United States Patent

[11] 3,590,400

[72] Inventors **Frank L. Kessler**
17 Vassar Road, Broomall, Pa. 19008;
Stephen F. Kendall, 536 Sprague Road,
Penn Valley, Pa.

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[54] **SWIMMING POOL COPING**
2 Claims, 3 Drawing Figs.

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[50] **Field of Search** 4/172, 172.21, 172.19, 172.18; 52/169, 155, 588

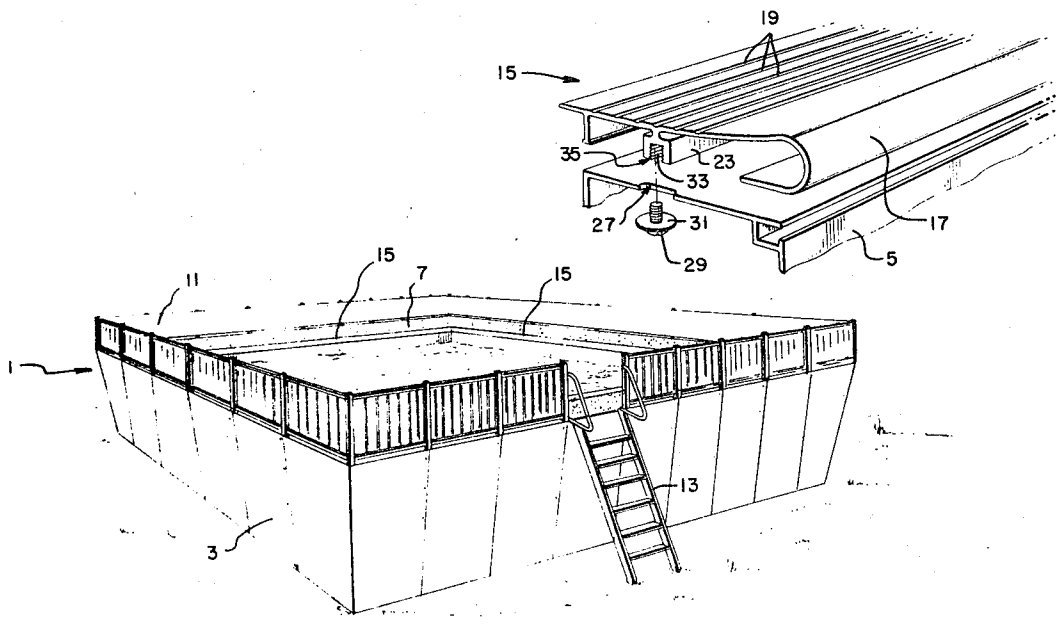
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Primary Examiner—Laverne D. Geiger
Assistant Examiner—Henry K. Artis
Attorney—Jay M. Cantor

ABSTRACT: The disclosure relates to a swimming pool which is prefabricated and is assembled on site from the component parts. The shell of the pool containing the water during use is formed from a flexible inner liner which is attached to the sides of the pool. The construction also includes a one-piece coping which is placed around the deck of the pool and at the inner edge thereof in order to give the pool a rectilinear appearance despite the bowing caused by outward pressure exerted on the pool walls by the water within the pool.



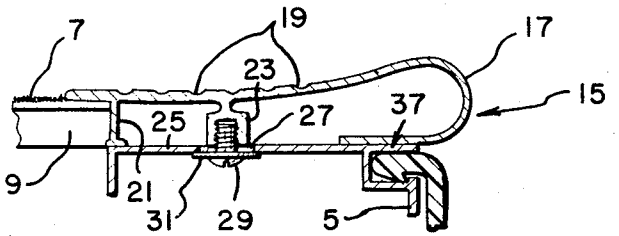


Fig. 2

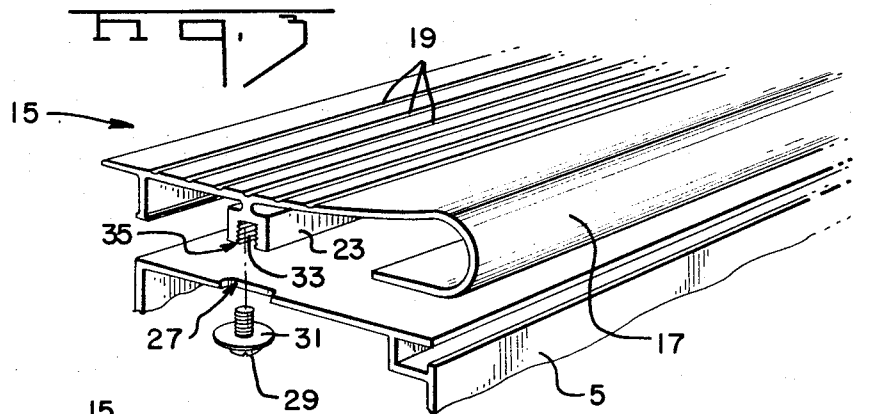


Fig. 3

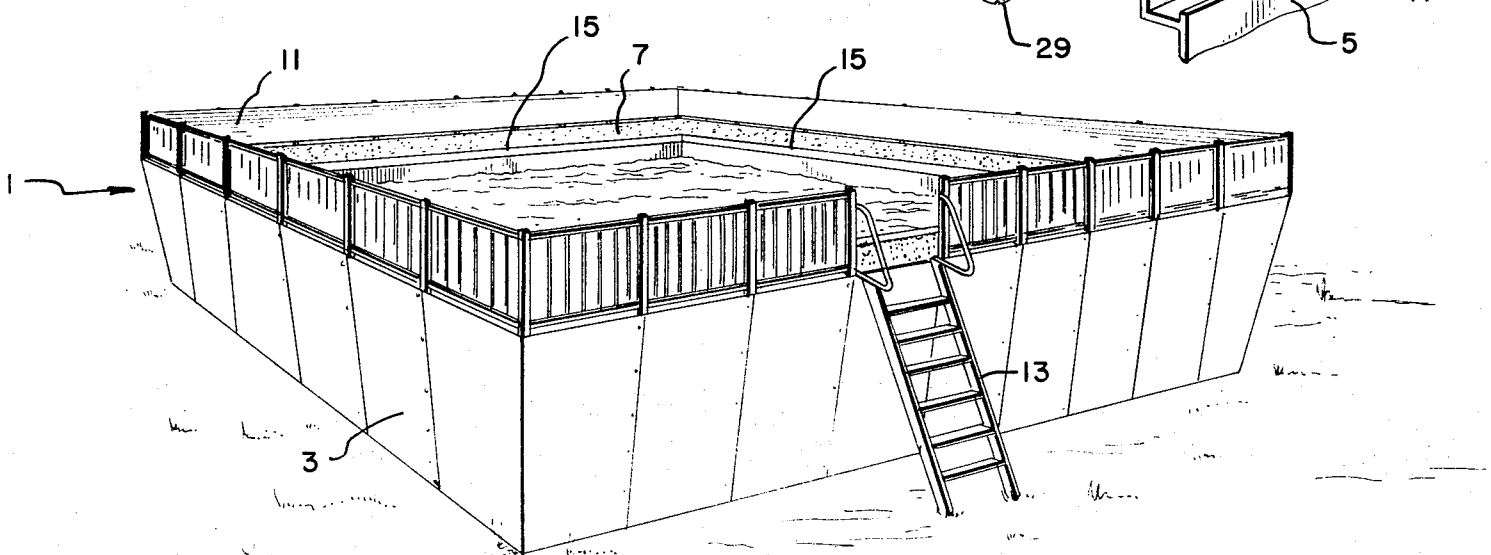


Fig. 1

SWIMMING POOL COPING

This invention relates to prefabricated swimming pools which are assembled at the installation site and, more particularly, to a one-piece coping for such swimming pools which can be easily and economically manufactured and which can be installed in a simple one-step operation.

Swimming pools of the prior art were originally constructed by earth excavation with subsequent pouring of concrete to form the final pool. Such methods of pool construction were relatively expensive and the upkeep of concrete swimming pools was relatively high. Therefore, the art turned to relatively less expensive pool constructions, one such pool construction involving the use of prefabricated materials which could be assembled at the site of the installation, either in an excavation below ground, or on the ground surface. Such swimming pools have normally been prefabricated from wood or metal materials such as aluminum extrusions and the like. Such pools contained the water therein by the use of flexible plastic liners and the like, pool depth being dependent merely upon the amount of earth excavation or pool height above ground level. Prefabricated pools of this type have found increasingly greater acceptance by the public due to their relatively lower cost than the prior art concrete pools. However, since the prefabricated pools do not offer the great degree of resistance to the outward pressure of water therein as do the prior art concrete pools, there is a tendency for the sidewalls of the prefabricated pool to be bowed outwardly, thereby providing a nonrectangular appearance. Such bowing, if of sufficient degree, becomes unsightly and greatly detracts from the appearance of the swimming pool installation. The prior art has recognized this problem and has provided copings along the pool edges, the copings being secured to the pool deck after the pool bowing has taken place. In this manner, the coping will remain rectilinear, even though the pool walls will have bowed slightly, thereby providing the rectilinear appearance desired.

The copings provided by the prior art have normally been of two-piece construction and have required the production of two separate coping elements as well as the difficult problem of properly securing the two-piece coping to the upper surface of the swimming pool frame. A coping of this type is shown in U.S. Pat. No. 3,416,165 of Pefeira as well as U.S. Pat. No. 3,310,814 of Lipman. Another prior art coping is shown in U.S. Pat. No. 3,298,039 of Schmerler.

In accordance with the present invention, there is provided a one-piece coping formed from extrudable material such as aluminum or plastic, the coping including a centrally located depending member having a hollow rectangular slotted interior which is open at its downward end for receiving threaded bolts. The slots extend axially along the entire length of the coping. Elongated slots can also be cut in the pool deck whereby the bolts can be positioned therethrough for threading into the slotted bolt receiver which is integral with the coping. In this manner, a relatively inexpensive one-piece coping can be provided, the coping being secured to the pool deck by a unitary bolt which is easily positioned through an elongated slot in the deck to overcome the problems caused due to bowing. It can be seen that a single serviceman need merely locate the threaded or slotted receiver through the aperture in the deck and secure the bolt therein, whereas, in prior art devices, an operator was required both above and below the deck to locate both the nut and bolt portions and mate same and prevent the bolt from rotating during securing same.

It is therefore an object of this invention to provide a coping for a swimming pool which is inexpensive to manufacture relative to prior art copings.

It is a further object of this invention to provide a unitary coping for a swimming pool which is easy to install relative to prior art copings.

It is yet a further object of this invention to provide a coping for a prefabricated swimming pool for providing a rectilinear appearance to the swimming pool which is relatively inexpensive to manufacture and install relative to prior art copings.

The above objects and still further objects of the invention will become apparent to those skilled in the art after consideration of the description of the following preferred embodiment of the invention which provided by way of example and not by way of limitation with the accompanying drawing wherein;

FIG. 1 is a perspective view of the above ground swimming pool installation in accordance with the present invention;

FIG. 2 is a sectional view of the installed coping in accordance with the present invention; and

FIG. 3 is a cross-sectional view of the coping and swimming pool deck prior to installation.

Referring first to FIG. 1, there is shown a prefabricated swimming pool which is assembled at the site of installation and labeled 1. In the embodiment of FIG. 1 there is shown an above ground pool, it being understood that an excavation can be made and the pool can be assembled therein to become a below ground pool. The pool includes outer sidewalls or the like 3 and an inner wall 5 (shown in FIGS. 2 and 3). The swimming pool includes a deck 9 (FIG. 2) over which is positioned a carpet 7. A railing 11 surrounds the outer portions of the deck and a stair 13 is provided for entry onto the deck of the swimming pool. A coping 15 is positioned at the interior edge of the deck and extends beyond the interior wall thereof to provide a rectilinear appearance to the entire pool despite bowing of the sidewalls 5 thereof as will be explained hereinbelow.

Referring now to FIGS. 2 and 3, there is shown the coping of the present invention in enlarged cross-sectional view. The coping 15 includes a rounded front surface 17 which is positioned over the inner edge of the swimming pool. The coping also includes a plurality of antislip grooves 19 which are provided by way of decoration and which also serve to decrease the possibility of slipping by swimmers standing at the pool edge. The coping has a rear support leg 21 which abuts the pool deck, the coping extending outwardly beyond the support leg 21 to support the carpet 7 thereunder against the deck 9. The forward edge of the coping 17 is rounded and also abuts on the deck surface at 37. The coping also includes an integral downwardly depending rectangularly shaped bolt receiving member 23 having a hollow rectangular interior, open at the bottom, which includes axial grooves extending the entire length of member 23. These grooves or slots serve to receive a bolt as will be explained hereinbelow. The bolt receiver 23 extends along the entire length of the coping, thereby always providing access thereto by a bolt anywhere along the deck surface.

The deck surface portion 25 includes an elongated aperture 27 therein through which a bolt 29 is passed for mating with the threads or slots 33 of the bolt receiver 23. The elongated aperture 27 allows for mating of the bolt 29 and washer 31 through the surface 25 despite outward or inward bowing of the sidewalls of the pool. In any event, the coping 15 be straight and provide the rectilinear pool appearance. In addition, it can be seen that the slotted portion of the coping will always be positioned opposite any aperture 27 in the deck, the slots 33 being rigid, thereby allowing the installer of the pool to merely pass the bolts 29 through the apertures 27 into the slotted bolt receiver 23. Only one operator is required to perform this function rather than two as was the case in the prior art. The coping can be made of any suitable material, though extruded aluminum has been found to be the most satisfactory and economical. In addition, though any type of bolt can be used, an aluminum bolt has been found to be most satisfactory since stripping of the threads or slots 33 in the rectangular hollow member 35 is materially decreased by use of such bolt.

It can be seen that, in accordance with the present invention, the single-piece coping provides both economy in production of the coping as well as economy in installation of the coping.

In a below ground swimming pool installation, the coping would be identical to that described hereinabove. However there would be no need for a deck, carpet and railing and the outside wall could also be removed. In addition, the grooves 19 can be supplemented or replaced by a nonskid paint.

Though the invention has been described with respect to a specific preferred embodiment thereof, many variations and modifications thereof will immediately become apparent to those skilled in the art. It is therefore the intention that the appended claims be interpreted as broadly as possible in view of the prior art to include all such variations and modifications.

What we claim is:

1. A swimming pool coping comprising an elongated body member having a cross section with an externally convex end, a top surface and a downwardly depending elongated bolt receiving member integral with said top surface, said bolt receiving member comprising a channel extending parallel to the axis of the member and parallel slots in the facing walls of the channel whereby to receive a threaded member at any point along the length thereof.

2. A swimming pool coping as set forth in claim 1, wherein said top surface includes parallel grooves therein.