RESILIENT SWIMMING POOL COPING

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The present invention relates generally to new and improved swimming pool coping comprising blocks of material which are resilient and compressible to minimize hazards of personal injury; more particularly, the invention relates to such resilient swimming pool coping wherein interengaging means secure the blocks for depression together under load to eliminate marked differences in block heights under load, and wherein the blocks are resistant to the effects of pool chemicals and of the sun.

Swimming pool coping has heretofore been characterized by certain shortcomings and disadvantages, which the present invention overcomes or alleviates. The coping along the edges of swimming pools is ordinarily fabricated of concrete or other hard material, which involves hazards of personal injury to swimmers and other persons when their heads, limbs or other portions of their body strike the coping. The coping and adjacent decking are unusually wet while a pool is in use, and are slippery when wet, thereby enhancing the hazards of injury. Persons engaging in activities in the water, persons entering or climbing out of the water, or persons engaging in activities or frolicking adjacent to the pool are subject to the hazards of injury. The likelihood of personal injuries caused by hard pool coping is considerably greater in the case of pools utilized by large numbers of persons, such as swimming pools maintained by schools or pools utilized by the public, because large numbers of people or children engage in activities in or adjacent to such pools, involving games, jumping, frolicking and pushing.

Coping fabricated of materials such as concrete are relatively expensive to fabricate and to install. They are subject to unsightly discoloration by pool chemicals, such as chlorine and muriatic acid. Sunlight causes the colors of such coping to fade over a period of time. Such coping is hard and uncomfortable to walk and sit upon, and becomes uncomfortably warm under the action of the sun.

The present invention provides coping for swimming pool edges which is formed of a plurality of individual coping blocks fabricated of resilient spongy material. The blocks are configured for assembly together to provide coping along the pool edge. Interengaging means, preferably in the form of tongue-and-groove joints between adjacent blocks, secure adjacent block portions together, so that they are depressed together under load, such as that applied by the foot of a person. Means are provided for securing the coping blocks to the decking adjacent to the pool edge, the securing means preferably being a mastic adhesive. Serrations are preferably provided on the undersides of the blocks to facilitate securement to the decking. Such securement is further provided by angular mutually engaging portions of the decking and the rear portion of each block. Features including a resilient lip portion depending from the front portion of the block, and a feather section extending rearwardly from the block facilitate the structural and aesthetic integration of the blocks with the associated structure, and provide increased assurance against injury to persons from impact.

It is therefore an object of the present invention to provide new and improved swimming pool coping.

An object of the invention is to provide resilient and compressible swimming pool coping to reduce hazards of personal injury by impact of a person upon the coping.

An object of the invention is the provision of swimming pool coping according to the foregoing objects wherein interengaging means secure together adjacent edge portions of coping blocks, whereby they are depressed together under load to maintain a relatively smooth upper surface.

It is an object of the invention to provide swimming pool coping which is relatively comfortable to walk and sit upon.

An object of this invention is the provision of swimming pool coping which is relatively economical to fabricate and which is relatively easy to install.

An object of the invention is the provision of swimming pool coping adapted to resist the effects of swimming pool chemicals and the fading effects from the sun.

Other objects, features and advantages of the present invention will become apparent to those versed in the art from a consideration of the following description, the appended claims and the accompanying drawing, wherein:

FIGURE 1 is a perspective view, partially in cross section, of a portion of a swimming pool having coping according to the invention installed along the edges thereof;

FIGURE 2 is a perspective view of a preferred embodiment of the swimming pool coping block of the invention;

FIGURE 3 is a sectional view taken at line 3—3 of FIGURE 1;

FIGURE 4 is a sectional view, generally similar to the view of FIGURE 3, illustrating the effect of interengaging means on adjacent blocks during the application of a load by a foot shown in phantom outline;

FIGURE 5 is a partial perspective view illustrating the resilient compression of swimming pool coping blocks according to the invention upon being impacted by the head of a person, the head being shown in phantom outline; and

FIGURE 6 is a sectional view taken at line 6—6 of FIGURE 5, and further illustrating the resilient compression of the coping blocks upon impact by a head shown in phantom outline.

Referring to the drawing, FIGURE 1 illustrates a portion of a swimming pool structure 10 which includes a decking 12 formed of concrete sections or tiles, and coping 14 formed of a plurality of coping blocks 16 according to the invention.

FIGURES 2 and 6 illustrate a preferred configuration of coping block according to the invention. The decking adjacent the pool edge is recessed or relieved, as indicated at 18 (FIGURE 6), and the rear end portion of the recess is undercut to define an angular shoulder 20 to accommodate the coping block 16. The coping block has an arcuate, somewhat concave upper surface 22, a rounded front corner or rib portion 24, and a downwardly extending lip portion 30 depending from the cushion portion 24 and terminating in a lower edge 32. The rear portion of the coping block has an upper feather section 34 which tapers rearwardly, and a lower angularly re-
cessed section 36 which is configured for engagement with the angular shoulder 26 in the decking, for the purpose of securing the rear portion of the block. The side surfaces 40 of the block are planar and parallel.

Interlocking means in the form of interengaging recesses 42, 44 and projections or tongues 46, 48 are provided at the sides of each coping block 16, as shown in FIGURE 2. With a plurality of the blocks assembled to provide coping along the edge of the pool as indicated in FIGURE 1, the projections or tongues 46, 48 fit into the recesses or grooves 42, 44, as indicated in FIGURES 3 and 4.

As indicated at 54 in FIGURES 2 and 6, the underside of the coping block is preferably serrated in order to provide more positive securement to the pool decking. The serrated underside of the block is preferably secured to the decking by a mastic adhesive or other appropriate adhesive. However the coping blocks may also be secured by means of bolts, pins or other fastening means.

The coping block 16 is fabricated of a resilient, preferably spongy, material, such as a spongy synthetic plastic. The coping blocks are therefore resilient and compressible. Upon being impacted by a person's head, limbs, or other portions of the body, a coping block of the invention will yield and compress, as indicated in FIGURES 5 and 6. The shock or force of the impact upon the person is thereby greatly reduced, and personal injury, such as bruises, cuts or bone fractures, are rendered much less likely and their severity minimized. As is well known, persons walking, running or otherwise active at the edges of pools often slip or fall at the edge of the pool and strike their heads or portions of their bodies against the pool coping. Persons entering or climbing out of the pool water, or swimmers in the water, can strike their head or portions of their body against the coping. The substantial reduction or elimination of the hazards of personal injuries is an important feature of the invention. This factor is of great importance to individual pool owners, particularly with respect to children playing about or in the pool. This reduction or elimination of hazards of personal injury is of particular importance in relation to swimming pools utilized by a large number of people, such as the swimming pools of schools and public swimming pools, where large numbers of people engage in activities in or about the pools. The reduction of personal injury hazards is, of course, of particular importance with respect to children who generally engage in frolicking activities, jumping and pushing in or about swimming pools.

The interengaging tongues or projections 46, 48 and recesses or grooves 42, 44 secure the adjacent edge portions of coping blocks together, so that they are depressed together upon the application of a load, as indicated in FIGURE 4. The resilience and compressibility of the blocks and their tongue-and-groove interengagement cause adjacent portions of adjoining blocks to be compressed downwardly together, when load is applied to one of the blocks, as indicated in FIGURE 4. This results in the maintenance of a relatively smooth upper surface across the adjoining blocks, which otherwise would not be maintained because one block would be depressed, while an adjacent block would remain uncompressed, thereby resulting in an uneven and relatively hazardous projection or ridge.

From the foregoing, those versed in the art will appreciate that the present invention achieves the objects and realizes the advantages herebefore mentioned, and that the invention provides additional advantages which are apparent from the detailed description. Hazards of personal injury are greatly reduced by the resilience and compressibility of the swimming pool coping. The coping is relatively comfortable to walk or lie upon. The blocks are preferably fabricated of synthetic plastic, and may therefore be resistant to discoloration and deterioration under the effects of swimming pool chemicals, such as chlorine or muratic acid. The materials of the blocks are preferably such that the blocks are resistant to fading or deterioration caused by sun and weather. The blocks may be fabricated of a wide choice of colors, inasmuch as synthetic plastic materials provide enhanced versatility in this respect.

Although a specific embodiment of the present invention has been described and illustrated herein, it will be understood that the same is merely exemplary of presently preferred embodiments capable of attaining the objects and advantages herebefore mentioned, and that the invention is not limited thereto; variations will be readily apparent to those versed in the art, and the invention is entitled to the broadest interpretation within the terms of the appended claims.

The inventor claims:

1. Coping for the edge of a swimming pool, said coping comprising a plurality of individual coping blocks formed of a resilient spongy material, said blocks being configured to provide coping along the edge of the pool, each of said blocks having an arcuate upper surface, a rounded front portion adjacent to the pool wall and a rear portion tapering rearwardly, and means on the undersides of the respective coping blocks for securing the blocks to the decking structure of the pool edge.

2. Swimming pool coping according to claim 1 wherein said coping blocks are fabricated of a spongy synthetic plastic.

3. Coping for the edge of a swimming pool, said coping comprising a plurality of individual coping blocks formed of a resilient spongy material, said blocks being configured to provide coping along the edge of the pool, interengaging means on the respective coping blocks securing together their adjacent edge portions for depression together under load, and means defined on the undersides of the respective coping blocks for securing the blocks to the decking structure of the pool edge.

4. Swimming pool coping according to claim 3, wherein said interengaging means comprise tongue-and-groove joints between adjacent blocks.

5. Coping for the edge of a swimming pool, said coping comprising a plurality of individual coping blocks formed of a resilient spongy material, said blocks being configured to provide coping along the edge of the pool, interengaging means on the respective coping blocks securing together their adjacent edge portions for depression together under load, means defining serratations on the undersides of the blocks, and mastic adhesive securing the serrated block undersides to the decking structure of the pool edge.

6. Coping for the edge of a swimming pool, said coping comprising a plurality of individual coping blocks formed of a resilient spongy material and configured to provide coping along the pool edge, each of said blocks having an arcuate concave upper surface, a rounded front cushion portion adjacent to the pool wall, a resilient depending lip portion extending downwardly from said front cushion portion along the pool wall, and interengaging means on the respective coping blocks securing together their adjacent edge portions for depression together under load.

7. Swimming pool coping according to claim 6, and further including means defining serratations on the undersides of the blocks, and mastic adhesive securing the serrated block undersides to the decking structure of the pool edge.

8. Coping for the edge of a swimming pool, said coping comprising a plurality of individual coping blocks formed of a resilient spongy material and configured to provide coping along the pool edge, each of said blocks having an arcuate concave upper surface, a rounded front cushion portion adjacent to the pool wall, and a rear portion having an upper feather section tapering rearwardly and an angularly recessed lower section con-
figured for engagement with a complementary portion of the pool decking structure to secure said coping rear portion against rising.

9. Coping for the edge of a swimming pool, said coping comprising a plurality of individual coping blocks formed of a resilient spongy material, said blocks being configured to provide coping along the edge of the pool, means defining serrations on the undersides of the blocks, and mastic adhesive securing the serrated block undersides to the decking structure of the pool edge.

10. Coping for the edge of a swimming pool, said coping comprising a plurality of individual coping blocks formed of a resilient spongy material and configured to provide coping along the pool edge, each of said blocks having an arcuate concave upper surface, a rounded front cushion portion adjacent to the pool water, a resilient depending lip portion extending downwardly from said front cushion portion along the pool wall, and means for securing the resilient coping blocks to the decking structure of the pool edge.

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