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(54) **Whirlpool**

(57) Invention relates to a whirlpool (1) comprising vessel (12) equipped with massage means and protected on external perimeter by cladding (11), on whose upper part or upper part of vessel (12) is mounted removable cover (13) comprising at least one thermoinsulating segment (131, 132, 133). Every thermoinsulating segment (131, 132, 133) is coupled with means (31) for its transfer between cover and storage position, whereas in cover

position is thermoinsulating segment (131, 132, 133) placed on periphery of whirlpool (1) and in storage position is thermoinsulating segment (131, 132, 133) placed out of periphery of whirlpool (1).

With advantage is the thermoinsulating segment (131, 132, 133) in its storage position laid in storage space (2) that is composed outside of ground plan of whirlpool (1), eventually in the space defined by perimeter cladding and outer surface of whirlpool vessel.

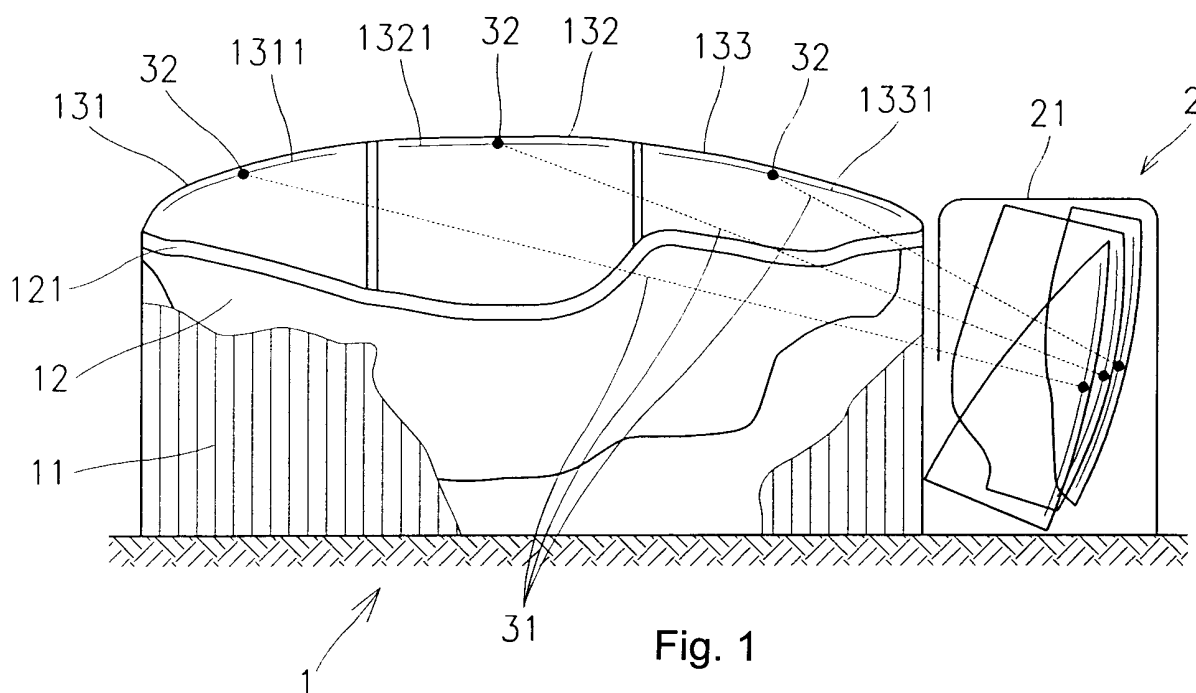


Fig. 1

Description

Technical field

[0001] Whirlpool comprising vessel equipped with massage devices and protected on external perimeter by cladding where on its upper part or on upper part of vessel is placed removable cover comprising at least one thermoinsulating segment.

Background art

[0002] Massage pools and other relaxation devices of similar type, generally designated as whirlpools, are nowadays components of interior or exterior of modern habitation and their use is a component of modern way of exploitation of free time part dedicated to relaxation and rehabilitation.

[0003] With regard to bigger dimensions of these devices, above all to relatively big volume of water they contain, it is looked for their economic operation modes. One of the expensive service operations related to whirlpool running is heating up of water filling and long term keeping of its temperature. With regard to the ratio of time for that is whirlpool directly used to interval between the using it appears as very desirable to isolate the whirlpool water content perfectly against surrounding. This requirement is extra important when placing the whirlpool in exterior, especially in winter season.

[0004] To the category of massage pools and them similar pools can be classified pools with ground plan dimensions from approximately 1 x 2 meters to 3 x 5,5 meters, and with height of upper rim over the floor 0,7 to 1,5 meter. Various areal pools dimensions and their placing in interior or exterior influence solution of the removable isolation cover.

[0005] Massage pools in the sense of above mentioned description are mostly composed as overground put on an underlay. Isolation of the shell wall is the usual component of whirlpool. Preventing of heat and humidity transfer from whirlpool water level in the time when equipment is momentarily not in use, is presently usually solved by isolation cover in the form of a panel, that is transferable and that is necessary to take off before the use of whirlpool. This causes especially in interiors space and aesthetic difficulties. Covering of whirlpool by planar panel additionally requires that upper pool rim is lying in one plane, what limits ergonomic, eventually aesthetic forming of height of whirlpool separate parts according to demand for example on various form of internal seat back. Covering of pool with broken rim by corresponding removable cover is uncomfortable for servicing and additionally unsuitable especially with regard to exact cover positioning that would provide good tightening of isolated space, usually does not simultaneously fulfil the designer's demands.

[0006] The aim of invention is to eliminate all existing deficiencies of the state of the art and to shift higher the

utility value and thus the quality of massage pools utilizing.

Principle of the invention

[0007] The aim of the invention is reached by whirlpool comprising vessel and removable cover constituted at least by one thermoinsulating segment, whose principle is that every thermoinsulating segment is coupled with means for its transfer between covering position and storage position, whereas in covering position is the thermoinsulating segment placed on whirlpool periphery and in storage position is the thermoinsulating segment placed outside of whirlpool periphery.

[0008] Another useful attribute is that the thermoinsulating segment is in its storage position put in storage space that is composed outside of whirlpool ground plan.

[0009] It is also advantageous when the thermoinsulating segment is in its storage position put in storage space that is composed in space defined by perimeter cladding and outer surface of whirlpool bottom.

[0010] Especially advantageous is when individual whirlpool thermoinsulating segments are after transfer from covering position to storage space composed in this storage space mutually parallel and when the storage space is equipped with closable cover.

[0011] From point of view of space utilization and manipulation it is advantageous, when closable cover of storage space is constituted by one of thermoinsulating segments.

[0012] Sectional cover reduces requirements on size of cover storage space, increases service operations comfort, positioning means make easier optimal thermoinsulating segments positioning in storage space and especially their exact back setting into the position, in which they ought to have isolation function.

[0013] It is further advantageous, when means for thermoinsulating segments transfer comprise positioning means coupled with driving joint device.

[0014] In so doing it is advantageous, when drive and means for transfer of thermoinsulating segments are put in storage space.

[0015] Joint device coupled with means for thermoinsulating segments relocation and its motor drive eliminates or at least reduces demands on physical condition of operator. In so doing the joint device is usually relatively simple, reliable and simultaneously enables exact thermoinsulating segments setting on whirlpool vessel periphery.

[0016] Solution of storage space according to the invention reduces demands on enlarging of complex whirlpool ground plan surface in consequence of removed pool cover. Covering of pool so does not increase at all or only minimally build up area, eventually service area necessary for pool installation, and additionally fulfils also aesthetic demands especially when placing the whirlpool in interior.

Description of the drawings

[0017] Example of embodiment of solution according to the invention is schematically shown on drawings, where fig. 1 is a side view at pool with one storage space, fig. 2 a frontal view at the pool covered by covering parts and fig. 3 a lateral view at pool with two storage spaces.

Examples of embodiment

[0018] Whirlpool 1 comprises not illustrated supporting frame equipped with lateral perimeter cladding 11, which can create supporting part of whirlpool 1, protects components of system of whirlpool 1 as are water distribution to nozzles, filtering equipment and similar and in addition it has also important aesthetic function. Proper vessel 12 is according to the actual state of the art most frequently produced from special acrylates, its upper rim is composed usually in a plane, what is requirement for placing of planar thermoisolated cover. At fig. 1 is illustrated design with broken form of the rim 121 for example with embossed head rest and similar.

[0019] Whirlpool 1 is in illustrated version at fig. 1 equipped with three-part cover 13 whose individual thermoisolating segments 131, 132, 133 in covered position are against each other tightened and tightly sit down at rim 121 so, that thermally isolate warm water contained in vessel 12 of whirlpool 1 and simultaneously prevent humidity leakage into the interior, in that is whirlpool 1 eventually placed. Thermoisolating segments 131, 132, 133 comprise supporting elements 1311, 1321, 1331.

[0020] Some of thermoisolating segments 131, 132, 133 of whirlpool 1 can be created from flexible material with good thermoisolating properties, comprising not illustrated flexible stretching frame, what can be advantageous for flexible mutual tightening up of thermoisolating segments 131, 132, 133 in covered position.

[0021] In close vicinity of whirlpool 1, outside of its ground plan is composed storage space 2 for cover 13 of whirlpool 1.

[0022] In not illustrated embodiment is the storage space 2 composed in ground plan of whirlpool 1 between perimeter cladding 11 of whirlpool 1 and external surface of vessel 12 of whirlpool 1.

[0023] Cover 13 of whirlpool 1 is with the storage space 2 coupled by device 3 for thermoisolating segments 131, 132, 133 transfer. This device 3 for thermoisolating segments 131, 132, 133 transfer comprises means 31 for thermoisolating segments 131, 132, 133 transfer created by joint rotating arms, joined together by means of joints 32 with carrying elements 1311, 1321, 1331 of thermoisolating segments 131, 132, 133. Means 31 for transfer of thermoisolating segments 131, 132, 133 are coupled with not illustrated driving device that uses electric, electro-hydraulic, electro-pneumatic means controlled by operator, eventually is coupled with not illustrated means for application of physical force of operator. Individual thermoisolating segments 131, 132, 133 are further

equipped with not illustrated positioning means, which secure precise positioning of individual segments on the rim 121 of vessel 12, eventually secure segment position in storage space 2.

[0024] Movement of every thermoisolating segment 131, 132, 133 during its transfer from rim 121 of vessel 12 into the storage position proceeds on trajectory, that is defined by kinematics relations of joint device, whereas at first movement phase is thermoisolating segment 131, 132, 133 practically vertically lifted up and then in the second phase along curve trajectory transferred into the storage space 2. Transfer of cover 13 back to the covering position is done by reversed sequence of phases.

[0025] Thermoisolating segments 131, 132, 133 are after transfer from covering to storage position by virtue of means for transfer of thermoisolating segments 131, 132, 133 put into the storage space 2 to advantage vertically or crossways, whereas dimensions of individual thermoisolating segments 131, 132, 133 are (according to fig. 2) dimensionally selected so, that they are able to assemble mutually into each other, so that they occupy minimal space in the storage space 2.

[0026] Storage space 2 is covered by cover 21 that can be according to not illustrated embodiment one of the thermoisolating segments 131, 132, 133 of massage pool 1. In the case of embodiment, when the storage space 2 is composed in ground plan of whirlpool 1 between perimeter cladding 11 of whirlpool 1 and external surface of the vessel 12 of whirlpool 1, the cover 21 can be incorporated also into the perimeter cladding 11 of whirlpool 1.

[0027] Fig. 3 illustrates an alternative embodiment with two storage spaces 2, 4, being composed outside of the ground plan contour of whirlpool 1, in which are laid thermoisolating segments 134, 135, 136, 137 in couples into every storage space 2 according to indicated scheme

[0028] It is obvious, that number of thermoisolating segments 131, 132, 133, 134, 135, 136, 137 and theirs positioning in storage spaces 2, 4 can differ from illustrated embodiments.

[0029] Advantage of embodiment of cover 13 of whirlpool 1 according to the invention is the comfort of whirlpool utilizing, because uncovering and covering of whirlpool is possible to do with small operating forces. Proposed solution minimizes demands for size of space for put off cover 13 and optically incorporates design of storage space 2 into the integral complex of whirlpool 1, eventually storage space 2 places into ground plan of perimeter cladding 11 without demand for enlarging of ground plan surface of whirlpool 1. This contributes to aesthetic arrangement of whirlpool 1 and its surroundings especially in interiors.

Claims

1. Whirlpool comprising vessel equipped with massage means and protected on external perimeter by clad-

ding, at whose upper part or at upper part of vessel is placed removable cover comprising at least one thermoisolating segment, **characterized by** that every thermoisolating segment (131, 132, 133) is coupled with means (31) for its transfer between covering position and storage position, whereas at covering position is thermoisolating segment (131, 132, 133) placed on the periphery of whirlpool (1) and at storage position is thermoisolating segment (131, 132, 133) placed outside of whirlpool (1) periphery.

2. Whirlpool according to claim 1, **characterized by** that the thermoisolating segment (131, 132, 133) is in its storage position placed in storage space (2), that is composed outside of whirlpool (1) ground plan.
3. Whirlpool according to claim 1, **characterized by** that the thermoisolating segment (131, 132, 133) is in its storage position placed in storage space (2), that is composed in space defined by perimeter cladding (11) and outer surface of vessel (12) of whirlpool (1).
4. Whirlpool according to claim 2 or 3, **characterized by** that the individual thermoisolating segments (131, 132, 133) of whirlpool (1) are after transfer from covering position into storage space (2) composed in this storage space (2) mutually parallel.
5. Whirlpool according to any of claims 2 to 4, **characterized by** that the storage space (2) is equipped with closable cover (21).
6. Whirlpool according to claim 5, **characterized by** that the closable cover (21) of storage space (2) is created by one of thermoisolating segments (131, 132, 133).
7. Whirlpool according to any of previous claims, **characterized by** that the means (31) for relocating of thermoisolating segments (131, 132, 133) comprise positioning means coupled with driving joint device.
8. Whirlpool according to claim 7, **characterized in that** the drive and positioning means are laid in storage space (2).

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