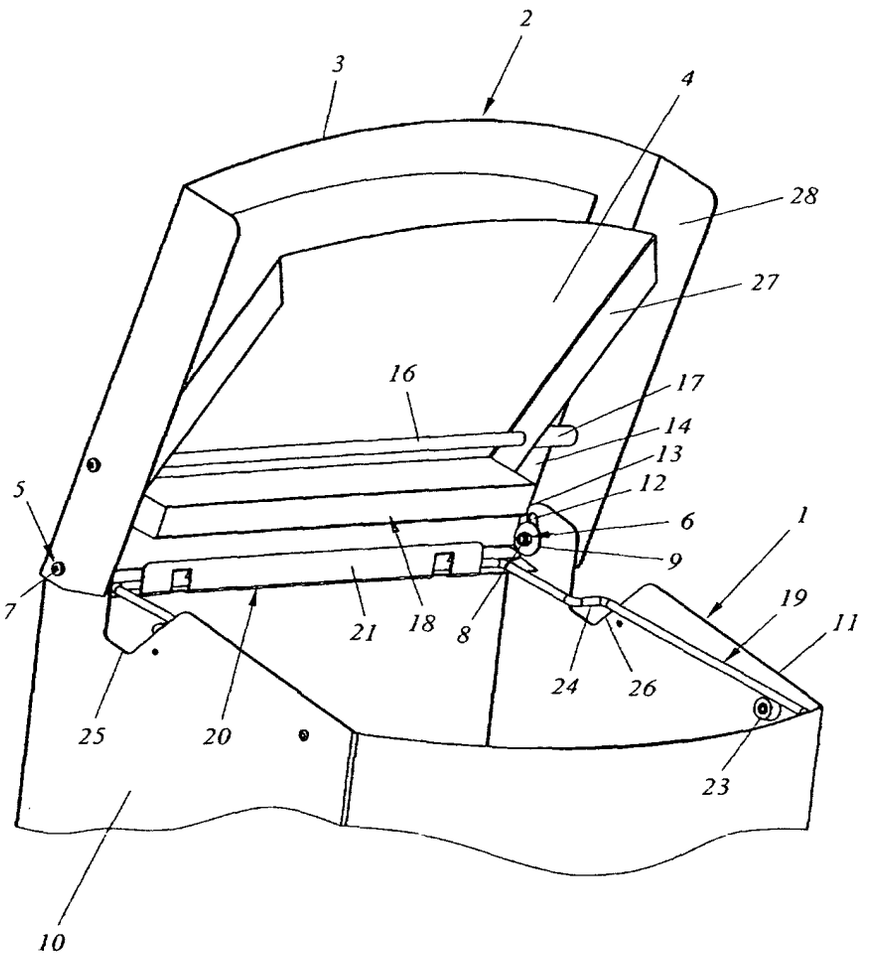


FIG. 2

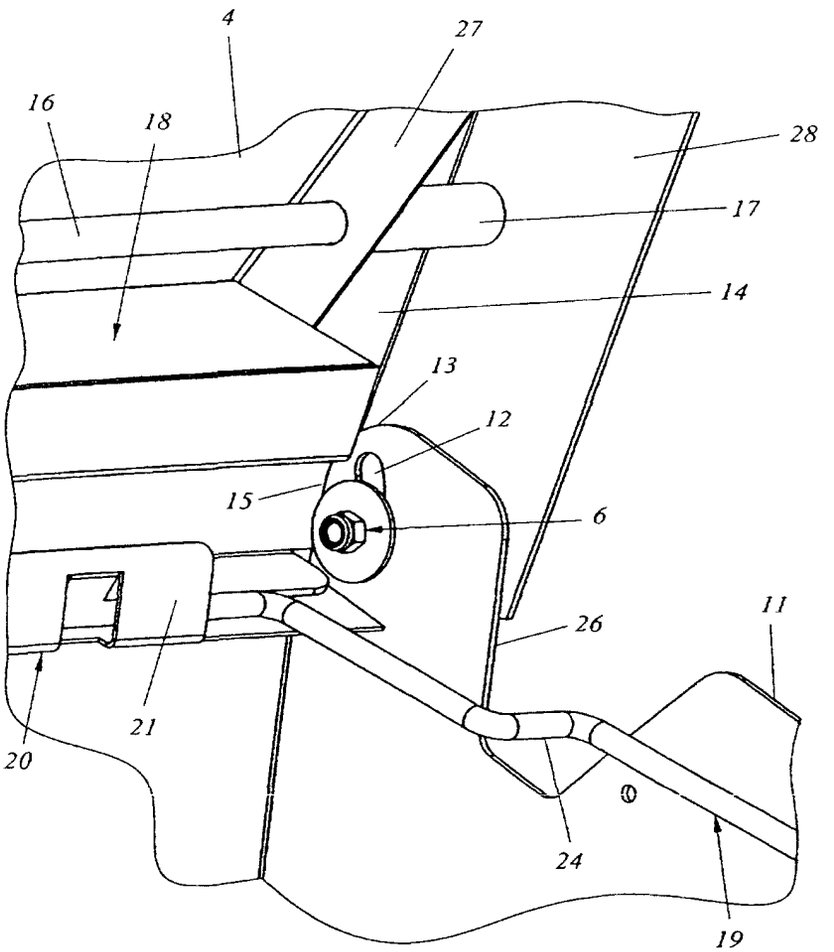
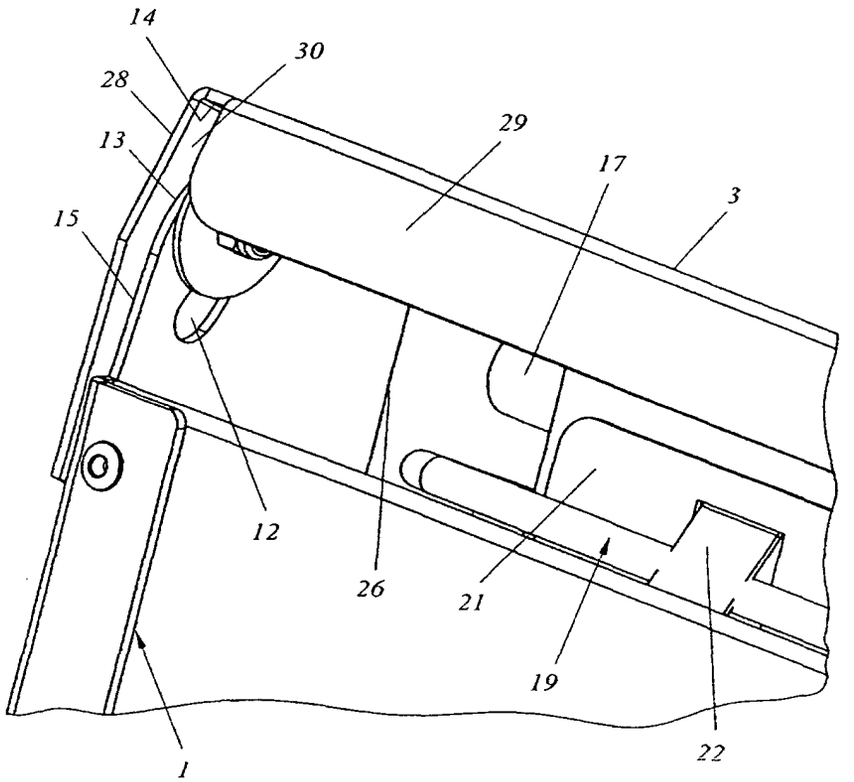


FIG. 3



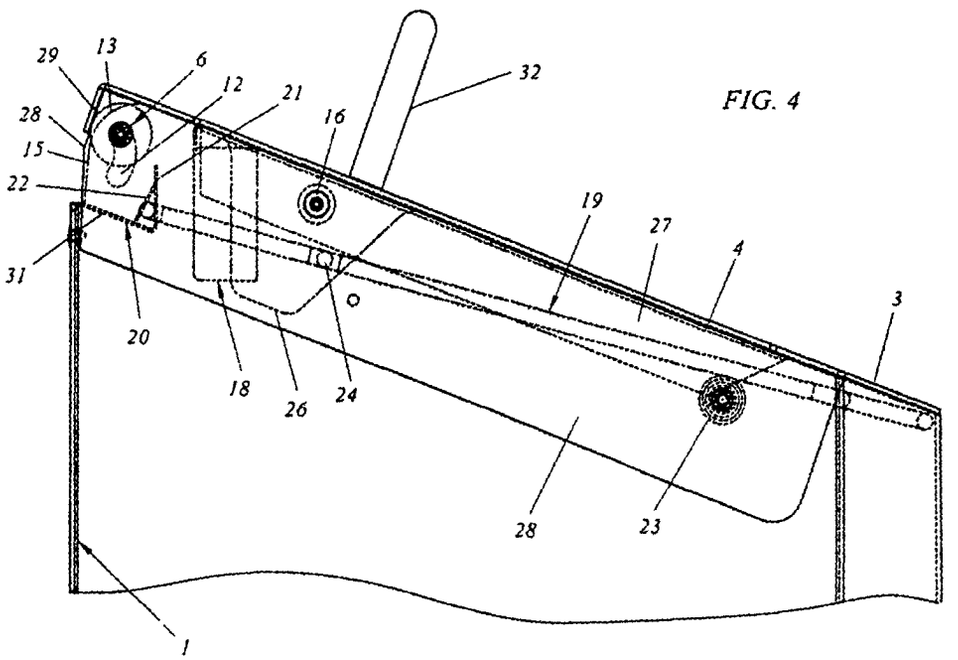


FIG. 4