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(54) Door for sanitary or similar appliance

(57) The door (1) has a leaf (3) with side profile sections (6) co-operating, in such a manner as to form a water-tight labyrinth-type seal, with respective shaped jambs (4) defining an access aperture. The profile sections (6) and the jambs (4) have mutually similar cross-sections, respectively, and are mounted in a specular arrangement.

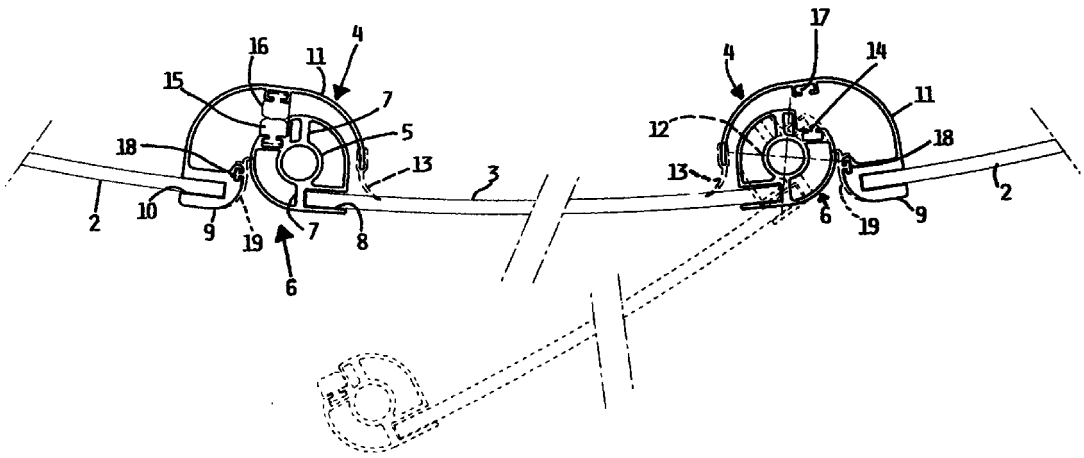

FIG.2

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Description

[0001] The present invention relates to an improved door for a sanitary appliance, such as a shower booth or the like.

[0002] Sanitary appliances such as shower booths are generally known to mainly comprise a substantially enclosed inner volume or space that is defined by a base, or bottom, and a side surface that are variously shaped or conformed according to aesthetical or installation requirements. In any case, the side surface generally comprises fixed walls and at least an access door, which may be of the either folding, sliding or swinging type. In this latter case, which on the other hand is the generally preferred solution in view of the greater convenience offered, the door comprises at least a leaf, or wing, which on the one side is hinged in correspondence of an edge of an aperture provided in the side wall, and on the other side is adapted to abut against the opposite edge of the same aperture.

[0003] In a preferred manner, in view of obtaining a good functional result and ensuring an adequate watertight sealing effect to exclude water leakages, both the hinging side and the abutment side of the door comprise respective profile sections that are adapted to co-operate, under interposition of more or less complex gaskets therebetween, with corresponding jambs provided on the afore cited sides of the aperture.

[0004] In general, said profile sections of the door have a different conformation in order to be able to perform their respective hinging and abutment tasks, and also the therewith associated jambs of the corresponding aperture are formed by profile sections that are correspondingly conformed in a different manner.

[0005] It therefore ensues that the entire door of the sanitary appliance turns out to be undesirably complex and formed of such a number of different component parts as to it scarcely rational to be manufactured and assembled on an industrial scale.

[0006] It therefore is a purpose of the present invention to provide a door for a sanitary or similar appliance, which has a particularly simple and rational structure capable of simplifying the manufacturing and assembly thereof.

[0007] A further purpose of the present invention is to provide a door of the above cited kind, which is particularly functional and convenient, as well as effective in substantially doing away with water-leakage sealing problems.

[0008] According to the present invention, these aims are reached in a door for a sanitary or similar appliance, embodying the characteristics as recited in the appended claims.

[0009] The features and advantages of the present invention will anyway be more readily and clearly understood from the description that is given below by way of non-limiting example with reference to the accompanying drawings, in which:

- Figure 1 is a schematical view of a preferred embodiment of the door according to the present invention; and
- Figure 2 is enlarged-scale cross-sectional views of the door shown in Figure 1.

[0010] With reference to the above cited Figures, the door 1 is adapted to be applied for instance to a sanitary appliance such as a shower booth, comprising preferably fixed side walls 2 between which there is provided at least an access aperture adapted to be closed by means of the same door.

[0011] The door 1 comprises at least a preferably square-shaped leaf 3 having a cross-section that may be either plane, ie. straight, or substantially curvilinear. In any case, the leaf 3 is adapted to co-operate with at least two side jambs 4, as this will be described in greater detail further on.

[0012] On the opposite side edges of the leaf 3 there are mounted respective profile sections 6 that may for instance be made of aluminium and have preferably a hollow structure, with a cross-section having a preferably curvilinear outer contour. The profile sections 6 extend preferably over the whole height of the leaf 3 and further comprise internally a substantially cylindrical portion 5 connected to the outer contour by means of radial ribs 7.

[0013] Between the cylindrical portion 5 and the outer contour of the profile sections 6 there is provided at least a longitudinal recess 8 in which there is inserted in a sealed manner, by pressure fitting or bonding it thereto, a respective side edge of the leaf 3.

[0014] As this can be best noticed in Figure 2, the profile sections 6 are preferably protruding from the leaf 3 towards the interior of the sanitary appliance.

[0015] According to a feature of the present invention, the profile sections 6 are equal to each other as far as the cross-section thereof is concerned, and they are mounted on the leaf 3 in a substantially specular manner, so that they are capable of being manufactured in an advantageous manner by starting from just a single type and piece of profile section.

[0016] The door 1 furthermore comprises the afore mentioned side jambs 4, which in a preferred manner are also formed by respective profile sections extending over the full height of the leaf 3.

[0017] The jambs 4 have a cross-section which is substantially in the shape of a G, with a swollen portion 9 in correspondence of which there is provided at least a longitudinal recess 10 adapted to accommodate in a sealing manner, by pressure fitting or bonding it thereto, the edge of a respective wall 2 delimiting the access aperture of the sanitary appliance.

[0018] In each jamb 4, from said swollen portion 9 there is departing towards the above mentioned access aperture, in such a manner so as to preferably protrude towards the interior of the sanitary appliance itself, a

shaped portion 11 having a cross-section which is curvilinear or anyway so shaped as to substantially accommodate a respective profile section 6 therewithin, when the door 1 is closed and aligned with the walls 2.

[0019] According to a further feature of the present invention, also the jambs 4 are equal to each other as far as the cross-section thereof is concerned, and are further arranged in a substantially specular manner with respect to the door 1, so that they are capable of being manufactured in an advantageous manner by starting from just a single type and piece of profile section.

[0020] Any one of said profile sections 6 (for instance the right-hand one, in Figure 2) may be mounted on the sanitary appliance by means of at least a hinging pin (not shown) extending in correspondence of the cylindrical portion 5 of the profile section itself, which is in turn accommodated in the respective jamb 4, as already indicated earlier in this description.

[0021] The door leaf 3 can therefore be opened (outwardly in the example being described here, as shown by the dashed line in Figure 2) by rotating about an axis 12 that extends along the cylindrical portion 5 of one of said profile sections 6. The opposite profile section 6 is on the contrary substantially accommodated inside the associated jamb 4 when the door is closed, as this has been already indicated earlier in this description.

[0022] In any case, it should be noticed that the shaped portions 11 of the jambs 4 are in an advantageous manner adapted to protect the corresponding profile sections 6, with which they form respective labyrinth sealing devices in the door 1, against the water splashes produced inside the sanitary appliance.

[0023] It will of course be appreciated that the sealing effect against water splashes seeping out through the door is preferably completed by the provision of a proper set of gaskets. In particular, on the free edge of the shaped portion 11 of both jambs 4 there can be provided a longitudinal lip-sealing gasket 13 adapted to abut (when the door is closed) against the leaf 3. Also such a gasket 13 is in an advantageous manner similar for both jambs 4.

[0024] Furthermore, in a preferred manner the profile sections 6 comprise, on the inward facing side thereof, a further longitudinal recess 14 in which there can be mounted (on the non-hinged side of the door only) a corresponding elastic gasket 15 adapted to cooperate with a complementary gasket 16 attached inside the respective jamb 4. To this end, the jambs 4 also comprise a corresponding attachment longitudinal recess 17 provided in correspondence of the shaped portion 11.

[0025] In a preferred manner, the gaskets 15 and 16 are of the magnetic profile type and are mounted so as to not only be effective in dampening the closing action of the leaf 3, but also favouring a correct closing thereof by the effect of magnetic attraction.

[0026] Furthermore, at the free end of the swollen portion 9 of each jamb 4 there is preferably provided a further longitudinal recess 18 that is capable of accommodating a corresponding lip-type sealing gasket 19 adapted not only to seal against the respective profile section 6, but also to act as an elastic abutment, ie. a limit stop for the door leaf 3 (on the hinged side of the door) when the door 1 is swung fully open.

[0027] It will be appreciated that the afore described door assembly may be subject to a number of modifications and variants without departing from the scope of the present invention.

[0028] For instance, the door leaf 3 may be arranged to open inwardly, ie. towards the interior of the sanitary appliance, which in this case is situated below the same leaf, as shown in Figure 2.

Claims

1. Door (1) for a sanitary appliance, or the like, comprising walls (2) between which there is provided at least an access aperture capable of being closed by means of the same door, the latter comprising at least a leaf (3) on the opposite side edges of which there are fixed respective profile sections (6) adapted to cooperate with respective side jambs (4) delimiting said access aperture, **characterized in that** said profile sections (6) are mutually similar in their cross-section and are mounted on the leaf (3) in a substantially specular or mirror-like manner, said jambs (4) being similar to each other in their cross-section and being arranged in a substantially specular or mirror-like manner with respect to the door (1).

2. Door according to claim 1, **characterized in that** said jambs (4) comprise a first portion (9) which is adapted to be mounted on an edge of a respective wall (2) and from which there departs towards said access aperture a shaped portion (11) adapted to substantially accommodate, when the door (1) is closed, a respective profile section (6) with which it forms a labyrinth-type sealing arrangement.

3. Door according to claim 2, **characterized in that** the profile sections (6) and said shaped portion (11) of the jambs (4) are protruding from the leaf (3) and the walls (2), respectively, towards the interior of the sanitary appliance.

4. Door according to claim 1, **characterized in that** said profile sections (6) are conformed with a substantially cylindrical inner portion (5), one of said profile sections being adapted to be mounted on the sanitary appliance by means of hinging means extending in correspondence of the respective cylindrical portion (5).

5. Door according to claim 2, **characterized in that**

said shaped portion (11) of the jambs (4) comprises lip-type longitudinal sealing gasket means (13) adapted to abut against the leaf (3) when the door is closed.

6. Door according to claim 2, **characterized in that** between at least one of the profile sections (6) and the respective jamb (4) there are provided respective longitudinal elastic sealing gasket means (15, 16) of the magnetic profile type.

7. Door according to claim 2, **characterized in that** on said first portion (9) of the jambs (4) there are provided lip-type sealing gasket means (19) adapted to seal against the respective profile section (6) and to act as elastic abutment means for the leaf (3) when the door (1) is swung open.

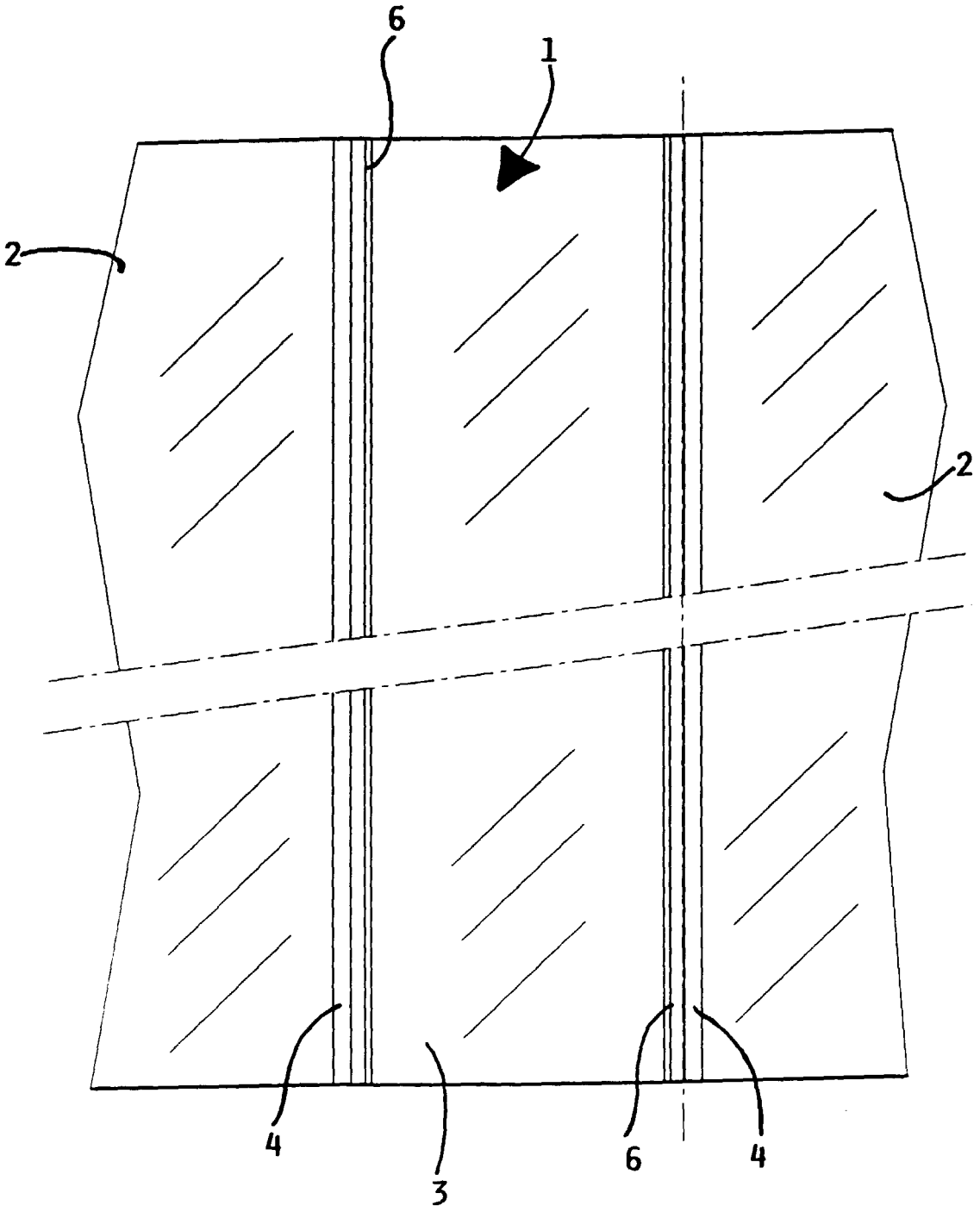
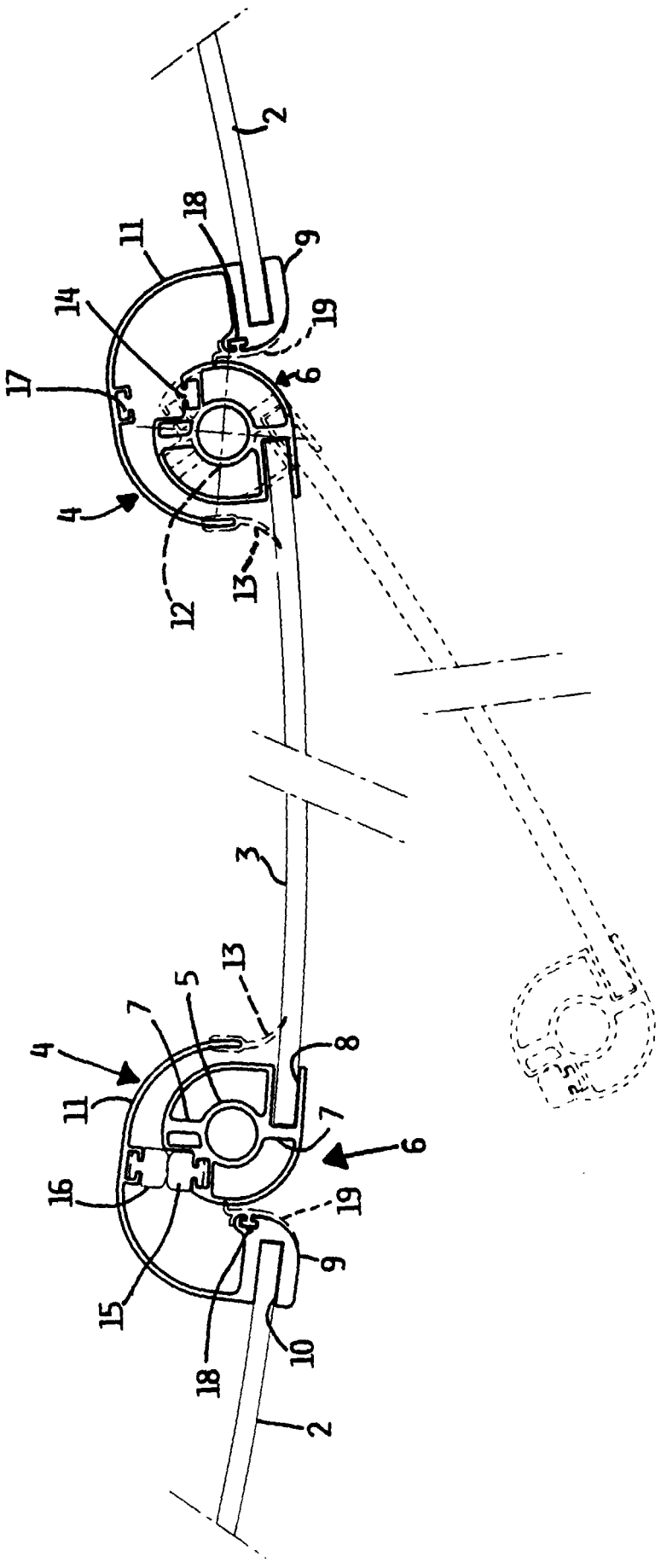


FIG. 1



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