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(54) **A housing structure for garbage collection containers**

(57) A housing structure for garbage collection containers (24) includes a supporting framework (1), external parts and doors fixed to this framework, whereby the containers (24) receive garbage through access openings (20) that are provided in the fixed external parts which form vertically extending side wall portions (18) situated adjacent the doors (23). The doors (23) form a support for advertising material along all the height of the housing structure.

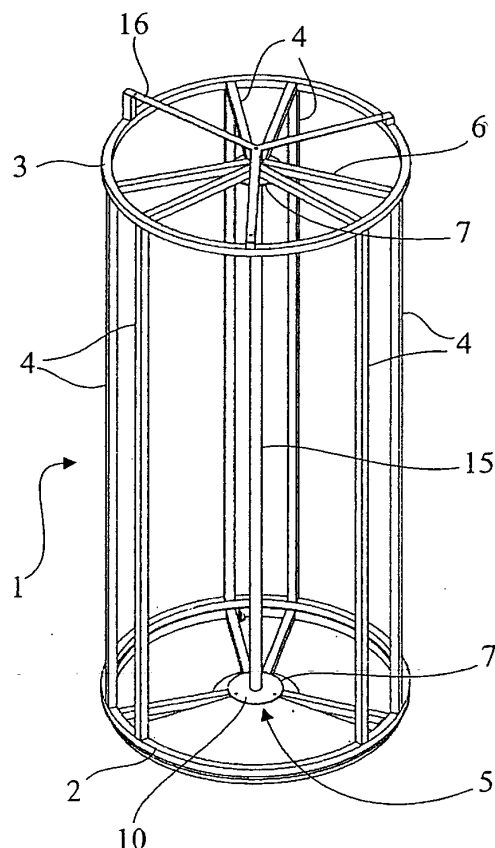


Fig. 3

Description

[0001] The present invention relates to a housing structure for containers for garbage collection and differentiated collection having advertising exhibitors in urban fittings.

[0002] Among preceding documents relevant to the differentiated collection, the closest prior art is shown in U.S. Patent No. 6,047,843, which discloses a self-bearing structure in the form of a compartmented receptacle for use in recycling. The self-bearing structure includes a supporting framework having internal cylindrical sections or segments and covered by a lid. A door is connected to match each internal cylindrical section in which a respective container for the differentiated collection is housed. Made on the lid of the self-bearing structure or alternatively over each door thereof, in any case in external fixed parts of the same structure are access openings for the passage of garbage designed to be received in the respective container.

[0003] An object of US 6,047,843 is to obtain a recyclable garbage collecting assembly that is aesthetically attractive. For this purpose, applied on the external surface of the doors of the structure are instructions for recycling, for example, in order to make it easier, more pleasant and, in the end, more efficacious than now.

[0004] As one can read in the specification of the patent US 6,047,843, the height of the self-bearing structure can reach nine feet, i.e. almost three meters. Since the access openings for the garbage passage are provided over the doors and the same access openings shall be reachable by the users, one can understand that the placement of the access openings in the lid or over the doors influences an extent in height of the self-bearing structure and then limits the available surface for attaching instructions or other.

[0005] This limitation becomes a drawback if the surface of the doors is desired to be used not only for the instructions but also for the advertising material to be attached. It is obvious that greater is the available surface, more efficacious will be the advertising message impact. Elongated self-bearing structures already exist in the urban fittings, but they operate only for supporting advertising messages and useful indications for roads, and not like containers for the differentiated collection of garbage. Further, there is a model of the same Applicant, in which the openings of the garbage passage are situated in the middle of the doors and suffer the above cited drawback.

[0006] Therefore, an object of the present invention is to provide a structure that can operate for housing containers for the differentiated collection and, in the same time, can serve pretty well for supporting advertising material in various forms.

[0007] The solution being provided by the invention is a housing structure for containers for garbage collection and differentiated collection having advertising exhibitors in urban fittings, including a supporting framework for

fixed external parts and doors, and internally housing containers reachable by garbage through access openings that are provided in the fixed external parts, that are vertically extending side wall portions situated adjacent said doors, and the access openings are made at an height that is comfortably reachable by a user, and the doors are useful as a support for advertising material along all the height of the structure.

[0008] According to the embodiment provided by the invention, the access openings do not interfere with the advertising message, since they do not limit the extent of the latter upward in the structure, nor interrupt it when inside the advertising message. The present invention will be described in one embodiment thereof with reference to the enclosed drawing, in which:

Figure 1 shows in a side view a supporting framework for a structure according to the present invention;

Figure 2 shows in a top plan-view the supporting framework in Figure 1;

Figure 3 is an isometric view of the supporting framework in Figure 1;

Figure 4 is an enlarged plan view of a connecting plate for connecting central beams of the supporting framework in Figure 1;

Figure 5 is an enlarged top plan view of a fixing plate for fixing the supporting framework in Figure 1 to the ground;

Figure 6 is a cross-section made along a plane having trace line A-A in Figure 4;

Figure 7 shows in a side view an assembly covering the structure according to the present invention;

Figure 8 shows in a top plan view the covering assembly in Figure 7;

Figure 9 is an isometric view of the covering assembly in Figure 7;

Figure 10 shows in a side view the structure according to the present invention;

Figure 11 is a cross-section made along a plane having trace line B-B in Figure 10; and

Figure 12 is a cross-section made along a plane having trace line C-C in Figure 10.

[0009] With reference to the drawings, shown in side view, plan view and isometric view in Figures 1 to 3 is a supporting framework, generally indicated at 1, for the structure according to the present invention. The supporting framework 1, by means of an example, essentially cylindrical, comprises at least a couple of rings 2, 3, the one a base ring, the other a top ring that are joined by sections acting as uprights generally indicated at 4. If, as in the example shown, the inside of the structure is designed to receive three containers, it is suitable that the uprights 4 are arranged in three couples, which are equidistant one from the other, of two near uprights. In this way, as seen below, the cylindrical side view between a couple and the other of the three couples can be covered by a respective door being hinged in one upright of the

couple of uprights, and the portion of cylindrical side view between the uprights of each couple is closed by an external fixed part like a portion of wall. The uprights 4 extend perpendicularly both downward and upward to form a cage, in the base ring 2 in transversal sections disposed in a pattern like spokes generally indicated at 5, and in the top ring 3 in an identical pattern like spokes 6. The transversal sections of the spokes 5 and 6 are retained by a lower and an upper connecting plate 7, 7. Represented in Figure 4 in enlarged scale is the connecting plate 7 in which a central hole 8 and a series of holes 9 are provided, preferably angularly spaced of the same distance.

[0010] Referring particularly to Figure 3, shown therein is a base plate 10 that serves for fixing to the ground the supporting framework 1 and therefore all the structure according to the invention. Small adjustable feet not shown in detail are provided.

[0011] The base plate 10 is provided with a first series of holes 11 corresponding to the series of holes 9 in the connecting plate 7. The holes 9 and 11 serve for the passage of bolts (not shown) to fasten together the connecting plate 7 and the base plate 10. Made in the base plate 10 is also a second series of holes 12, that are radially more external to the series of holes 11, holes 12 that serve for the passage of anchoring bolts (not shown) in order to fix the base plate 10 to the ground. In the structure according to the present invention a trunk of pipe 14 useful for positioning a central pillar 15, for example also a tubular element, can be fixed in a central hole 13 of the base plate 10.

[0012] The central pillar 15 extend beyond the top ring 3 of the supporting framework 1, thereby supporting in the centre a frame 16 made of arms positioned 120 degrees one from the other. The frame 16 is based with the external ends of the arms on the upper ring 3 by differently high small feet in such a manner so to define an inclined plane with respect to the upper ring 3.

[0013] With reference to Figures 7 to 9, therein is shown a diagrammatic representation of a general covering assembly of the structure comprising an annular element 17 designed to contact the base ring 2, three external vertical fixed portions 18, that are arched in their transversal cross-section with the same bend angle of the base ring 2, and a cap 19. The cap 19, being based on the inclined plane frame 16, is also inclined. Thus the cap 19 can act usefully as a support for a photovoltaic panel not represented in the figures. The photovoltaic panel can constitute a suitable energy source for lightning or audio-visual apparatuses in the structure according to the invention.

[0014] Access opening 20 being useful as passages of a material to be recycled from outside to inside in the structure are provided on each of the external vertical fixed portions 18. The access openings 20, which are oblong in their shape, are delimited by a frame 21, which is preferably elongated downward, whereby to define better through their conventional colour the kind of material

to be entered.

[0015] Alternatively, the colour of the frames 21 is neutral, and this indicates that garbage may enter in an undifferentiated manner.

[0016] In correspondence with the access opening 20, on the internal side of each fixed portion 18 there are if any sleeves 22 that are curved downward for guiding the garbage entering the respective containers shown in the following figures.

[0017] With reference to Figures 10 to 12, which are a side view of the whole structure according to the invention and two transversal cross-sections along the planes with trace lines B-B and C-C in Figure 10 respectively, the structure according to the invention is shown provided with doors indicated generally at 23, in a number of three in the illustrated embodiment. It is clear that also the doors 23 are arched generally with the same radius of curvature of the base ring 3. As seen in Figure 11, every door is hinged on an upright 4 supporting its fixed portion 18. Details of the hinge are not illustrated since they can be chosen in the desired forms available on sale.

[0018] Supported by the base of the structure are garbage containers 24, which are shown in cylindrical shape. Nevertheless, they can have a prismatic shape with a base in the form of a circle segment as shown in the above U.S. patent. It should be clear that the aperture angle of the segment or circular section of every container shall be chosen in such a way to allow the passage through the door of the structure.

[0019] The doors 23 form a supporting surface for advertising material, which is not shown in the figures and can be of any desired type, such as posters, serigraphies, luminous panels or other.

[0020] An internal electric circuit is not even shown because it can be chosen according to the normal methods of designing.

Claims

1. A housing structure for containers for garbage collection and differentiated collection having advertising exhibitors in urban fittings, including a supporting framework (1) for fixed external parts and doors, and internally housing containers (24) reachable by garbage through access openings (20) that are provided in the fixed external parts, **characterised in that** the fixed external parts of the structure are vertically extending side wall portions (18) situated adjacent the doors (23), and access openings (20) are made at an height that is comfortably reachable by a user, and the doors (23) are useful as a support for advertising material along all the height of the structure.

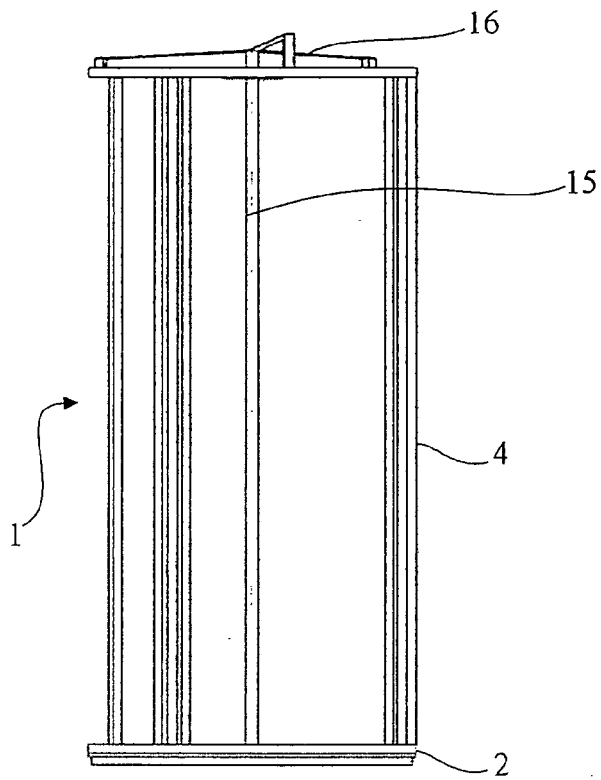


Fig. 1

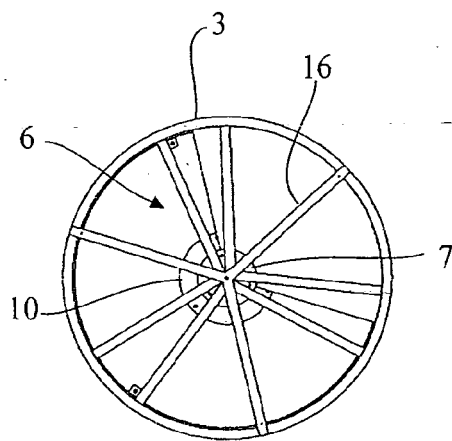


Fig. 2

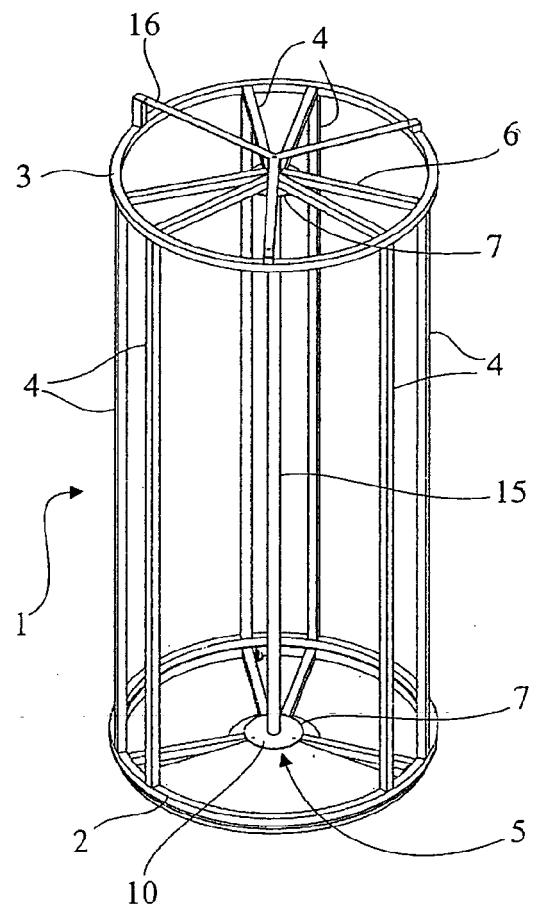


Fig. 3

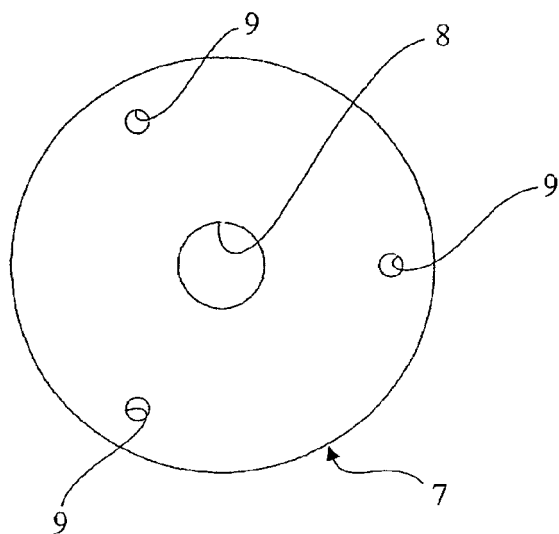


Fig. 4

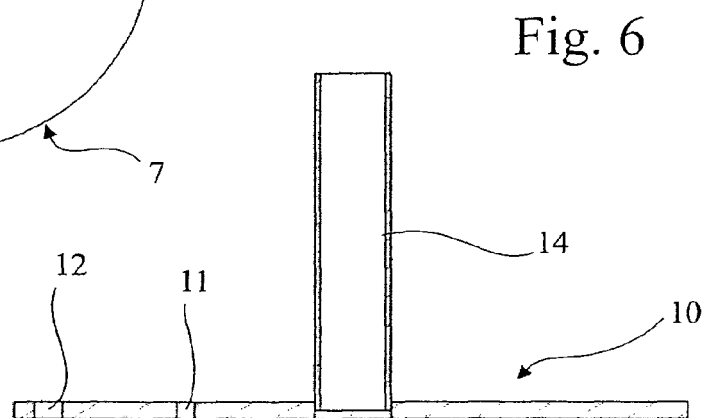


Fig. 6

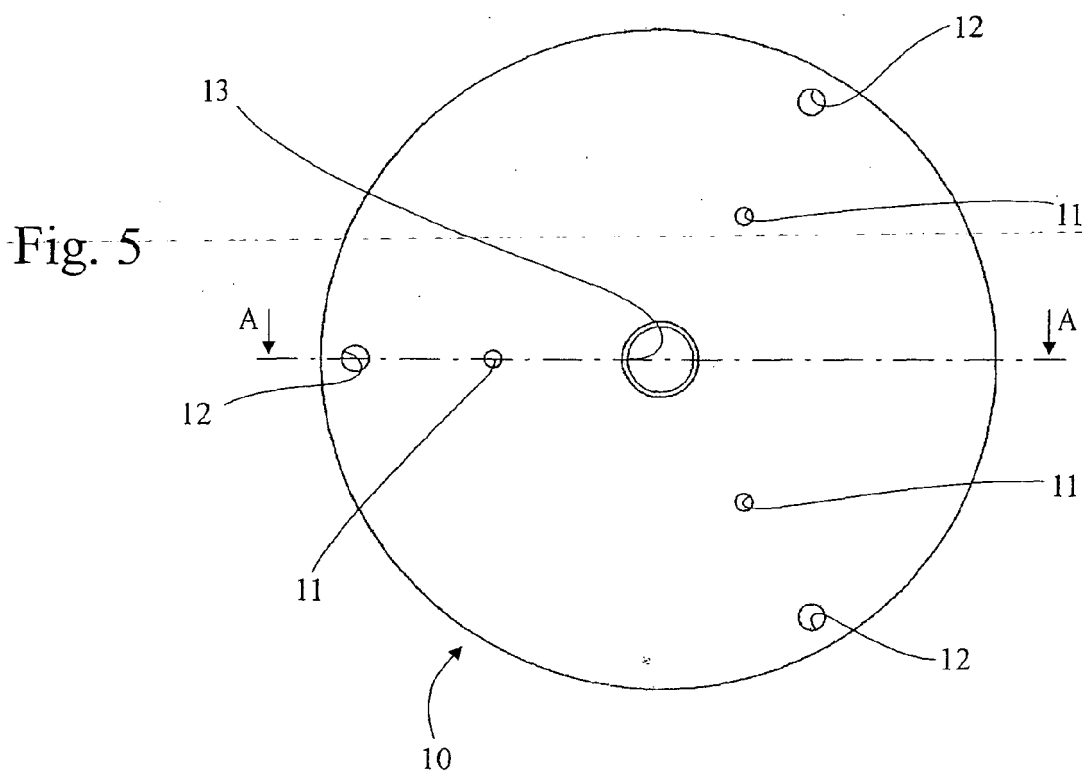


Fig. 5

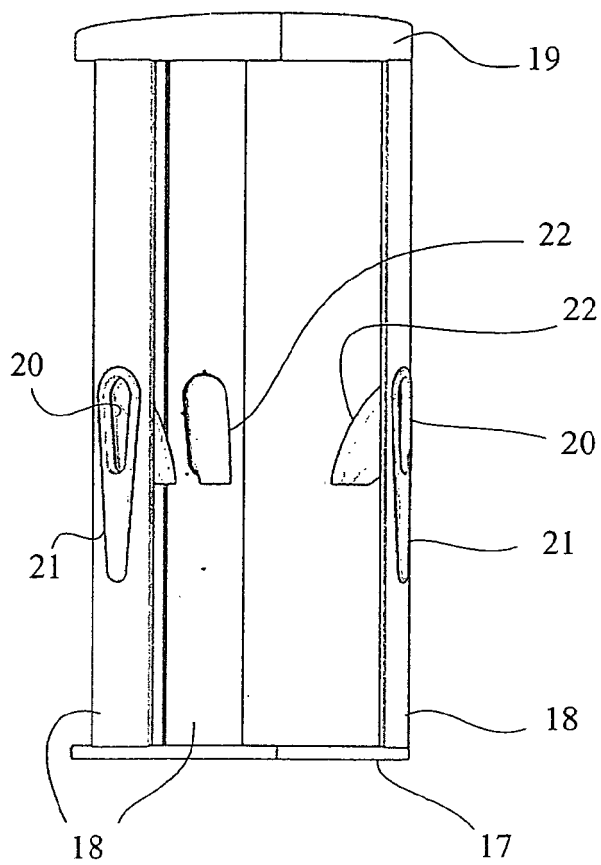


Fig. 7

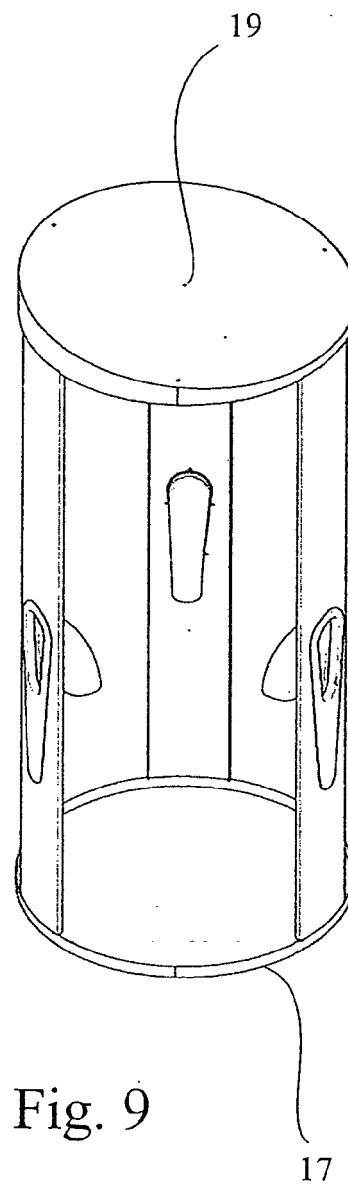


Fig. 9

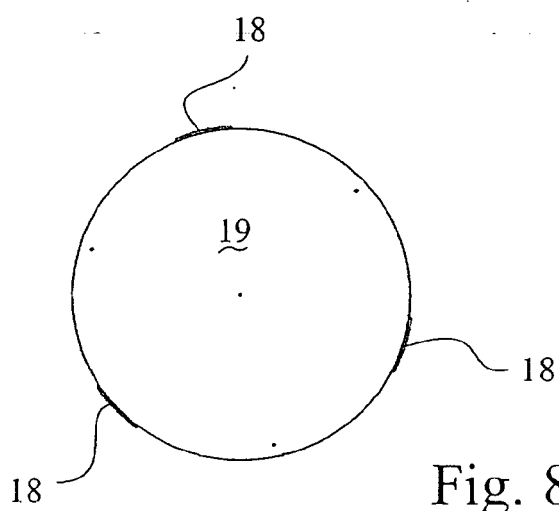


Fig. 8

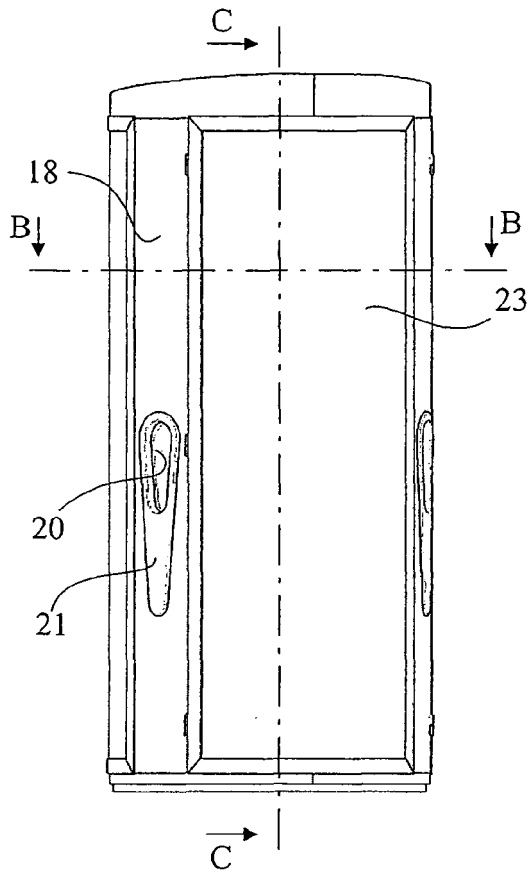


Fig. 10

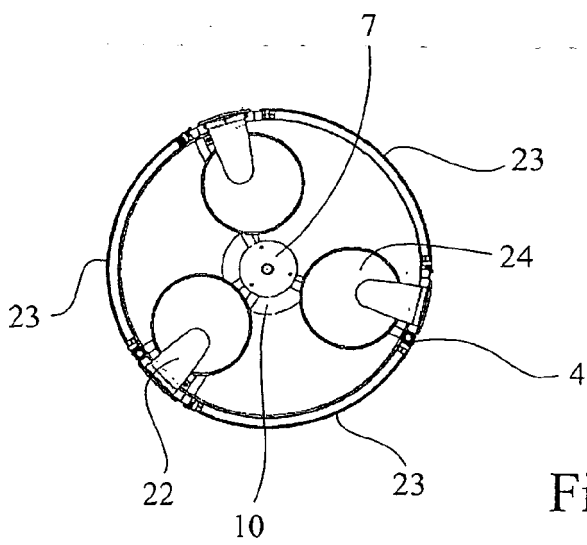
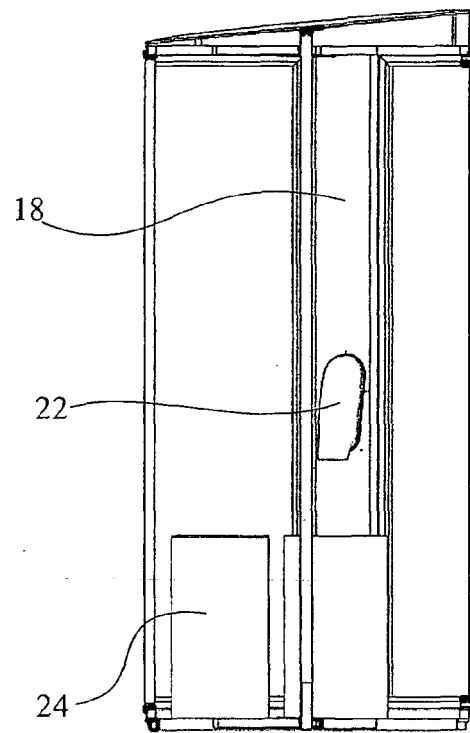


Fig. 11

Fig. 12





EUROPEAN SEARCH REPORT

Application Number
EP 10 42 5071

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A,D	US 6 047 843 A (D. MECKE) 11 April 2000 (2000-04-11) * column 2, line 52 - column 4, line 49 * * figures 1-4 *	1	INV. B65F1/14
A	FR 2 913 962 A1 (MULTI COM AFFICHAGE SARL) 26 September 2008 (2008-09-26) * page 3, line 19 - page 4, line 16 * * figures 1,2 *	1	
A	GB 2 336 101 A (D. MCKEOWN ET AL.) 13 October 1999 (1999-10-13) * page 6, line 5 - line 24 * * figures 1-4 *	1	
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A	DE 20 2004 014301 U1 (P. UNRUH) 18 November 2004 (2004-11-18) * the whole document *	1	TECHNICAL FIELDS SEARCHED (IPC) B65F
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 25 June 2010	Examiner 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 (P04/C01)

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

EP 10 42 5071

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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25-06-2010

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