

Description

[0001] The present invention relates to a moveable wall for swimming pools, with closing devices of the spaces between its edges and the walls and bottom of the swimming pool.

[0002] In the swimming pool industry, the necessity of delimiting different areas within the same pool is well known, for example for contemporaneously effecting various activities. In order to fulfil this function, moveable walls are generally used, i.e. structures consisting of a supporting framework, covered by a grid, in order to divide the pool into two separate areas without preventing the necessary circulation of water in the pool.

[0003] To prevent limbs from becoming trapped, there should be no spaces between the edges of the moveable wall and, respectively, the walls or bottom of the pool in which the wall is installed. Considering however the necessity of moving the moveable walls, to vary the amplitude of the areas delimited thereby, in addition to construction demands (mechanical tolerances) and installation requirements (friction between the edges of the moveable walls and walls of the pool), according to the regulation in force, the total absence of spaces between the edges of the moveable wall and the walls and bottom of the pool is not required, but it is requested that these spaces be contained within specific limits. In particular, the European regulation destined for guaranteeing the safety of users of swimming pools, and in this specific case the regulation UNI EN 13.451 part 1 and the regulation UNI EN 13.451 part 10, allow a maximum amplitude limit of space between the edges of a moveable wall and the walls or bottom of a swimming pool equal to 8 mm.

[0004] It is not easy to respect these safety requirements and at times it is not even possible. If, on the one hand, the moveable wall is a prefabricated structure and consequently produced with narrow tolerances, on the other, the pool, especially if made of concrete or masonry it is subject to the usual tolerances of the building industry which are much wider. A moveable wall could therefore be suitable for safe installation in a certain point of the pool and unsuitable in another. Furthermore, in the particular case of a pool with a non-constant but sloping bottom, the movement of the moveable wall would inevitably imply the violation of these safety regulations.

[0005] In view of what is specified above, there is evidently the necessity of availing of a moveable wall capable of being adapted, within certain limits, to variations in width and depth of the pool in which it is installed, such as that according to the present invention.

[0006] An objective of the present invention is therefore to solve the problems of the known art by providing a moveable wall for swimming pools equipped with devices capable of closing possible spaces present between its edges and the walls and bottom of the pool in which it is installed.

[0007] Another objective of the present invention is to provide a moveable wall for swimming pools which re-

duces the assembly times and costs.

[0008] Finally, another objective of the present invention is to provide a moveable wall for swimming pools which is easy and economical to produce.

[0009] These and other objectives are achieved by the moveable wall for swimming pools according to the present invention which has the characteristics of the enclosed claim 1.

[0010] Further characteristics of the invention are indicated in the subsequent claims.

[0011] Further characteristics and advantages of the present invention will appear more evident following the present invention provided for illustrative and non-limiting purposes, with reference to the enclosed drawings, in which:

- figure 1 shows a perspective view of a side portion of a moveable wall for swimming pools according to a preferred embodiment of the present invention ;
- figure 2 shows a perspective view of a detail of the moveable wall of figure 1, close to the bottom of the pool;
- figure 3 shows a perspective view of a first detail of the moveable wall of figure 1, close to the edge of the pool; and
- figure 4 shows a raised front view of a second detail of the moveable wall of figure 1, close to the edge of the pool.

[0012] With reference to the figures, these show a moveable wall for swimming pools, with closing devices of spaces between its edges and the walls and bottom of the pool, according to the present invention.

[0013] As can be seen in figure 1, the moveable wall for swimming pools, indicated as a whole with the reference number 1, comprises at least one framework 2, covered on at least one of the two sides of the moveable wall 1 (and preferably on both sides) by a grid 3. The upper edge of the moveable wall 1 is covered by a treadable grid 4. Figure 1 also shows a portion of the wall 5 and the bottom 6 of a pool. In particular, the bottom 6 has a horizontal portion 6' and a slanting portion 6".

[0014] On the side edge of the moveable wall 1, and in particular in correspondence with each of the uprights 7 on the edge of the framework 2 and partially superimposed, there is a vertical plate 8, shaped around the corner of the upright 7 facing the outside of the moveable wall 1. The vertical plates 8 situated on the same side edge of the moveable wall 1 are connected to each other by a transversal plate 9, in turn slidably connected to the framework 2, and in particular to two wings 10, one in correspondence with each of the two uprights 7, so as to be able to move towards and away from the side edge of the moveable wall 1. The possibility of moving the system consisting of the vertical plates 8 and transversal plate 9 with respect to the edge of the moveable wall, at the same time continuing to at least partially cover the uprights 7 (i.e. without creating spaces accessible from

the outside between the uprights 7 and vertical plates 8) ensures the complete closure of spaces between the edge of the moveable wall 1 and the wall 5 of the pool.

[0015] The movement of the vertical plates 8 can be driven by automatic means or by manual activation devices. In particular, the embodiment illustrated with reference to the figures, and in particular to figure 3, has an activating rod 11, hinged in correspondence with a fulcrum 12, integral with the wings 10 of the uprights 7. The activating rod 11 passes through an opening 13 of the transversal plate 9 in order to transmit a translating movement to the transversal plate 9, in its rotation around the fulcrum 12. The activating rod 11 can in turn be activated manually or by automatic means.

[0016] The possibility of regulating the entity of the movement of the vertical plates 8 towards the wall 5 of the pool, allows spaces to be closed between the moveable wall 1 and the wall 5 of the pool and to be adapted each time to variations in the width of the pool itself, obviously within the limits of the maximum expandability projected.

[0017] In the case of irregular profiles of the wall 5 of the pool, it is also possible to provide vertical plates 8 of an extension made of elastic material (not shown) capable of adapting itself to the specific form of the wall 5. In particular, these extensions, have mechanical characteristics of sturdiness which are such as to satisfy the requisites of regulations in force in the case of closure with elastic elements ("entrapment test" effected by trying to insert with a defined load a "finger probe" between the wall and elastic element).

[0018] The solution illustrated, with reference to the figures, for closing spaces lateral to the moveable wall 1, can also be applied, with suitable adjustments, which will appear obvious to experts in the field, for the closing of spaces beneath the lower edge of the moveable wall 1, i.e. for the closing of spaces possibly present between the moveable wall 1 and the bottom 6 of a pool.

[0019] If a pool is equipped with a sloping bottom 6", this however may not be sufficient for guaranteeing the closure of spaces between the moveable wall 1 and the sloping bottom 6". In this case, with reference to figure 2, the framework 2 supports a secondary grid 14, slidably coupled with the framework 2 by means of vertical sliding guides 15, adjacent to the grid 3 and overlying its lower portion. The weight of the secondary grid 14 (or appropriate elements integral with the secondary grid 14) ensures, by gravity, that the secondary grid 14 rests on the sloping bottom 6", sliding along the sliding guides 15. The capacity of the moveable wall 1 of adapting itself to the depth of the pool, allows the moveable wall 1 to be moved in the pool, guaranteeing the closure of spaces beneath the moveable wall 1 at any moment during its movement.

[0020] In order to facilitate the movement of the moveable wall 1 and at the same time guarantee the optimum closure of the space between the lower edge of the moveable wall 1 and bottom 6 of the pool, in the case of both

a horizontal bottom 6' and sloping bottom 6", the framework 2, the grid 3 or secondary grid 14 must be prevented from sliding on the bottom 6 of the pool, with the possibility remaining entrapped and consequently creating undesirable friction. For this reason, on the lower edge of the moveable wall 1, there are wheels 16, integral with the framework 2, grid 3 or secondary grid 14, depending on the specific case.

[0021] Finally, in the case of pools with considerable differences in width or depth, the moveable wall 1 can also consist of a series of superimposed frameworks 2, each covered with at least one grid (3), and slidably connected with each other, so as to form an actual telescopic moveable wall, both in width and depth.

[0022] The present invention is described for illustrative but non-limiting purposes according to its preferred embodiments, but it is understood that variations and/or modifications can be applied by experts in the field, all included in the relative protection scope, as defined by the enclosed claims.

Claims

1. A moveable wall (1) for swimming pools, comprising at least one framework (2) covered on at least one of the two sides of the moveable wall (1) by a grid (3), **characterized in that** it comprises adjustable extension means of at least one of its side edges and/or adjustable extension means of its lower edge.
2. The moveable wall (1) according to claim 1, **characterized in that** said adjustable extension means of at least one of its side edges and/or said adjustable extension means of its lower edge comprise at least a second framework, covered on at least one of the two sides of the moveable wall (1) by a second grid, slidably connected to said framework (2), free to run in a horizontal direction or vertical direction.
3. The moveable wall (1) according to claim 1 or 2, **characterized in that** said adjustable extension means of the side edge comprise at least one vertical plate (8), which covers each side edge of the moveable wall (1) and is slidably connected to the framework (2) and to activation means which give said vertical plate (8) a movement in a horizontal direction.
4. The moveable wall (1) according to claim 3, **characterized in that** said vertical plates (8) which cover the two side edges of the same edge of the moveable wall (1) are connected to each other by a transversal plate (9) and, through this, are slidably connected to said framework (2) and said activation means.
5. The moveable wall (1) according to claim 1 or 2, **characterized in that** said adjustable extension

means of the lower edge comprise at least one horizontal plate, which covers each lower edge of the moveable wall (1) and is slidingly connected to the framework (2) and to activation means which give said horizontal plate a movement in a vertical direction. 5

6. The moveable wall (1) according to claim 5, **characterized in that** said horizontal plates which cover the two lower edges of the moveable wall (1) are connected to each other by a transversal plate and, through this, are slidingly connected to said framework (2) and said activation means. 10
7. The moveable wall (1) according to any of the claims 3-6, **characterized in that** said activation means comprise an activating rod (11), hinged around a fulcrum (12) integral with the framework (2) and which can be manually or automatically activated. 15 20
8. The moveable wall (1) according to any of the previous claims, **characterized in that** said adjustable extension means of the lower edge comprise a secondary grid (14), slidingly connected to the framework (2) by means of vertical sliding guides (15). 25
9. The moveable wall (1) according to any of the previous claims, **characterized in that** it comprises wheels, arranged on the lower edge, slightly protruding with respect to said lower edge. 30

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