May 16, 1967 R. J. SCARANO 3,319,264

COPING ASSEMBLY FOR SWIMMING POOLS

Filed April 2, 1965 2 Sheets-Sheet 1

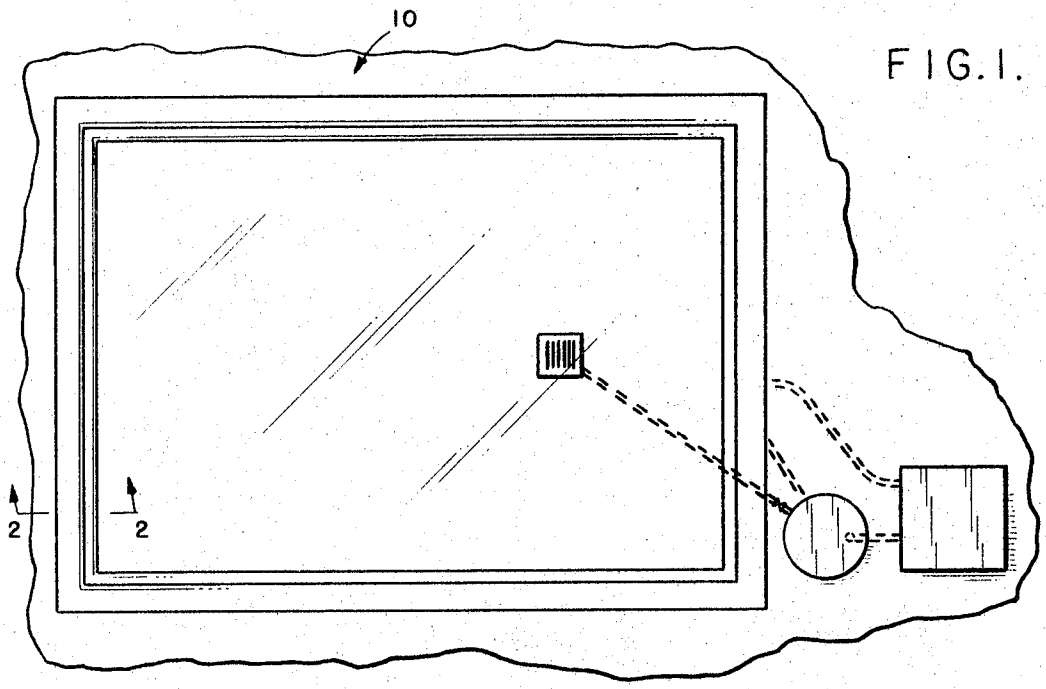


FIG. 1.

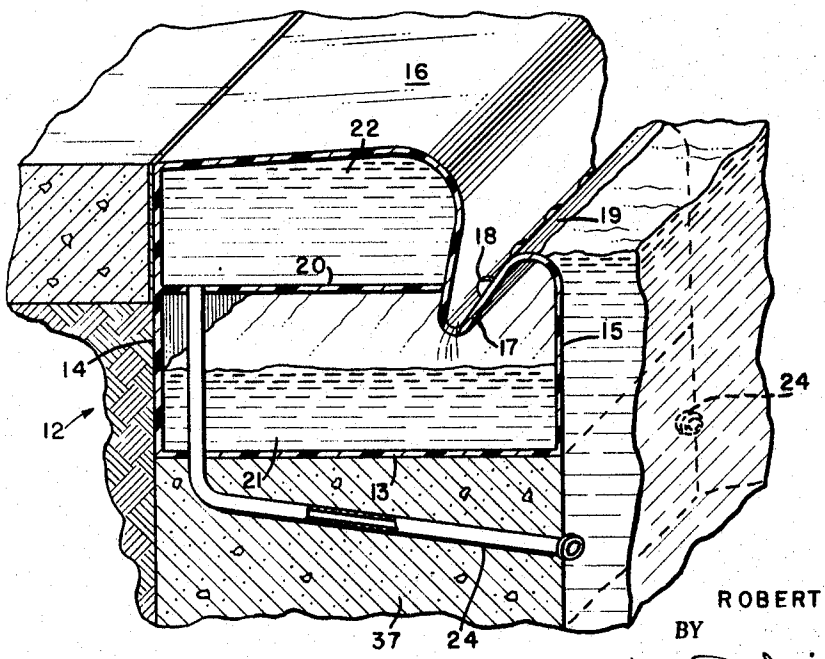


FIG. 2.

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FIG. 3.

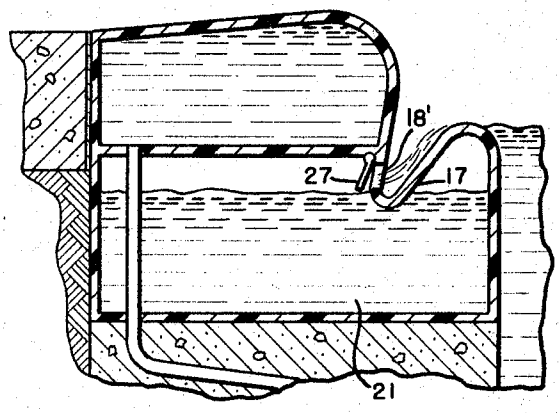
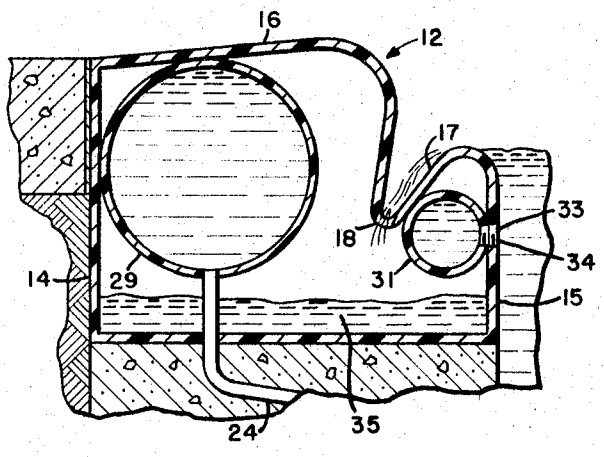


FIG. 4.



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COPING ASSEMBLY FOR SWIMMING POOLS

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21 Claims. (Cl. 4—172)

This invention relates to coping assemblies for swimming pools and more particularly to a coping assembly providing a conduit system for cycling swimming pool water to and from a filter unit.

In swimming pool construction there are generally two methods employed for removing spittle and similar floating matter from swimming pool water. One such method is to provide a continuous peripheral waste or scum gutter which accepts such material as it surges over a lip formed on the gutter. There are disadvantages to this method since the foreign matter will often discharge back over the lip and into the pool if the gutter is at full capacity; also the waste or scum gutter is open to the bathers.

Another such method commonly employed is to provide surface skimmers at spaced points along the periphery of the pool adjacent the pool wall. These devices provide only surface cleaning action in the immediate vicinity of the skimmer and its effectiveness may be adversely affected by wind or they may become clogged by large floating objects.

It is therefore a prime object of my invention to provide a coping assembly which will retain the lip or weir present on gutter pools but which will provide positive retention and remote conveying of skimmed pool water with entrapped surface waste to a filter unit and return filtered water to the pool.

Another object of my invention is to provide a precast coping assembly for housing a conduit system for mounting around the perimeter of a swimming pool and which is easily manufactured, inexpensive to make and easily installed by relatively unskilled laborers.

Still another object of my invention is to provide a precast coping assembly to be mounted to existing swimming pools with relative ease and inexpensively.

My invention generally contemplates providing a coping assembly to be mounted around the perimeter of a swimming pool which forms a continuous conduit system for cyling skimmed pool water to and from a filter unit. The coping assembly includes a conduit which extends longitudinally through the coping assembly and partitioning means which is mounted in the conduit for forming a plurality of passages therein extending longitudinally through the assembly and in which one of the passages is provided with openings for receiving skimmed water from the swimming pool for delivery to a filter, and the other of the passages is provided with discharge means for returning treated water from the filter to the swimming pool.

Other objects and advantages of my invention will become more apparent from the following description and the illustrative drawings showing several forms of my invention, in which:

FIG. 1 is a plan view illustrating a swimming pool unit embodying my invention;

FIG. 2 is a sectional view taken along the lines 2—2 in the direction of the arrows in FIG. 1;

FIG. 3 is an alternate form of my invention shown in cross-section; and

FIG. 4 is still another alternate form of my invention shown in cross-section.

Referring to FIGS. 1 and 2 of the drawings, a swimming pool unit including my improved coping assembly, filter unit and pool water is generally indicated by the numeral 10. The coping assembly itself is generally indicated at 12. In the preferred form, the coping assembly 12 may be preformed and manufactured as a unit from suitable materials, such as fiber glass or suitable rigid plastic material. It is obvious that other materials may be used, such as precast concrete sections, steel, which would be non-corrosive to water or any chemicals contained therein, or the steel may be coated with a corrosion-resistant surface.

Coping assembly 12 comprises a bottom wall 13, side walls 14 and 15, and top wall 16. Side wall 15 includes a trough 17 formed therein in the shape of a V and provides the wall face adjacent the swimming pool water surface. Trough 17 extends longitudinally around the perimeter of the pool and is formed with spaced openings 18 so that water in the pool spilling over lip 19 of wall 15 will enter coping 12 so that the water may be subsequently cycled to the filter unit.

Coping 12 is provided with a partition 20 mounted therein which extends lengthwise of the coping around the perimeter of the pool to form a plurality of passages 21 and 22. Passage 21 receives skimmed water from the pool through openings 18 in trough 17. Passage 22 receives treated water from the filter unit which is discharged to the swimming pool through a plurality of small diameter tubes 24 spaced around the perimeter of the pool and generally beneath the water surface of the pool so as to induce circulation of the pool water. Tube 24 is in sealed communication with passage 22 and bottom wall 13 of coping assembly 12 so that only water contained in passage 22, which is treated water, will be returned to the pool.

As shown in FIG. 2, partition 20 is disposed between side walls 14 and 15 and substantially parallel to bottom wall 13. It is obvious that partition 20 may be disposed in coping assembly 12 in any convenient manner. Thus, partition 20 may be disposed perpendicular to the bottom wall 13 or at an angle thereto. Further, partition 20 may contain a plurality of longitudinally extending surfaces disposed within coping assembly 12 to form a plurality of passages.

In FIG. 2 it is apparent that the surface water of the swimming pool is skimmed over lip 19 and falls into trough 17 and enters passage 21 through openings 18. Thus, the waste reservoir or passage 21, although in close proximity to bathers, is substantially closed except for the spaced openings 18. Further, water upon being received in passage 21 will not backwash into the pool and will be directed toward the filter unit, thus insuring only treated water received from the filter will flow through passage 22 into the pool.

Referring to FIG. 3 which shows a modified form of my invention, trough 17 is formed with openings 18' spaced slightly above the V. A closure means 27 is hingedly connected to the inner portion of side wall 15 at 28. Thus, as the water level in passage 21 rises above opening 18', hinge 27 will be closed by the pressure of the water exerted thereon thereby insuring that there will be no backwash of water into trough 17 once the water is received into passage 21.

In FIG. 4 the coping 12 is shown in still another modified form comprising a conduit 29 which is supported by the interior faces of walls 14 and 16. The conduit is disposed longitudinally through coping 12 and forms the return conduit for discharging treated water received from the filter unit to the pool through the small diameter tube 24 in the manner described in connection with the embodiment of FIG. 2. A second conduit 31 is mounted on the interior of wall 15 and trough 17 extends longitudinally through coping 12. Disposed around the perimeter of the pool and communicating with conduit 31 are openings 33 fitted with removable closures 34. When closure 34 is removed, a vacuum assembly,

not shown, may be connected to opening 33 so that the inner surfaces of the pool may be cleaned in the conventional manner. The remaining passage 35 receives skimmed water from the pool through openings 18 which is filtered in the manner described in connection with the embodiment of FIG. 2.

Coping assembly 12, as indicated previously, may be preformed into any desired lengths and configurations, such as corner pieces, and may be assembled around the top perimeter of the swimming pool walls indicated at 37. The sections are formed with cooperative coupling means so that succeeding sections can be coupled together in a tongue and groove fit. Suitable adhesives for providing a water-tight seal at each joint may be used depending upon the type of preformed section that is used. For example, cement, if the section has been preformed in cement. Thus, by successively coupling each preformed section in a like manner, the coping assembly is fitted around the top perimeter of the swimming pool wall 37. A filter unit, as shown in FIG. 1, is assembled near the pool and comprises the water treatment unit for the swimming pool. A surge tank may or may not be utilized. Suitable pipes are shown in dotted lines connected to the coping assembly so as to communicate respectively with passages 21 and 22 so that skimmed water may pass through the filter unit and into a surge tank and be pumped back through pipes connecting passage 22 so that the treated water may be returned to the pool.

Having thus described the several illustrative embodiments of my invention, it is understood that changes in structure and design may be made without departing from the spirit of the invention as defined in the appended claims.

I claim:

1. A coping assembly to be mounted around the perimeter of a swimming pool and to form a continuous conduit system for cycling water to and from a filter unit comprising: a conduit extending longitudinally through said assembly, partitioning means for separating said conduit into a plurality of passages extending longitudinally through said assembly, at least one of said passages having openings therein for receiving skimmed water from the swimming pool and at least one of the passages having discharge means for returning treated water from the filter unit to the swimming pool.

2. A coping assembly to be mounted around the perimeter of a swimming pool as set forth in claim 1 wherein a trough in the shape of a V is formed in the wall face of said coping adjacent the water surface of the swimming pool, said trough having openings therein so as to communicate with said passage for receiving water from the swimming pool.

3. A coping assembly to be mounted around the perimeter of a swimming pool as set forth in claim 1 wherein said discharge means is mounted in sealed connection to said passage for returning treated water to the swimming pool so that all of the treated water is discharged into the swimming pool.

4. A coping assembly to be mounted around the perimeter of a swimming pool as set forth in claim 1 wherein said openings in said passage for receiving water from said pool has closure means hingedly mounted therein so that water received in said passage is prevented from returning to said pool.

5. A coping assembly to be mounted around the perimeter of a swimming pool as set forth in claim 4 wherein said closure means seals said openings by the pressure of water exerted against the surfaces of said means when the water level in said passage rises above said openings.

6. A coping assembly to be mounted around the perimeter of a swimming pool as set forth in claim 1 wherein a passage having outlets mounted therein and disposed around the perimeter of the swimming pool for connection to a vacuum assembly for cleaning the swimming pool.

7. A coping assembly to be mounted around the perimeter of a swimming pool and to form a continuous conduit system for cycling water to and from a filter unit comprising a conduit extending longitudinally through said assembly, partitioning means mounted in said assembly and extending longitudinally therethrough and forming at least a pair of passages in said conduit wherein one of said passages is provided with openings spaced around the perimeter of the swimming pool for receiving skimmed water and the other passage is provided with spaced openings around the perimeter of the swimming pool for discharging treated water to the swimming pool received from the filter unit.

8. A coping assembly to be mounted around the perimeter of a swimming pool as set forth in claim 7 wherein said partitioning means forms a common wall for said pair of passages.

9. A coping assembly to be mounted around the perimeter of a swimming pool as set forth in claim 7 wherein a trough in the shape of a V is formed in the wall face of said coping adjacent the water surface of the swimming pool, said trough having openings therein so as to communicate with said passage for receiving water from the swimming pool.

10. A coping assembly to be mounted around the perimeter of a swimming pool as set forth in claim 7 wherein said partitioning means is disposed substantially parallel to the base of said assembly and mounted above the openings in said passage for receiving water from said swimming pool.

11. A swimming pool assembly comprising a water treatment unit including a filter and a pump disposed adjacent said pool, a coping assembly mounted around the perimeter of the pool and forming a continuous conduit for cycling water to and from said treatment unit, said conduit extending longitudinally through said coping, partitioning means mounted in said conduit and forming a plurality of longitudinally extending passages therein, at least one of said passages having openings therein for receiving skimmed water from the swimming pool and at least one of said passages having openings therein for discharging treated water to the swimming pool received from said treatment unit and means connecting said passages to the treatment unit for cycling water to and from the filler.

12. A swimming pool assembly as set forth in claim 11 wherein a trough in the form of a V is formed in the wall face adjacent the swimming pool surface of said coping, said trough having openings therein so as to communicate with said conduit for receiving water from the swimming pool.

13. A swimming pool assembly as set forth in claim 11 wherein said discharge means is mounted in sealed relation to said passage for returning treated water to the swimming pool so that all of the treated water is discharged into the pool.

14. A swimming pool assembly as set forth in claim 11 wherein said openings in said passage for receiving water from said pool has closure means hingedly mounted therein so that water received in said passage is prevented from returning to said pool.

15. A swimming pool assembly as set forth in claim 11 wherein said closure means seals said openings by the pressure of water exerted against the surfaces of said means when the water level in said passage rises above said openings.

16. A swimming pool assembly as set forth in claim 11 wherein a passage having outlets mounted therein and disposed around the perimeter of the swimming pool for connection to a vacuum assembly for cleaning the swimming pool.

17. A swimming pool assembly as set forth in claim 11 wherein said partitioning means forms a common wall for said pair of passages.

18. A swimming pool assembly as set forth in claim 11 wherein said partitioning means is disposed substantially parallel to the base of said assembly and mounted above the openings in said passage for receiving water from said pool.

19. A coping assembly to be mounted around the perimeter of a swimming pool to form a continuous conduit system for cycling water to and from a filter unit comprising a conduit extending longitudinally around the perimeter of said pool and disposed in said assembly and having openings formed therein for receiving skimmed water from the swimming pool, at least a second conduit extending longitudinally around the perimeter of the swimming pool and disposed in said assembly adjacent said other conduit, said second conduit having openings therein for discharging treated water received from the filter unit to the pool, and partitioning means forming at least a common wall between each of said conduits.

20. A coping assembly as set forth in claim 19 wherein a trough in the form of a V is formed in the wall face adjacent the swimming pool surface of said coping, said trough having openings therein so as to communicate with said conduit for receiving water from the swimming pool.

21. A coping assembly to be mounted around the perimeter of a swimming pool and to form a continuous passageway for cycling water to and from a filter unit comprising: a conduit extending longitudinally through said assembly and having discharge means for returning treated water to the swimming pool, said assembly having spaced openings disposed around the perimeter thereof adjacent the water surface of said pool and communicating with said passageway for receiving skimmed water from said pool.

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