



(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
01.06.2005 Bulletin 2005/22

(51) Int Cl.⁷: **D06F 58/14**

(21) Application number: **04425898.6**

(22) Date of filing: 26.11.2004

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
 HU IE IS IT LI LU MC NL PL PT RO SE SI SK TR**
 Designated Extension States:
AL HR LT LV MK YU

(72) Inventor: **Campanale, Gianluigi**
59100 Prato (PO) (IT)

(74) Representative: **Lanzoni, Luciano**
c/o BUGNION S.p.A.
Via A. Valentini, 11/15
47900 Rimini (IT)

(30) Priority: 27.11.2003 IT PO20030012

(71) Applicant: **Campanale, Gianluigi**
59100 Prato (PO) (IT)

(54) **Equipment for a bathtub or for a shower booth**

(57) Equipment for a bathtub or shower booth which characteristically comprises a structure (2) applicable to said bathtub or said shower booth in such a way as to identify a space (3); said structure (2) comprises a tenter

(4), positioned and structured in such a way as to remain in said space (3) without interfering with the user; said equipment (1) further comprises an air treatment apparatus (5).

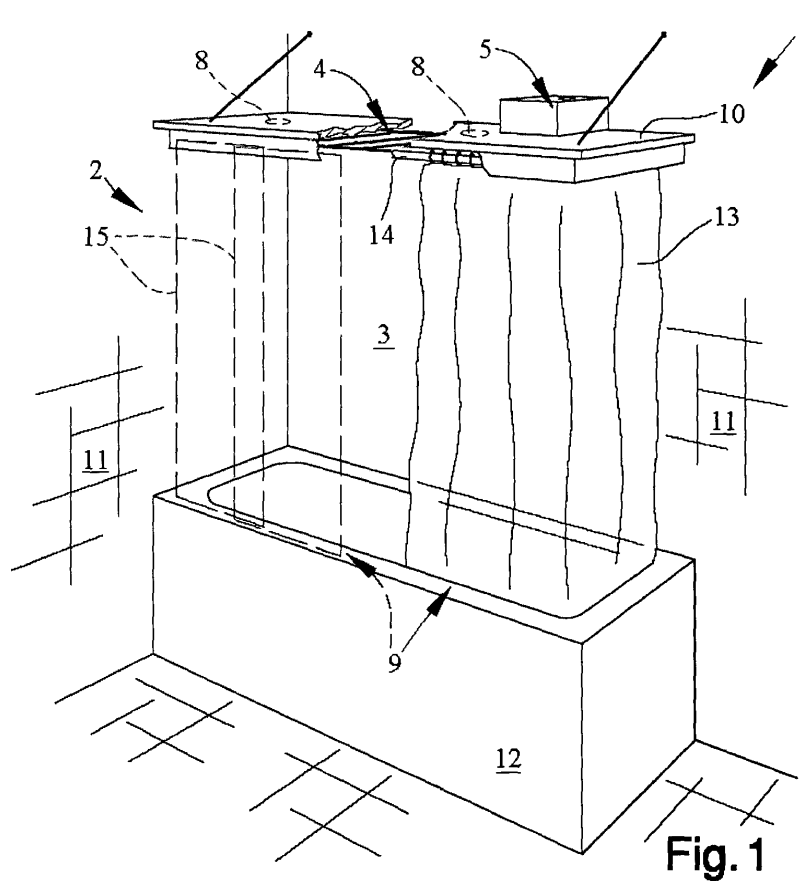


Fig. 1

Description

[0001] The present invention relates to an equipment for a bathtub or shower booth, in particular usable to allow the drying of laundry hung at the bathtub or the shower booth.

[0002] Movable tenters are known which are positioned from time to time near radiators or heat generators or otherwise in ventilated spaces.

[0003] The solution described above has some drawbacks. In particular, the movable tenters positioned near heat sources clutter, in anti-aesthetic fashion, spaces which in many living solutions are already restricted; in the case of hand-washed laundry, or delicate items not subjected to spin-drying, the quantity of water released on the floor is not negligible and this creates further inconvenience for the persons who are in the same living space.

[0004] Also known are tenters which use the space at the bathtub or the shower booth.

[0005] However, this solution is also not free of drawbacks. In particular, the drying of the laundry, especially in humid days, is slow and consequently use of the sanitary fitting (bathtub or shower booth) is prevented for a long time.

[0006] The object of the present invention is to overcome the aforesaid drawbacks, making available an equipment which allows to solve in simple and economical fashion the problem of drying laundry in rainy days, in the winter months and when usable spaces are lacking.

[0007] This object and others as well, which shall become readily apparent in the description that follows, are achieved, in accordance with the present invention, by an equipment for bathtub or shower booth having structural and functional characteristics in accordance with the accompanying independent claims, further embodiment thereof being identified in the accompanying and corresponding dependent claims.

[0008] The invention is described more in detail hereafter with the aid of the drawings, which represent an embodiment provided purely by way of non limiting example.

Figure 1 shows a perspective view, with some parts removed, of the subject equipment applied to a bathtub;

Figure 2 shows a sectioned side view of the upper part of the subject equipment;

Figure 3 shows a bottom view of the upper part of the equipment in question, in the same configuration shown in Figure 2.

[0009] With reference to Figure 1, the reference number 1 globally designates an equipment for bathtub or shower booth.

[0010] Said equipment 1 characteristically comprises a structure 2, applicable to the bathtub or the shower

booth in such a way as to identify a space 3.

[0011] As shown in Figure 1, in an exemplifying, non limiting embodiment, the space 3 is delimited by a roof 10, by walls 11 of the room, by substantially vertical peripheral closure means 9, positioned in combination with the bathtub. The structure 2 characteristically comprises a tenter 4, positioned and structured in such a way as to remain at the space 3 without interfering with the user. At the limit, the roof 10 may even be absent, the tenter 4 being able to contribute to define the space 3.

[0012] The fact that the tenter 4 remains in the space 3 without interfering with the user means that said tenter 4 can be fixed, removable, or overturning. In this latter case (solution not shown herein) said tenter 4 could for example be hinged to a fixed wall defining the space 3, and provided with elements for locking the tenter 4 in two extreme configurations: a configuration of use, substantially horizontal, and a rest configuration, substantially vertical, able to minimise occupied space in order to facilitate the normal use of a sanitary fitting 12 (bathtub or shower booth) for uses linked to personal hygiene.

[0013] As shown in Figure 1, in an exemplifying, non limiting embodiment, the tenter 4 is positioned in the upper part of the space 3.

[0014] The equipment 1 comprises an air treatment apparatus 5, associated to the structure 2, for conditioning at least partially the climate in the space 3. Said air treatment apparatus 5 comprises air dehumidifying means or air heating means, which could for example be electric heaters, burners, etc. Advantageously, however, said apparatus 5 is provided both with air dehumidifying means and with air heating means. The drying of laundry positioned in the space 3 is thereby favoured. During winter months, to improve comfort when using the sanitary fitting 12 (bathtub or shower booth) for hygienic reasons, said apparatus 5 can also be used to heat or dehumidify the space 3 or the entire room where the equipment 1 is positioned.

[0015] As shown in Figure 2, the equipment 1 comprises aspiration means 6 for aspirating the air drawn from the environment outside the space 3, and also introduction means 7 for introducing the air drawn from the external environment into the space 3; the air treatment apparatus 5 is interposed between said aspiration means 6 and said introduction means 7. The structure 2 defines the space 3 in such a way that said space 3 is at least partially closed in non hermetic fashion. For example, this could occur if the upper roof 10 is not used. In any case, even if the structure 2 defines a totally closed space 3, said closure is not hermetic. For this purpose the structure 2 can comprise through holes 8 to allow the escape of air.

[0016] As shown in the exemplifying, not limiting embodiment illustrated in Figure 1, said through holes 8 are advantageously obtained in the roof 10 which delimits superiorly the space 3. In the same figure are also shown the substantially vertical peripheral closure

means 9 comprised in the structure 2. Said peripheral closure means 9 are movable to allow access to the interior of the space 3 identified by them; said peripheral closure means 9 can be constituted by flexible elements such as a waterproof curtain 13 supported by a peripheral guide 14; alternatively, said peripheral closure means 9 are constituted by rigid elements, for instance comprising slidable panels 15 (shown in dashed lines in Figure 1), or panels 15 hinged in such a way as to be able to rotate about their own axis (this solution is not shown). Figure 1 shows the tenter 4 at the upper area of the space 3. Said tenter 4 could advantageously be removable.

[0017] The equipment 1 may also comprise engagement means to support bath accessories, e.g. soap dishes or shelves for holding personal hygiene products.

[0018] In general, during use, the aspiration means 6, comprising for example a fan, can be used to aspirate air from the external environment; the air, after being dehumidified and/or heated by the apparatus 5, is inserted within the space 3 at a temperature and pressure sufficient to allow conditioning the climate within the space 3. All this causes a forced circulation which causes an improvement in the effectiveness of the heat exchange between air and the laundry to be dried, consequently reducing drying time. The environment inside the space 3 is in a condition of slight overpressure with respect to the external environment and this facilitates the escape of the air, assuring continuous recirculation. The fact that the space 3 is not hermetically isolated from the external environment allows the aforementioned recirculation.

[0019] The invention achieves important advantages.

[0020] First of all, it allows a rapid drying of the laundry; said drying occurs independently of external atmospheric conditions and with relatively low energy consumption. Secondly, in cold months, the invention allows to improve comfort, when using the bathtub or the shower booth for personal hygiene, thanks to the heating and the dehumidification of the space or of the bathroom. Two important additional advantages are that the invention allows to evacuate water in a simple and easy manner and it also allows to avoid cluttering, in anti-aesthetic fashion, spaces of the home that are already restricted or normally destined to other uses.

[0021] Lastly, the costs and the non negligible bulk of electrical appliances specifically dedicated to drying the laundry are avoided.

[0022] The inventions thus conceived can be subject to numerous modifications and variants, without departing from the scope of the inventive concept that characterises it.

[0023] Moreover, all components can be replaced by other, technical equivalent elements.

[0024] In practice, all materials used, as well as the dimensions, may be any, depending on requirements.

Claims

1. Equipment for bathtub or shower booth **characterised in that** it comprises a structure (2) applicable to said bathtub or said shower booth in such a way as to identify a space (3), said structure (2) comprising a tenter (4), positioned and structured in such a way as to remain in said space (3) without interfering with the user.
2. Equipment as claimed in claim 1, **characterised in that** it comprises an air treatment apparatus (5) associated to the structure (2), to condition at least partially the climate in the space (3).
3. Equipment as claimed in claim 2, **characterised in that** said air treatment apparatus (5) comprises means for heating the air.
4. Equipment as claimed in claim 2 or 3, **characterised in that** said air treatment apparatus (5) comprises means for dehumidifying the air.
5. Equipment as claimed in claim 2 or 3 or 4, **characterised in that** it comprises aspiration means (6) for aspirating the air drawn from the environment outside the space (3), introduction means (7) for introducing the air drawn from the external environment into the space (3), said air treatment apparatus (5) being interposed between said aspiration means (6) and said introduction means (7).
6. Equipment as claimed in any of the previous claims, **characterised in that** said structure (2) defines the space (3) in such a way that said space (3) is at least partially closed in non hermetic fashion.
7. Equipment as claimed in claim 6, **characterised in that** said structure (2) comprises through holes (8) to allow air to escape.
8. Equipment as claimed in any of the previous claims, **characterised in that** said structure (2) comprises substantially vertical peripheral closure means (9).
9. Equipment as claimed in claim 8, **characterised in that** said substantially vertical peripheral closure means (9) are movable to allow access to the interior of the space (3) identified by them.
10. Equipment as claimed in claim 8 or 9, **characterised in that** said substantially vertical peripheral closure means (9) are flexible.
11. Equipment as claimed in claim 8 or 9, **characterised in that** said substantially vertical peripheral closure means (9) are rigid.

12. Equipment as claimed in any of the previous claims,
characterised in that the tenter (4) is removable.
13. Equipment as claimed in any of the previous claims,
characterised in that it comprises engagement 5
means for bathroom accessories.
14. Shower booth **characterised in that** it comprises
the equipment (1) as claimed in claims 1 through 13. 10
15. Shower booth **characterised in that** it comprises
the equipment (1) as claimed in claims 1 through 13.

15

20

25

30

35

40

45

50

55

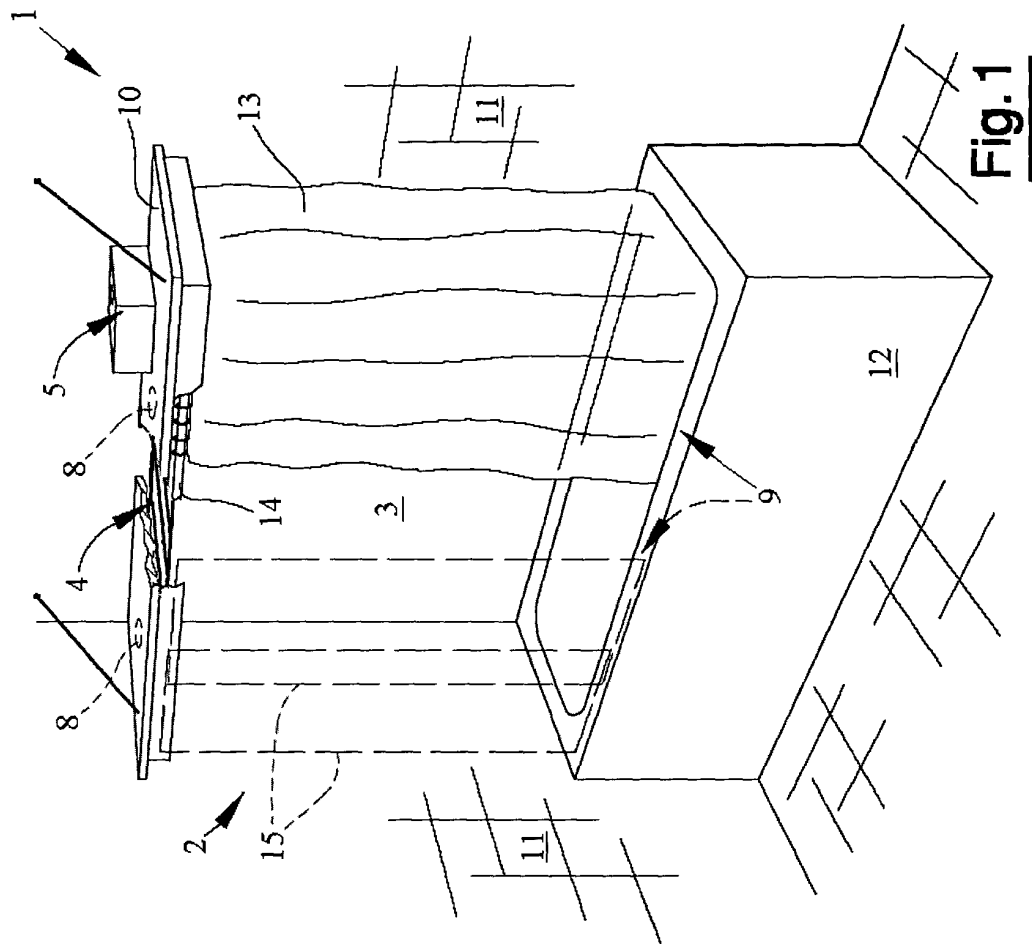


Fig. 2

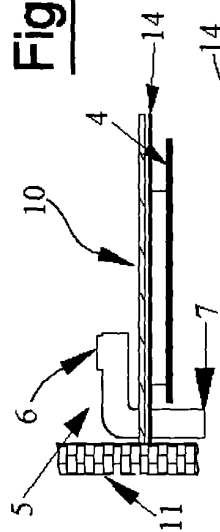


Fig. 3

