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(71) Applicant: **Easy Sanitary Solutions B.V.**
7575 BK Oldenzaal (NL)

(72) Inventor: **Keizers, Jurgen Hendrik Peter Jozeph**
7582 GH Losser (NL)

(74) Representative: **'t Jong, Bastiaan Jacob**
Inaday Patent B.V.
Hengelosestraat 141
7521 AA Enschede (NL)

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(54) **Toilet paper holder**

(57) The invention relates to a toilet roll holder (1), comprising:
- a housing of at least an elongate tray (2) and a cover (3) for closing the elongate tray; and

- a dispensing opening (7) arranged in the housing for removing a toilet roll (R), wherein the cover closes a long side of the tray.

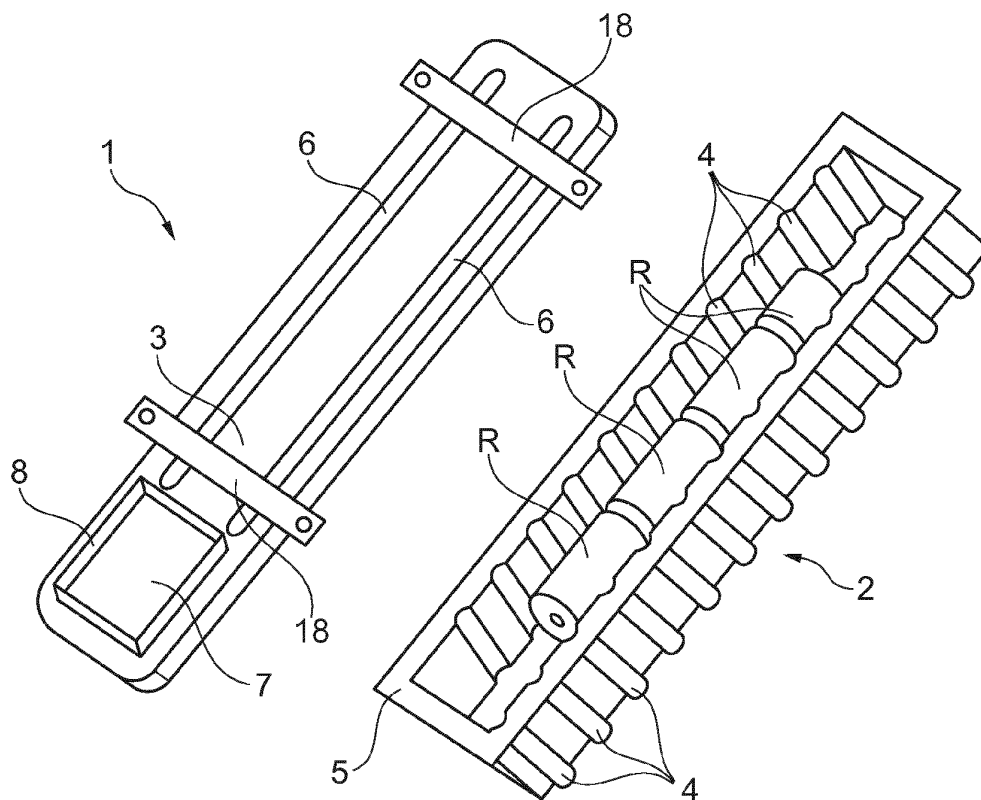


Fig. 1

Description

[0001] The invention relates to a toilet roll holder for holding a number of toilet rolls.

[0002] Toilet roll holders are known in numerous forms. Holders are for instance known with a base and a vertical rod around which several toilet rolls can be held in stacked form. Such a toilet roll holder is placed freely in a space.

[0003] Also known are toilet roll holders which can be built in, particularly into the housing in which the flush reservoir is also accommodated.

[0004] A toilet roll holder according to the preamble is for instance known from US 3295900. This publication describes a build-in toilet roll holder with a housing in the form of an elongate cabinet which is arranged in an opening in a pre-wall, and a cover which closes the opening in the pre-wall and the elongate tray. Arranged in the cover is a dispensing opening for removal of a toilet roll. The cover can be removed in order to refill the housing with toilet rolls. In this toilet roll holder the elongate tray is provided with a peripheral flange with which the elongate tray can be fixed in the opening.

[0005] The drawback of this toilet roll holder is that the cover extends over the whole length of the housing and that this cover is wholly visible in the built-in position of the toilet roll holder. The choice of material for at least the cover hereby has to be adapted to the materials used in the space. This toilet roll holder cannot be built in further because the cover has to be removable and moreover comprises an operating pin for moving the toilet rolls along in the housing.

[0006] US 2407971 describes another build-in toilet roll holder. A filling opening and a dispensing opening are provided here in a pre-wall. Further provided behind the pre-wall is a duct extending between this filling opening and the dispensing opening. The toilet roll holder is filled with toilet rolls via the filling opening, which can optionally be provided with a cover.

[0007] In this embodiment of a known toilet roll holder a large part of the housing is concealed behind the pre-wall and only the filling opening and the dispensing opening are still visible. The drawback is however the complex form of the duct behind the pre-wall, making the costs of manufacture relatively high.

[0008] In addition, this toilet roll holder first has to be mounted on the pre-wall before the pre-wall can be placed. When different tradespeople are building a toilet space, the building-in of the holder may cause problems because the tradespeople have to work together.

[0009] A build-in toilet roll holder is further also known wherein an injection-moulded part with a dispensing opening is arranged on a piece of PVC pipe. The injection moulding of such a part is relatively expensive, as is the PVC pipe. In addition, the production costs are relatively high because two different techniques are used for extruding of the pipe on the one hand and injection moulding of the part on the other. This holder must also be already

mounted on the pre-wall before the pre-wall is placed.

[0010] Further known is an embodiment in which a metal holder is arranged against the wall, after which a pre-wall is arranged in front of this metal holder.

[0011] It is now an object of the invention to provide a toilet roll holder which is suitable for building into a pre-wall and wherein the above stated drawbacks are reduced.

[0012] This object is achieved according to the invention with a toilet roll holder comprising:

- a housing of at least an elongate tray and a cover for closing the elongate tray; and
- a dispensing opening arranged in the housing for removing a toilet roll, wherein the cover closes a long side of the tray.

[0013] The housing can be fixed in an opening of a pre-wall using for instance an adhesive or mastic. However, a preferred embodiment of the toilet roll holder according to the invention comprises at least two fixing flanges arranged on either side of the side with the dispensing opening.

[0014] Because the housing consists of two parts, a tray and a cover, it can be made more simply and thereby more cost-effectively. Fixing flanges can then further also be arranged with which the housing can be mounted in an opening of for instance a pre-wall. Such a pre-wall preferably has a base layer such as a breeze block wall or a plasterboard, and a finishing layer such as a tile layer. When the toilet roll holder is in the mounted position the finishing layer can then extend as far as the dispensing opening so that the toilet roll holder is substantially invisible. The material of the holder need not therefore be adapted to the choice of material in the toilet space. It is thus readily possible to opt for an inexpensive material for the toilet roll holder which would otherwise not match the materials in the toilet space.

[0015] The toilet roll holder can further also be placed only when the base layer of the pre-wall has already been placed.

[0016] In yet another embodiment the cover can also be formed by a flat plate.

[0017] In a highly preferred embodiment of the toilet roll holder according to the invention the elongate tray and/or the cover are manufactured by thermoforming.

[0018] Thermoforming is a relatively inexpensive method of manufacture. The tray and the cover of the housing can be formed in simple manner by heating a sheet of plastic in a mould and can then be joined together, for instance by snapping or gluing.

[0019] Another way of manufacturing the cover and/or the housing is by means of injection moulding, by means of blow-moulding or by means of casting with a foam such as a polyurethane foam. The choice of manufacturing method depends particularly on the quantity which has to be made. Thermoforming is advantageous in the case of small quantities, while injection-moulding is on

the other hand advantageous in the case of large quantities. The toilet roll holder can optionally be formed together with a build-in reservoir, or they can be arranged on each other. The advantage hereof is that the usual steel profile will be modified due to the integration of holder and build-in reservoir.

[0020] In a preferred embodiment of the toilet roll holder according to the invention the elongate tray and the cover are connected to each other via at least one film hinge.

[0021] The walls of the housing typically have a uniform thickness. The walls of the housing are preferably provided with strengthening grooves. Owing to the strengthening grooves the wall thickness can be reduced while a good stiffness of the walls is nevertheless maintained. The manufacturing costs and material costs can hereby be further reduced. In addition, the material will heat and cool more quickly because of the smaller wall thickness.

[0022] In a further embodiment of the toilet roll holder the fixing flanges are formed by a plate which is arranged on the side with the dispensing opening and at least two edges of which extend beyond the edges of the side with the dispensing opening. It is also possible to form a flange on the cover. In the case of for instance thermoforming however, a starting material thickness of about 2 to 3 mm is necessary, whereby the resulting flange will acquire the same thickness. This is difficult to incorporate into the tile adhesive layer. By now using a flat plate which is not thermoformed, the thickness of the plate can be reduced to for instance 1 mm. Such a thickness is considerably easier to incorporate into the tile layer.

[0023] Using the plate the toilet roll holder can be mounted firmly in the opening in the base layer of the pre-wall. A finishing layer can then be arranged over the plate. A web layer can optionally be adhered to the plate for better attachment of tiles. The plate can also have a roughened surface or other finish whereby tile adhesive adheres well to the plate.

[0024] In another embodiment of the toilet roll holder according to the invention a protruding flange is arranged around the dispensing opening. This protruding flange preferably has a thickness which is roughly equal to a minimal tile thickness, for instance the thickness of glass mosaic. A frame necessary for finishing the tile edge can hereby be less deep, while the whole side of a tile is still concealed from view by the combination of frame and protruding flange. This is because the protruding flange already covers a part of the tile, while the frame covers the remaining part of the tile.

[0025] The dispensing opening is preferably arranged in the cover close to an outer end of the cover. The dispensing opening can also be arranged in the tray.

[0026] Yet another embodiment of the toilet roll holder according to the invention further comprises spring means for urging the toilet rolls toward the dispensing opening. The spring means ensure that a toilet roll is always positioned at the dispensing opening. The toilet roll holder can hereby be arranged in any desired position

and it is not essential for the dispensing opening to always be positioned on the underside of the housing.

[0027] The invention further relates to a combination of a toilet roll holder according to the invention and a pre-wall comprising a base layer and a finishing layer such as a tile layer, wherein the toilet roll holder is arranged in an opening in the base layer and wherein the dispensing opening is arranged at least overlapping with and preferably centred in an opening in the finishing layer.

[0028] An embodiment of the combination according to the invention further comprises a frame arranged in the opening of the pre-wall for the purpose of finishing the opening.

[0029] The housing, and in particular the elongate tray, can in addition be provided with two compartments accessible via the dispensing opening. A brush for cleaning can for instance be arranged in the second compartment. Both the supply of toilet rolls and the cleaning brush can be concealed from view when the dispensing opening is provided with a door.

[0030] These and other features of the invention are further elucidated with reference to the accompanying drawings.

Figure 1 shows an embodiment of the toilet roll holder according to the invention.

Figure 2 shows a perspective cross-sectional view of figure 1 in the assembled state.

Figure 3 shows an embodiment of the combination according to the invention.

Figure 4 shows a perspective view of a second embodiment according to the invention.

Figure 5 shows a cross-sectional view of the embodiment according to figure 4.

Figures 6A-6C show a cross-sectional view of a door in different positions.

[0031] Figure 1 shows a toilet roll holder 1 according to the invention. This toilet roll holder 1 comprises an elongate tray 2 and a cover 3. Toilet rolls R are received in elongate tray 2. Elongate tray 2 further has standing walls in which strengthening grooves 4 are arranged so that the wall thickness of elongate tray 2 can remain limited. Provided on the upper edge of elongate tray 2 is a peripheral flange 5 on which cover 3 can be arranged by means of for instance a snap connection or an adhesive connection.

[0032] Cover 3 is likewise provided with strengthening grooves 6 and a dispensing opening 7. A standing flange 8 is provided around dispensing opening 7. Two fixing flanges 18 are further arranged on cover 3.

[0033] Strengthening grooves 6 can further ensure that toilet rolls R are held at a distance from the cover. When for instance a finishing flange protrudes into dispensing opening 7, toilet roll R is then hereby prevented from catching against the finishing flange.

[0034] Figure 2 shows toilet roll holder 1 in vertical position, wherein cover 3 is placed on elongate tray 2.

Raised portions 9 are arranged on the end surface of elongate tray 2 so that a groove is formed therebetween and a toilet roll R can be easily removed.

[0035] Figure 3 shows an embodiment 10 of a combination according to the invention. A pre-wall 19 with a tile layer 12 thereon is provided here in front of a wall 11. An opening 20 is arranged in this pre-wall 19 and a smaller opening 13 is arranged in tile layer 12. Pre-wall 12 can further be used to conceal a build-in reservoir (not shown) of a toilet bowl 14.

[0036] A toilet roll holder 1 as according to figures 1 and 2 is arranged in opening 20 of pre-wall 19. Dispensing opening 16 is positioned here on the upper side of elongate tray 2. Flange 8 of dispensing opening 16 protrudes here into opening 13 of tile layer 12.

[0037] A spring 17 which presses against the underside of the stack of rolls R is provided in toilet roll holder 1 in order to ensure that toilet rolls R are urged to dispensing opening 16.

[0038] The raised portions 9, now on the upper side of elongate tray 2, ensure that the toilet rolls are not pressed too far upward.

[0039] Figure 4 shows a second embodiment 30 of a toilet roll holder according to the invention. Holder 30 here also has a tray 31 made by means of thermoforming and closed by a likewise thermoformed cover 32 (see also figure 5).

[0040] Arranged over cover 32 is a mounting plate 33 which is provided along the edge with openings 34 with which the toilet roll holder 30 can be mounted against a pre-wall.

[0041] A flange 35 which bounds dispensing opening 36 protrudes through mounting plate 33. A frame 37 can further be placed in dispensing opening 36 in order to finish the opening in a finishing layer, such as opening 13 in figure 3. A door 38 can finally be arranged in frame 37 to close dispensing opening 36.

[0042] Placed on the bottom of tray 31 is a removable bracket 43 which facilitates the removal of a toilet roll in that because of bracket 43 the roll remains a short distance from the bottom of tray 31.

[0043] Figures 6A-6C show a cross-sectional view of door 38 according to figures 4 and 5 in different positions.

[0044] Door 38 is arranged hingedly in frame 37 by means of hinge pin 39. A spring with two legs 40 and 41 is arranged around this hinge pin 39.

[0045] In the position shown in figure 6A the spring 40, 41 is not tensioned and exerts no pressure on door 38. Door 38 is held in position by means of magnet 42. A stop is hereby no longer necessary and more space is available in the dispensing opening for removing a toilet roll.

[0046] When door 38 is now pressed into frame 37 as shown in figure 6B, leg 40 will lie against door 38 and leg 41 of the spring will lie against frame 37, and spring 40, 41 will be tensioned.

[0047] As soon as door 38 is released, the tensioned spring 40, 41 will press door 38 back again, whereby door

38 will swing open (see figure 6C).

[0048] A tile can also be arranged in door 38, whereby the door is concealed from view in closed position.

[0049] Door 38 can further be arranged in an adjusting frame so that the frame can be adapted to the tile thickness and an overlapping flange is not necessary.

Claims

1. Toilet roll holder comprising:

- a housing of at least an elongate tray and a cover for closing the elongate tray; and
- a dispensing opening arranged in the housing for removing a toilet roll, wherein the cover closes a long side of the tray.

2. Toilet roll holder as claimed in claim 1, wherein the elongate tray and/or the cover are manufactured by thermoforming.

3. Toilet roll holder as claimed in claim 2, wherein the elongate tray and the cover are connected to each other via at least one film hinge.

4. Toilet roll holder as claimed in any of the claims 1-3, wherein the walls of the housing have a uniform thickness.

5. Toilet roll holder as claimed in any of the foregoing claims, comprising at least two fixing flanges arranged on either side of the side with the dispensing opening.

6. Toilet roll holder as claimed in claim 5, wherein the fixing flanges are formed by a plate which is arranged on the side with the dispensing opening and at least two edges of which extend beyond the edges of the side with the dispensing opening.

7. Toilet roll holder as claimed in any of the foregoing claims, wherein the walls of the housing are provided with strengthening grooves.

8. Toilet roll holder as claimed in any of the foregoing claims, wherein a protruding flange is arranged around the dispensing opening.

9. Toilet roll holder as claimed in any of the foregoing claims, wherein the dispensing opening is arranged in the cover close to an outer end of the cover.

10. Toilet roll holder as claimed in any of the foregoing claims, wherein the toilet roll holder further comprises spring means for urging the toilet rolls toward the dispensing opening.

11. Combination of a toilet roll holder as claimed in any of the foregoing claims and a pre-wall comprising a base layer and a finishing layer such as a tile layer, wherein the toilet roll holder is arranged in an opening in the base layer, wherein the dispensing opening is arranged at least overlapping with and preferably centred in an opening in the finishing layer. 5
12. Combination as claimed in claim 11, further comprising a frame arranged in the opening of the finishing layer for the purpose of finishing the opening. 10

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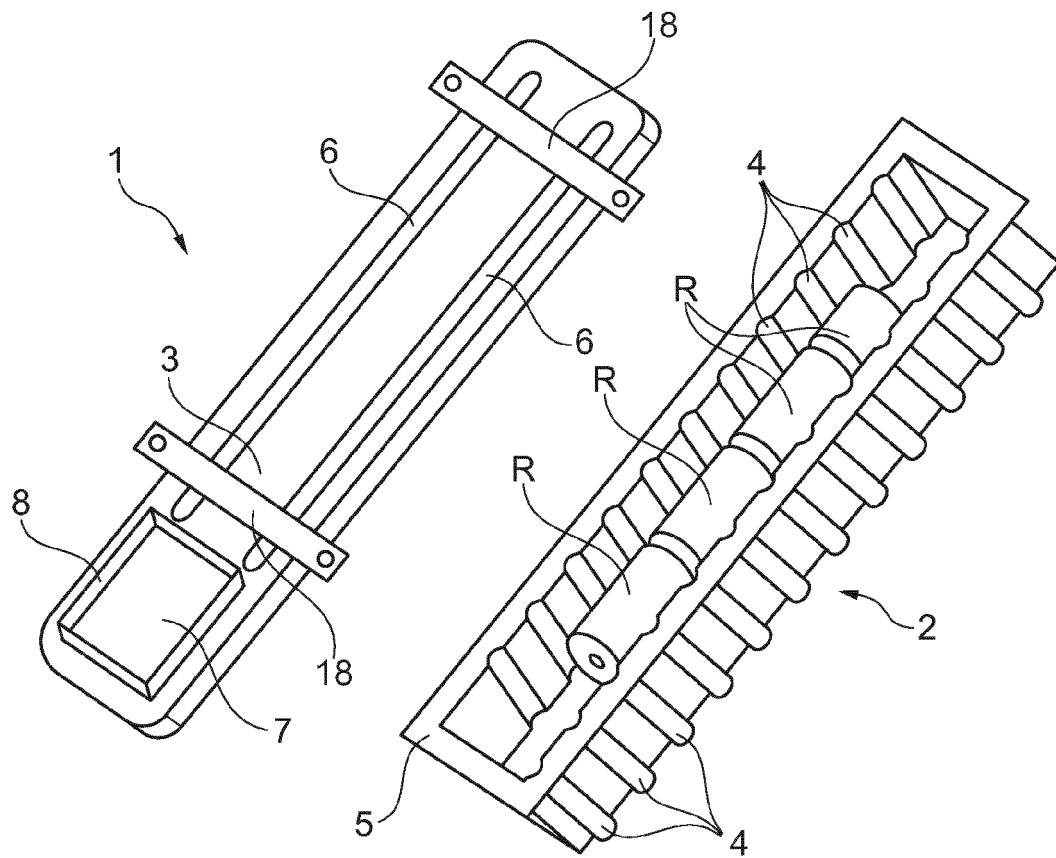


Fig. 1

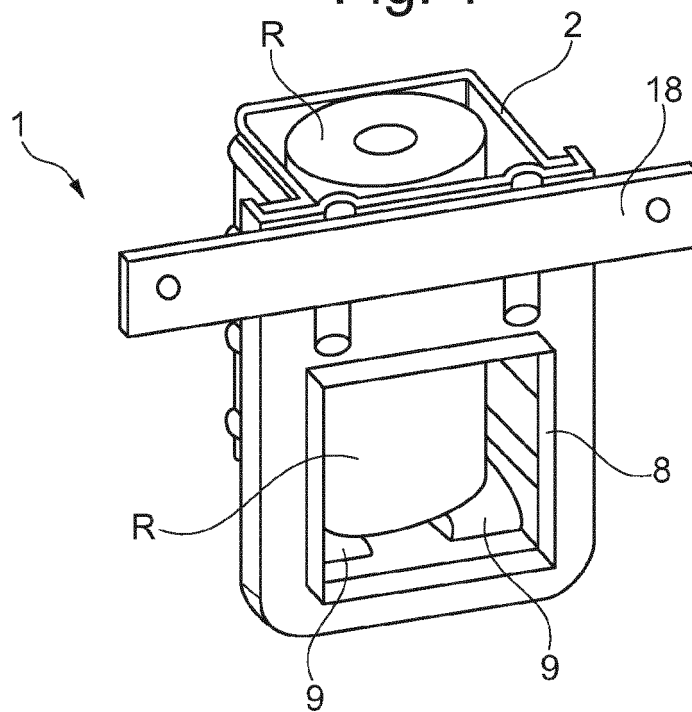


Fig. 2

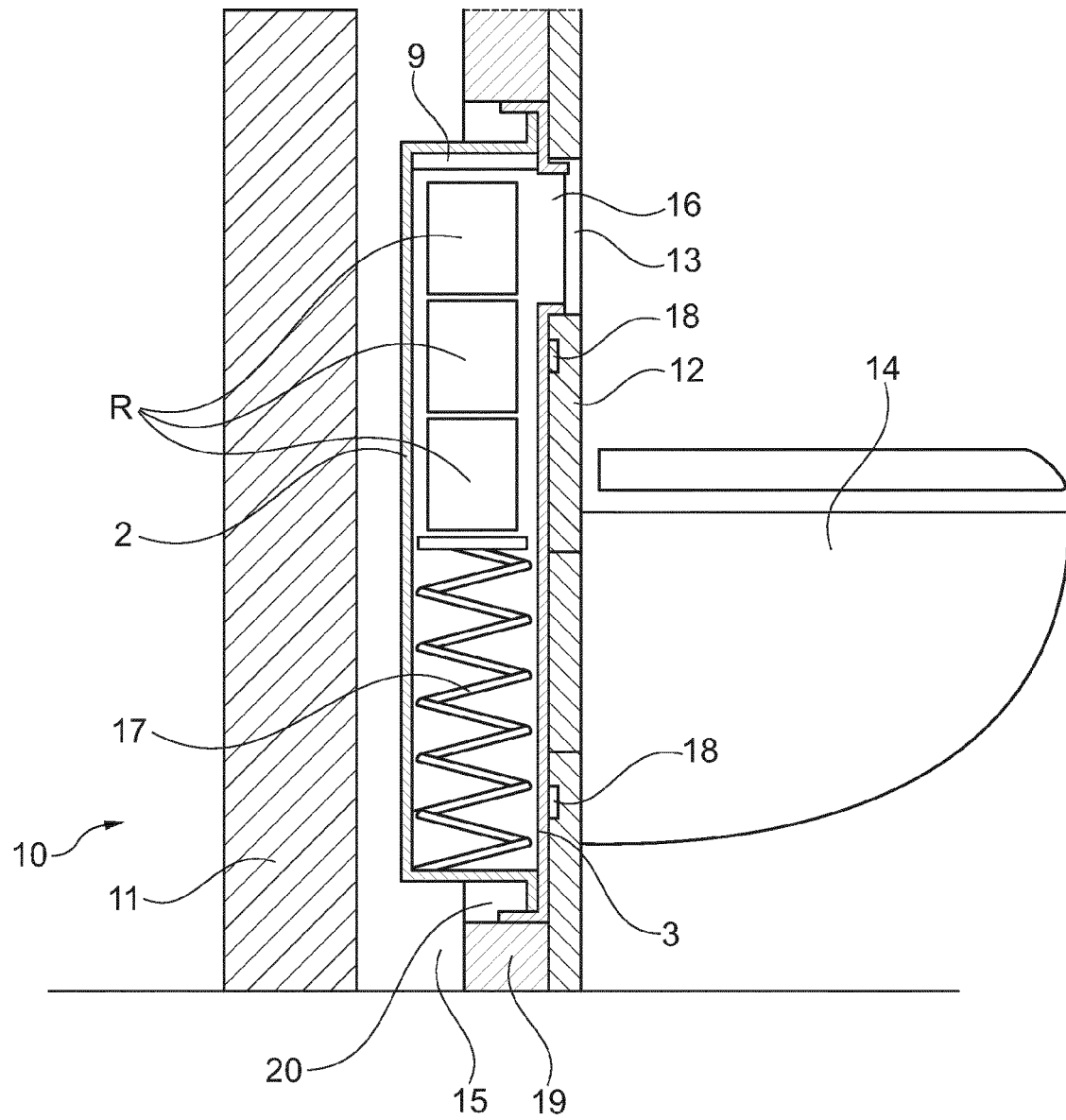


Fig. 3

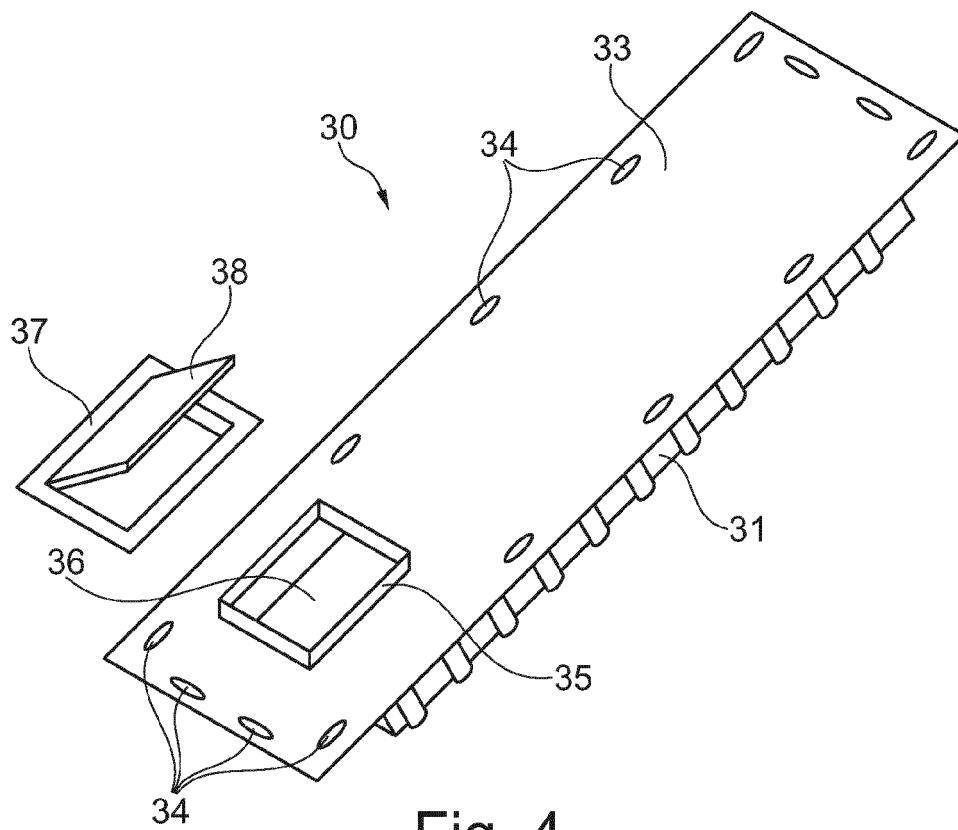


Fig. 4

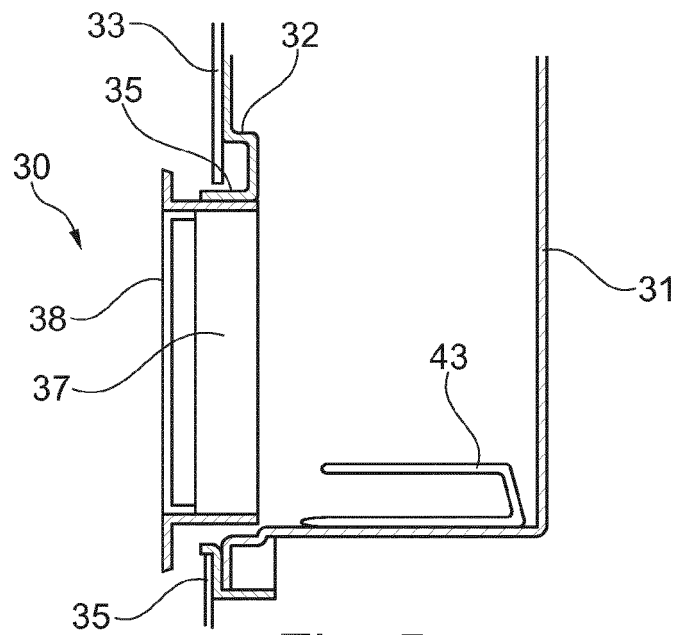


Fig. 5

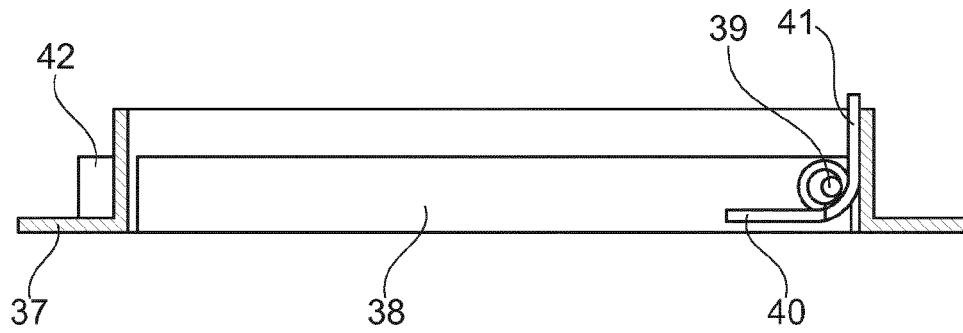


Fig. 6A

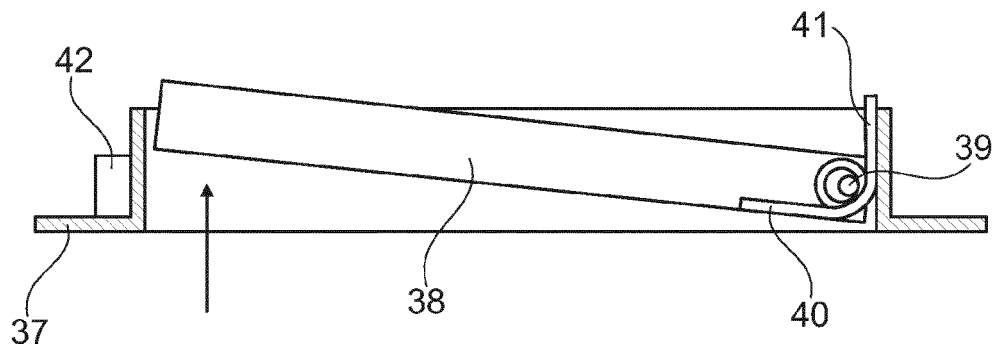


Fig. 6B

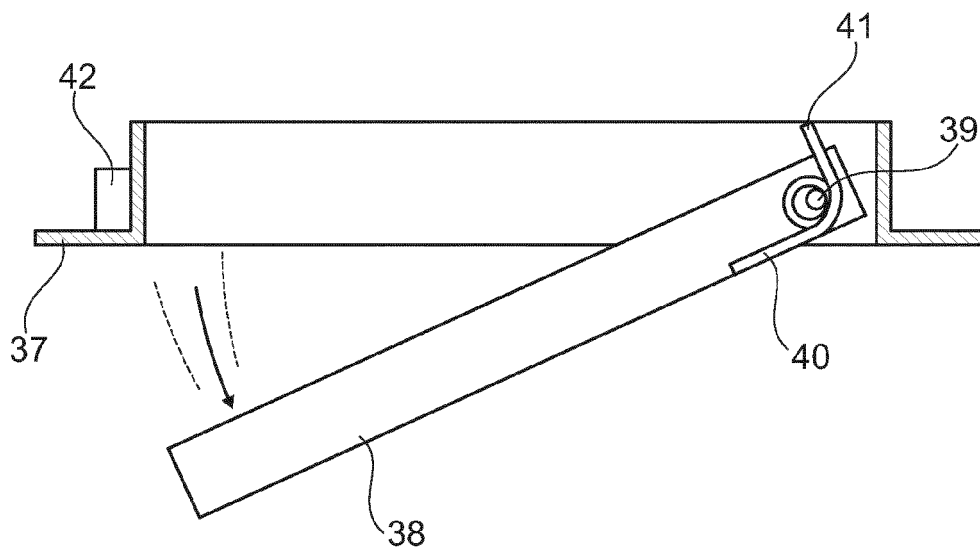


Fig. 6C



EUROPEAN SEARCH REPORT

Application Number
EP 13 19 5293

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 2 110 483 A1 (WILKE HEINRICH HEWI GMBH [DE]) 21 October 2009 (2009-10-21) * paragraph [0051] - paragraph [0122]; figures 6,8 *	1-9	INV. A47K10/22 A47K10/32
X,D	US 3 295 900 A (KENDALL WALTER V) 3 January 1967 (1967-01-03) * column 1, line 66 - column 3, line 2; figures 1,2,4 *	1,2,4-6,9	
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 27 March 2014	Examiner Zuurveld, Gerben
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.**

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The members are as contained in the European Patent Office EDP file on
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27-03-2014

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