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(54) Shower or sauna booth with sliding door

(57) A booth and in particular for shower or sauna and comprising a door sliding between an upper door-suspension track and a lower door guide track (16). The lower track (16) identifies a channel (18) for guided sliding of the door and the door comprises in turn sliding members (19) with support surfaces (20) sliding on side walls of the channel (18). The channel (18) has a curved internal cross section and the support surfaces (20) are elastically movable transversely to the door sliding direction.

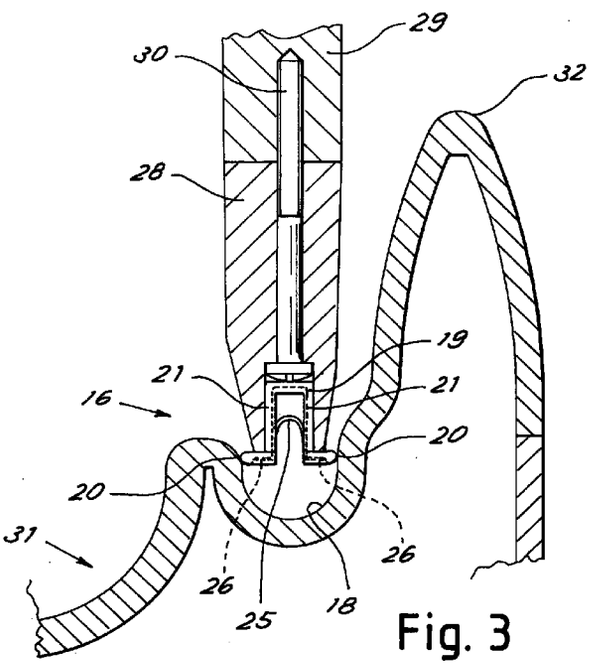

Fig. 3

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Description

[0001] The present invention relates to a shower or sauna booth.

[0002] Many booths of this type are usually equipped with a door sliding between an upper suspension track and a lower guide track. The lower guide track is generally made in the form of a metal section track with U cross section and parallel side walls with flat bottom so as to allow the lower edge of the door wing to penetrate into the channel more or less deeply while being guided laterally by the channel. This allows compensation for assembly tolerances and obviates any lack of parallelism between the upper and lower tracks.

[0003] The lower track is however a receptacle for dirt and difficult to clean and, because of the stagnating water therein, often leads to bacterial pollution which could become unacceptable.

[0004] The general purpose of the present invention is to obviate the above mentioned drawbacks by making available a booth with sliding door which would have a lower guide preventing stagnation and uncleanable dirt deposits, would offer excellent side guide characteristics for the door and allow the necessary vertical movement of the door.

[0005] In view of said purpose it is sought to provide in accordance with the present invention a booth and in particular for shower or sauna and comprising a door sliding between an upper door suspension track and a lower door guide track with the lower track identifying a channel for guided sliding of the door and the door comprising in turn sliding members with support surfaces sliding on side walls of the channel characterized in that the channel has a curved internal cross section and the support surfaces are elastically movable transversely to the door sliding direction.

[0006] To clarify the explanation of the innovative principles of the present invention and its advantages compared with the prior art there is described below with the aid of the annexed drawings a possible embodiment thereof by way of non-limiting example applying said principles. In the drawings:

- fig.1 shows a diagrammatic front perspective view of a booth in accordance with the present invention,
- fig. 2 shows a partially cross sectioned front view of a sliding detail of the door of the booth of fig. 1,
- figs. 3 and 4 show cross section views along plane of cut III-III of fig. 2 of the sliding member of the door in two different vertical positions inside the guide channel, and
- fig. 5 shows a perspective view of a detail of fig. 2.

[0007] With reference to the figures, fig. 1 shows a booth indicated as a whole by reference number 10 made up of a base 11, a cap 12, side walls 13 and a sliding door 14 made for example of glass. The door slides between an upper suspension track 15 and a lower guide track 16 of the door. The upper track is virtually prior art. For example it could be made from a section of appropriate form on which slide rollers 17 constrained to the upper edge of the door. This track is readily imaginable to those skilled in the art and not further shown or described.

[0008] As may be seen clearly in figs. 2, 3 and 4 the lower track identifies a channel 18 for guided sliding of the door with the door comprising in turn guided sliding members 19 which have support surfaces 20 sliding on the side walls of the channel.

[0009] In accordance with the innovative principles of the present invention the channel 18 has a curved internal cross section e.g. with semicircular bottom so as not to display sharp internal edges. In addition the support surfaces 20 are elastically movable transversely in the door sliding direction.

[0010] In a preferred embodiment the channel 18 is made in a single part with a plate 31 making up the bottom of the booth. To secure high precision in making the channel it has been found advantageous to mold the channel and plate as a single injection-molded part. The guide channel and the sliding members can be masked toward the exterior of the booth by means of a raised edge 32.

[0011] Advantageously the sliding member 19 has a generically overturned U structure to define a pair of elastic arms 21 facing each other across the channel. Each arm ends with a support surface 20 sliding on the nearest side wall of the channel. If the elastic thrust of the arms is considered insufficient there can be provided between the two arms a flat spring 25 to thrust the arms apart. The spring could be restrained with its ends bent within seats 26 in the ends of the arms.

[0012] As may be seen in fig. 5, in a preferred embodiment the sliding member is formed with a first cylindrical part with vertical axis 22 with a coaxial discoid projection 23 near the lower base. The sliding member has a slit 24 in an axial plane of itself which is open on the lower base and closed on the upper base of the cylinder so as to define the pair of elastic arms 21 and the support surface 20 respectively as two facing parts of the cylinder and two facing parts of the discoid projection divided by the slit 24.

[0013] The sliding member 19 is received advantageously in a complementary seat 27 located below in a terminal member 28 of a side section 29 of the door.

[0014] The same seat 27 can constitute a passage for a screw 30 for fastening the terminal member 28 to the section 29. In this manner the sliding member 19 acts as a plug for the seat to preserve the screw from contact with water and moisture.

[0015] From a comparison of figs. 3 and 4 it is seen that the door can vary the distance to which it penetrates the channel while still being perfectly guided laterally with the slide surfaces of the guide member 19 remaining in contact with the channel walls despite the curved form of the channel.

[0016] It was found that with the curved form of the channel accumulation of dirt difficult to clean and development of bacteria are avoided. Whereas in the prior art it is attempted to obviate the problem of water stagnation in the door-sliding channels by seeking to avoid entry of water therein, with a channel in accordance with the present invention a sliding channel can be used even as a water drainage channel. For this purpose, at one end the channel 18 terminates in a drain 33. Thus all water stagnation is avoided. The absence of sharp edges in the channel eliminates recesses accumulating bacteria and dirt and the channel bottom is easy to clean.

[0017] Naturally the above description of an embodiment applying the innovative principles of the present invention is given by way of non-limiting example of said principles within the scope of the exclusive right claimed here.

[0018] For example the form of the booth and its internal accessories could vary depending on necessity.

Claims

1. Booth and in particular for shower or sauna and comprising a door (14) sliding between an upper door-suspension track (15) and a lower door guide track (16) with the lower track (16) identifying a channel (18) for guided sliding of the door and the door comprising in turn sliding members (19) with support surfaces (20) sliding on side walls of the channel (18) characterized in that the channel (18) has a curved internal cross section and the support surfaces (20) are elastically movable transversely to the door sliding direction.

2. Booth in accordance with claim 1 characterized in that the sliding member (19) has a generically overturned U structure to define a pair of elastic arms (21) facing each other across the channel with each arm ending with a support surface (20) sliding on the nearest side wall of the channel.

3. Booth in accordance with claim 2 characterized in that the sliding member is formed with a first cylindrical part (22) with vertical axis and a coaxial discoid projection (23) near the lower base with the sliding member has a slit (24) in an axial plane of itself which slit is open on the lower base and closed on the upper base of the cylinder so as to define the pair of elastic arms (21) and the support surfaces (20) respectively as two facing parts of the cylinder and two facing parts of the discoid projection divided by the slit.

4. Booth in accordance with claim 2 characterized in that between the two arms (21) is located a flat spring (25) for thrusting the arms apart.

5. Booth in accordance with claim 1 characterized in that the sliding member is received in a complementary seat (27) of a terminal member (28) of a side section (29) of the door.

6. Booth in accordance with claim 5 characterized in that the seat (27) constitutes a passage for a screw (30) for fastening the terminal member (28) to the section (29).

7. Booth in accordance with claim 1 characterized in that the channel (18) is made in a single part with a plate (31) of the booth.

8. Booth in accordance with claim (7) characterized in that the plate and channel are a single injection-molded part.

9. Booth in accordance with claim 1 characterized in that the bottom of the channel has a circular cross section.

10. Booth in accordance with claim 1 characterized in that the channel (18) communicates with a drain (32) to constitute a water drain channel.

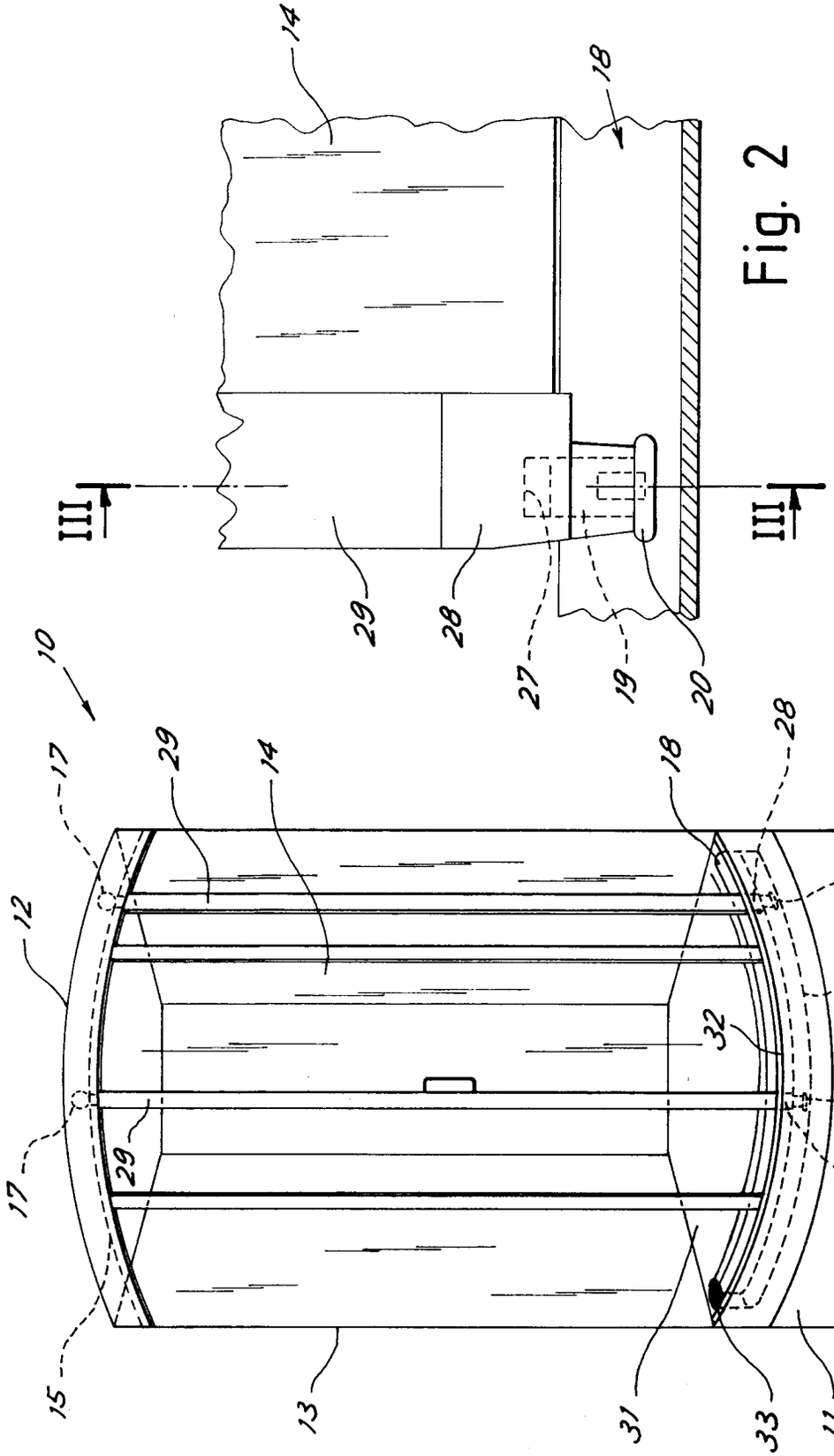
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Fig. 2

Fig. 1

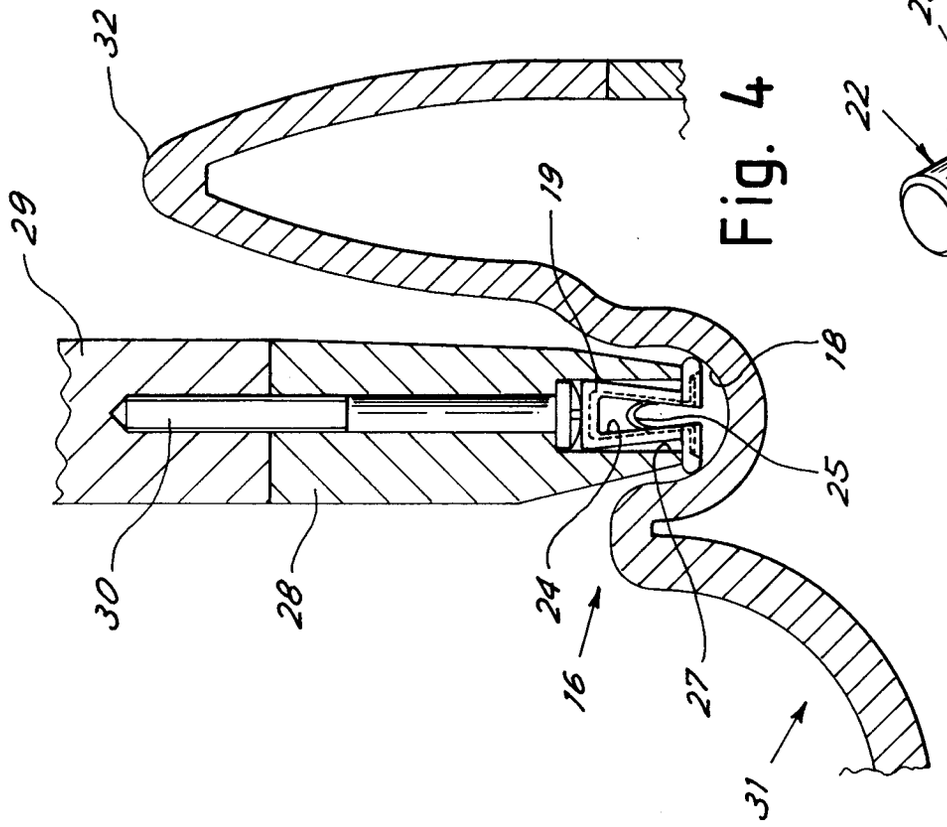

Fig. 4

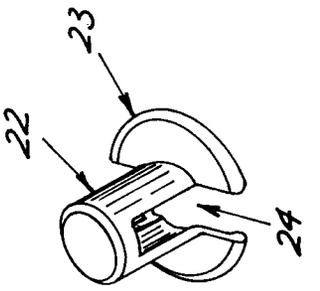

Fig. 5

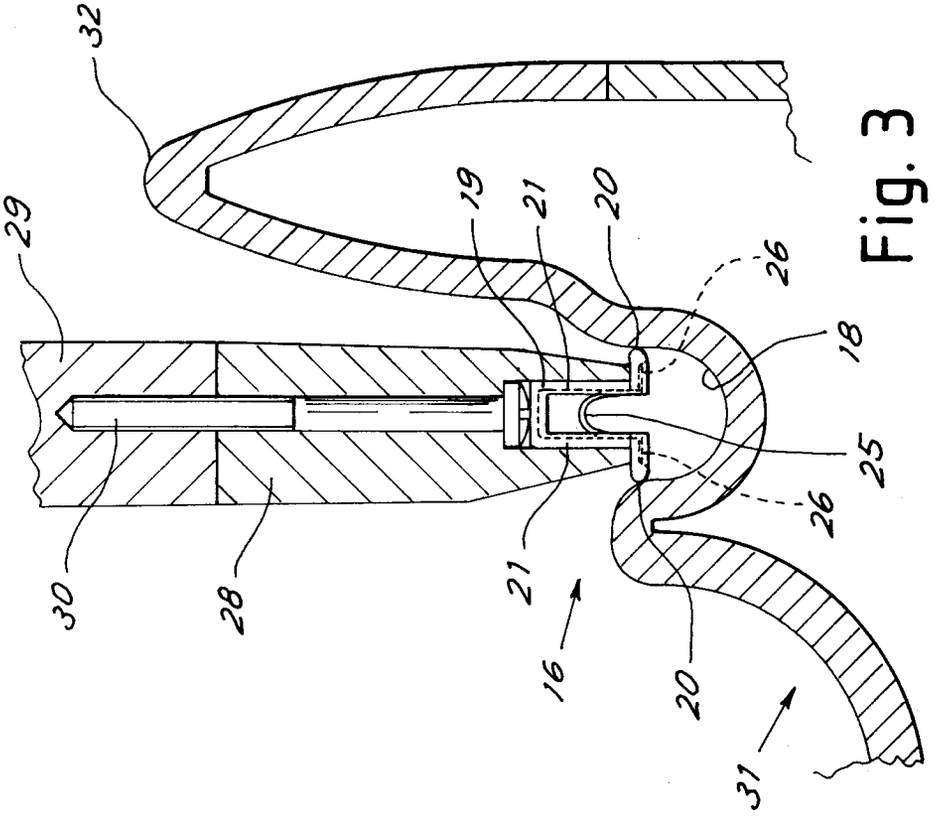

Fig. 3

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EUROPEAN SEARCH REPORT

Application Number
EP 98 20 3226

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
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TECHNICAL FIELDS SEARCHED (Int.Cl.6)

A47K
E05D
E06B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	8 January 1999	Kergueno, J

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08-01-1999

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