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(54) Holding cabinet

(57) A holding cabinet or the like especially intended for location in water splashing areas, for example shower cubicles, comprising a cabinet body (1) and a movable door (2) turnable relative to the cabinet body (1). The door (2) has a convex side and a concave side carrying at least one shelf (4) which is fitted to move into the cabinet body (1) thereby exposing its concave side and the at least one shelf (4). The cabinet body (1) and door (2) are provided, at their upper and lower ends, with mutually cooperating journalling means which, as known per se, are arranged to guide the turning movement of the door. The journalling means for at least the cabinet body are formed in separate end pieces (6) attached to the cabinet body (1).

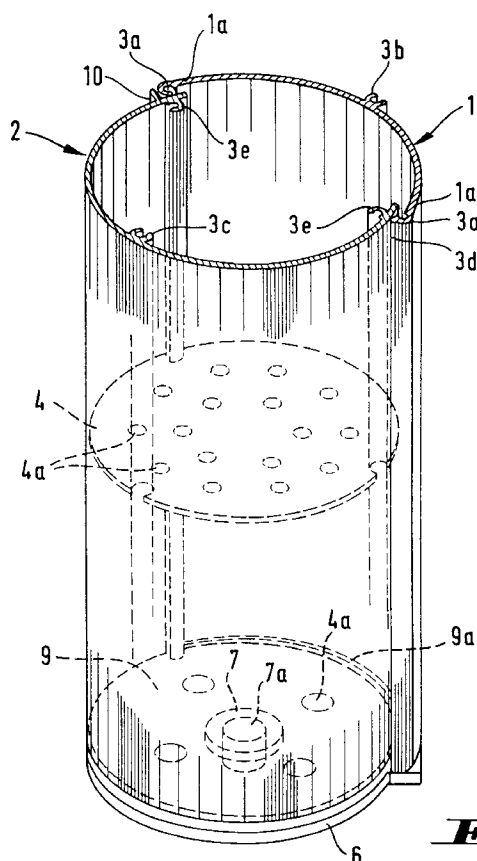


Fig. 1

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Description

This invention relates to a holding cabinet or the like according to the preamble of claim 1.

In shower cubicles or the like there is often a need for a cabinet for holding articles, such as soap, brushes and shampoo, that are required when taking a shower. Such a cabinet should be easy to open and close and no water should penetrate into the cabinet when a shower is taken. Furthermore, the cabinet should not take up too much space since there is often only a limited space within the shower cubicle.

An aim of the invention is to provide a cabinet, especially for shower cubicles, which is relatively inexpensive to manufacture, which takes up little space and in which small articles may be kept without becoming wet during use of the shower.

According to the present invention this aim is achieved by a cabinet as claimed in the ensuing claim 1. The basic idea of the invention is that, in a cabinet having a door which carries at least one shelf and which moves into the interior of the cabinet on opening of the door, the cabinet body as well as the door are made of elements, preferably profile elements, which at both ends are provided with cooperating journalling means arranged to guide the movement of the door, with the journalling means for at least the cabinet body being provided in separate end pieces attached to the cabinet body. This results in an inexpensive, rigid and compact cabinet that, regardless of whether the door is open or closed, takes up little space, especially if the cabinet is mounted in a corner of a shower cubicle or the like.

Preferably the journalling means of the door is in separate door end pieces attached at both ends of the door.

The turning movement of the door is guided entirely by the journalling means arranged at the upper and lower ends of the door. The door is thus able to move with low friction and receives a precise guiding. The end pieces of the cabinet body are preferably provided with an attaching arrangement for fixing the cabinet rigidly to a wall or, preferably, to two walls forming a corner. Such fixings at both ends of the cabinet provide rigidity to the mounted cabinet, the fixings being both reliable in operation and giving stiffening support to the cabinet structure. Since the attachments and journalling means are all provided in the cabinet body end pieces, the advantage is obtained that the cabinet body can be made from a simple profile element, e.g. formed by extrusion from extrudable material, such as aluminium or plastics material, cut to a desired length. The same type of end piece can be used in all cabinets, regardless of their length. In this way, the manufacturing costs of differently sized cabinets can be kept very low. Since the turning bearings for doors of different sizes are formed in similar end pieces, the cabinet structure and its assembly is very simple and convenient.

It has been found suitable that, measured from the

centre of rotation of the door, the door conveniently extends through a sector of more than 180°, preferably a sector of at least 210°. The protective function of the door will then be significant. The cabinet body may, as the door, have the shape of a circular sector, but it is suitable to somewhat outwardly bend the longitudinal edge areas of the sector-shaped cabinet body so that they are better adapted to a wall or a corner in which the cabinet is mounted. To ensure that the cabinet body and the cabinet door fit properly, the cabinet body may be provided, at its longitudinal edges, with inwardly protruding enlargements, strips or lips sealing against the door. These details can be incorporated in the profile element from which the cabinet body is made.

The cabinet body and, preferably also the door, should preferably have a number of longitudinal reinforcements which provide the cabinet body and door with rigidity and also serve as fixing or holder members for the cabinet body end pieces and the door end pieces if provided. In this way a most economical manufacture can be achieved. At least one of the longitudinal reinforcements of the door may comprise an enlargement with a groove, open towards the concave side of the door, in which groove support elements for the shelves of the door may be fitted so that they are adjustable in the longitudinal direction of the groove. Thereby, exceptionally good possibilities are provided for arranging shelves at different desired levels and for changing their height within the cabinet as required.

It has proved especially advantageous to make both the door and the cabinet body of extruded aluminium profiles with a wall thickness of approximately 2 mm. Both profiles are preferably substantially arcuate in shape having a radius of approximately 50 mm. The radius of the arcuate cabinet body must naturally be somewhat greater than the radius of the convex side of the arcuate door.

An embodiment of the invention will now be described, by way of example only, and with particular reference to the accompanying drawings, in which:

Figure 1 is a schematic perspective view of a holding cabinet according to the invention showing a cabinet body and a door in a closed position;

Figure 2 is a partly exploded view of the cabinet shown in Figure 1 but with the door in an open position; and

Figure 3 is a schematic cross-sectional view of the cabinet shown in Figures 1 and 2 and illustrating attachment of the cabinet to two walls.

Figure 1 shows a cabinet having a cabinet body 1 and a door 2 mounted for sliding circularly, i.e. turning or revolving, relative to the body 1. The cabinet body 1 and the door 2 are suitably made of aluminium profiles with a wall thickness of approximately 2 mm. The pro-

files include a number of longitudinal reinforcements in the form of longitudinally extending enlargements 3a, 3b, 3c and 3e each having a basically U-shaped cross-section providing an open longitudinal slot. The manufacture of such aluminium profiles is possible using normal extrusion or profile producing techniques. The cabinet body 1 includes two radially inwardly protruding enlargements 3a and one radially outwardly directed enlargement 3b, and the door 2 has two radially inwardly protruding enlargements 3e at its opposite longitudinal edges and one radially inwardly protruding enlargement 3c between them in the middle. The cabinet body 1 and door 2 may also have other reinforcements in the form of low longitudinal ridges or the like which, on the one hand, strengthen the profile and, on the other hand, give it a more aesthetic appearance. Such a ridge pattern is especially suitable for the outer side of the door 2 since it makes it easier to get hold of the door to open and close it. For proper functioning of the cabinet, it is highly desirable for the cabinet body 1 and door 2 to be relatively rigid so that they retain their shape when the door 2 is turned relative to the cabinet body 1. It is thus preferred for the body 1 and door 2 to be made of basically rigid material provided, if desired, with reinforcements to improve the rigidity of the cabinet. Figure 2 shows the door 2 provided with at least one shelf 4 which may be fixed on the door at any desired level or height and which turns or moves together with the door. The or each shelf is preferably provided with at least one drainage aperture 4a.

Figure 3 shows how the cabinet is fixed in a corner formed by two walls 5a and 5b, for example the corner of a shower cubicle. The cabinet body 1, which extends through a sector of no more than 180° and typically somewhat less than 160°, is not completely circular in shape but has, outside of a central sector of about 90°, somewhat outwardly bent longitudinal edge portions 1a, so that the cabinet body 1 better fits in a right angle corner. The inwardly protruding edge reinforcements 3a of the cabinet body have strip-shaped portions 3d which extend inwardly sufficiently far that they come very close to the door 2 and thus provide an effective seal of the slot between the door 2 and the cabinet body 1. The strip-shaped portion 3d may alternatively be replaced by a flexible lip of rubber or the like, which may be fixed in the longitudinal groove of any of the reinforcements 3a.

A separate end piece 6 is provided at each end of the cabinet body 1. Each end piece 6 has a sleeve bearing 7 in which the door 2 is journaled. Each end piece 6 is extended to provide a corner behind the cabinet body 1 and has an upwardly or downwardly extending fixation flange 6a, 6b by means of which the cabinet is attached to the walls 5a and 5b by screws 8 as shown in Figure 3. The end pieces 6 need not extend further out from the cabinet body 1 than to the sleeve bearing 7. However it is aesthetically more appealing if the end pieces substantially follow the outer profile of the cabinet

body 1 and of the door 2 when the door is in the closed position. The end pieces 6 can be fixed in a secure manner to the cabinet body 1 by means of screws, preferably self-tapping screws, screwed into the central aperture or slot of each of the longitudinal reinforcements 3a and 3b. Correspondingly, a bottom plate 9 and a top plate (not shown but of basically the same form as bottom plate 9) are fixed to the longitudinal reinforcements 3c and 3e of the door 2. Each of these end plates include a bearing pivot 7a, the pivots 7a fitting in the sleeve bearings 7 of the end pieces 6 of the cabinet body. The lower bottom plate 9 of the door may also function as the lowest shelf of the cabinet and is then preferably provided with a low edge 9a along an edge which is outside the door profile. The longitudinal reinforcements 3c and 3e of the door are further used as fixing and holder members for at least one other shelf 4 (Figure 2). The reinforcement 3c is, in particular, suitable for the attachment of a shelf support of suitable shape by means of one or several screws screwed into the central slot 3f of the longitudinal reinforcement. Normally, it is sufficient to have a rigidly fixed shelf support only in the central slot 3f, while the slots 3g of the edge reinforcements 3e, having a more difficult access, may be provided with flexible support members or the like, which are pressed into the slots and are kept in position by friction forces. The end elements 6 and 9 and the door shelves 4 may advantageously be made of plastics material.

The fixation flanges 6a, 6b of the end pieces of the cabinet body may be directed either away from each other, i.e. away from the cabinet body, or towards each other, i.e. extending behind the cabinet body. In the latter case the flanges are suitably provided, as known, with elongate attachment apertures each having a lower portion which is sufficiently large for the head of an attachment screw to pass through the aperture and an upper portion which is sufficiently narrow for the flange to be locked between the head of the attachment screw and the wall. The cabinet may then be hooked on attachment screws 8 which have previously been screwed into the walls 5a and 5b provided that a gap corresponding to the thickness of the fixing portion of the flange 6a, 6b has been left between the head of each screw and the wall. If a more secure attachment is required, end pieces with flanges 6a, 6b extending away from each other in opposite directions, that is away from the cabinet, are used instead. In this case, the cabinet is fixed by screws applied in attachment apertures smaller than the screw head. It is also possible in alternative designs to leave out the portions of the end pieces which extend outside the convex portion of the cabinet body, and to fix the cabinet body directly with through-going screws, preferably flush screws, at such positions where the body is in contact with the walls 5a and 5b.

The door 2 is provided along one of its longitudinal edges with an outwardly directed strip-like protrusion 10 which, in the closed position of the door, engages the edge of the cabinet body thereby restricting the closing

movement of the door. During the opening movement of the door, the protrusion 10 may have a similar function restricting the opening movement by engaging the opposite edge of the cabinet body. However, this function is not usually required since the door reaches its fully open position before the protrusion 10 engages the cabinet body 1. In Figures 1 and 2, the protrusion 10 is at the left side when viewed from the convex side of the door and in Figure 3 the protrusion is at the right side when viewed from the convex side of the door. This indicates that the same door profile may be turned so that it fits both right hand and left hand doors.

In the embodiment shown in the drawings, the door 2 extends over a sector of approximately 220°. This means that the cabinet body 1 comprises a smaller sector than the door and hence may be shaped so that it snugly fits against the walls of a corner. The shelves inside the door will be well protected from water, since the larger portion of the shelves is shielded by the door. The outer diameter of the door in the embodiment shown is approximately 10 cm.

The cabinet may be manufactured in different lengths. A length between 50 and 100 cm has proved to be suitable. Although the cabinet body 1 and 2 have been described as being made from extruded aluminium it will be appreciated that these cabinet parts could be extruded from other extrudable material, e.g. plastics material.

Although the mutually cooperating journalling means on the end pieces of the container body and the door have been described as a pivot member and a bearing in which the pivot member is turnably received, this construction, although presently preferred, is not essential. Alternatively, for example, the end pieces of the door could have projections slidable within, or be fitted with rolling elements rolling in, an arcuate groove or the like formed in the end pieces of the container body. Alternatively the door may not even be provided with end pieces, in which case the arcuate ends of the door could be slidably received in an arcuate groove of the like formed in the end pieces of the container body.

The invention is not to be considered as being limited to the embodiment shown in the drawings since several variations thereof are feasible including variations which have features equivalent to, but not necessarily literally within the meaning of, features in any of the following claims.

Claims

1. A holding cabinet or the like especially intended for location in water splashing areas, for example shower cubicles, the cabinet comprising a cabinet body (1) and a movable door (2) turnable relative to the cabinet body (1), the door (2) having a convex side and a concave side carrying at least one shelf (4) and being fitted to move into the cabinet body

(1) thereby exposing its concave side and the at least one shelf (4), characterised in that both the door (2) and the cabinet body (1), at their upper and lower ends, are provided with mutually cooperating journalling means which, as known per se, are arranged to guide the turning movement of the door, whereby at least the journalling means of the cabinet body (1) is in separate cabinet body end pieces (6) attached at both ends of the cabinet body (1).

2. A holding cabinet according to claim 1, characterised in that the journalling means of the door (2) is in separate door end pieces (9) attached at both ends of the door (2).

3. A holding cabinet according to claim 1 or 2, characterised in that the end pieces (6) of the cabinet body (1) are each provided with an attachment arrangement for fixing the cabinet rigidly to a wall or, preferably, to two walls (5a,5b) forming a corner.

4. A holding cabinet according to claim 1, 2 or 3, characterised in that the cabinet body (1) has a substantially circular sector cross-section with its edge portions (1a) slightly bent outwards and provided with inwardly protruding enlargements, strips or lips arranged to seal a clearance slot between the cabinet body (1) and the door (2).

5. A holding cabinet according to any of the preceding claims, characterised in that, relative to the turning centre of the door (2), the cabinet body (1) extends over a sector of no more than 180° and the door (2) extends over a sector of more than 180°, preferably at least 210°.

6. A holding cabinet according to any of the preceding claims, characterised in that both the cabinet body (1) and the door (2) are provided with a plurality of longitudinal reinforcements (3a,3b), extending between its ends, which also provide fixation areas for the cabinet body end pieces (6).

7. A holding cabinet according to claim 2 or any of claims 3 to 6 when dependent on claim 2, characterised in that the door (2) is provided with a plurality of longitudinal reinforcements (3c,3e), extending between its ends, which also provide fixation areas for the door end pieces (9).

8. A holding cabinet according to claim 7, characterised in that at least one of said longitudinal reinforcements of the door (2) includes, on the concave side of the door, an enlargement (3c) with an open groove (3f) for receiving a support element for the or each shelf (4).

9. A holding cabinet according to any of the preceding

claims, characterised in that the cabinet body (1)
and the door (2) comprise aluminium profiles.

10. A holding cabinet according to any of the preceding
claims, characterised in that the cabinet body (1) 5
and the door (2) comprise extrusions.

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