

May 25, 1971

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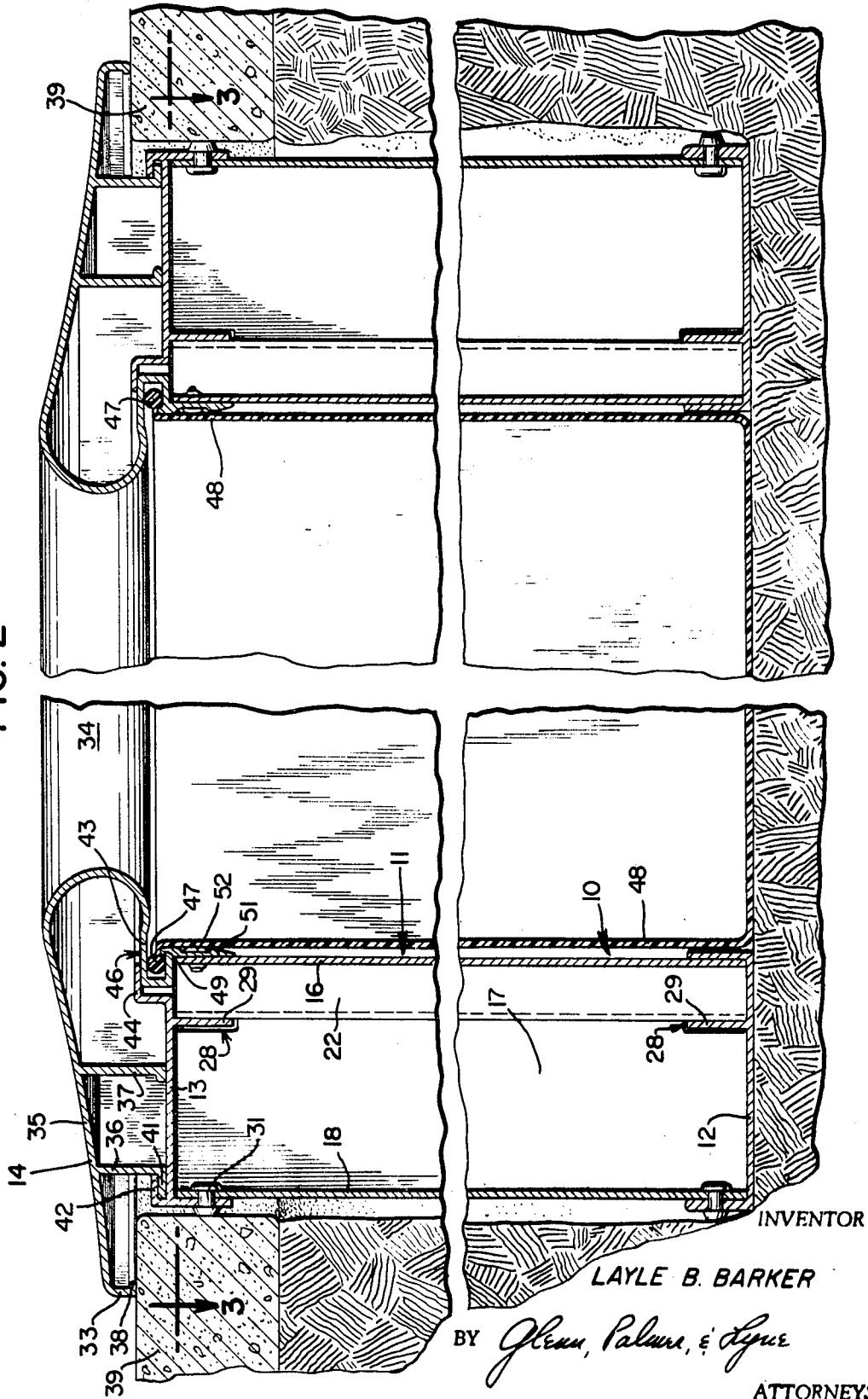
3,579,665

SWIMMING POOL STRUCTURE

Filed Oct. 11, 1967

5 Sheets-Sheet 2

FIG. 2



May 25, 1971

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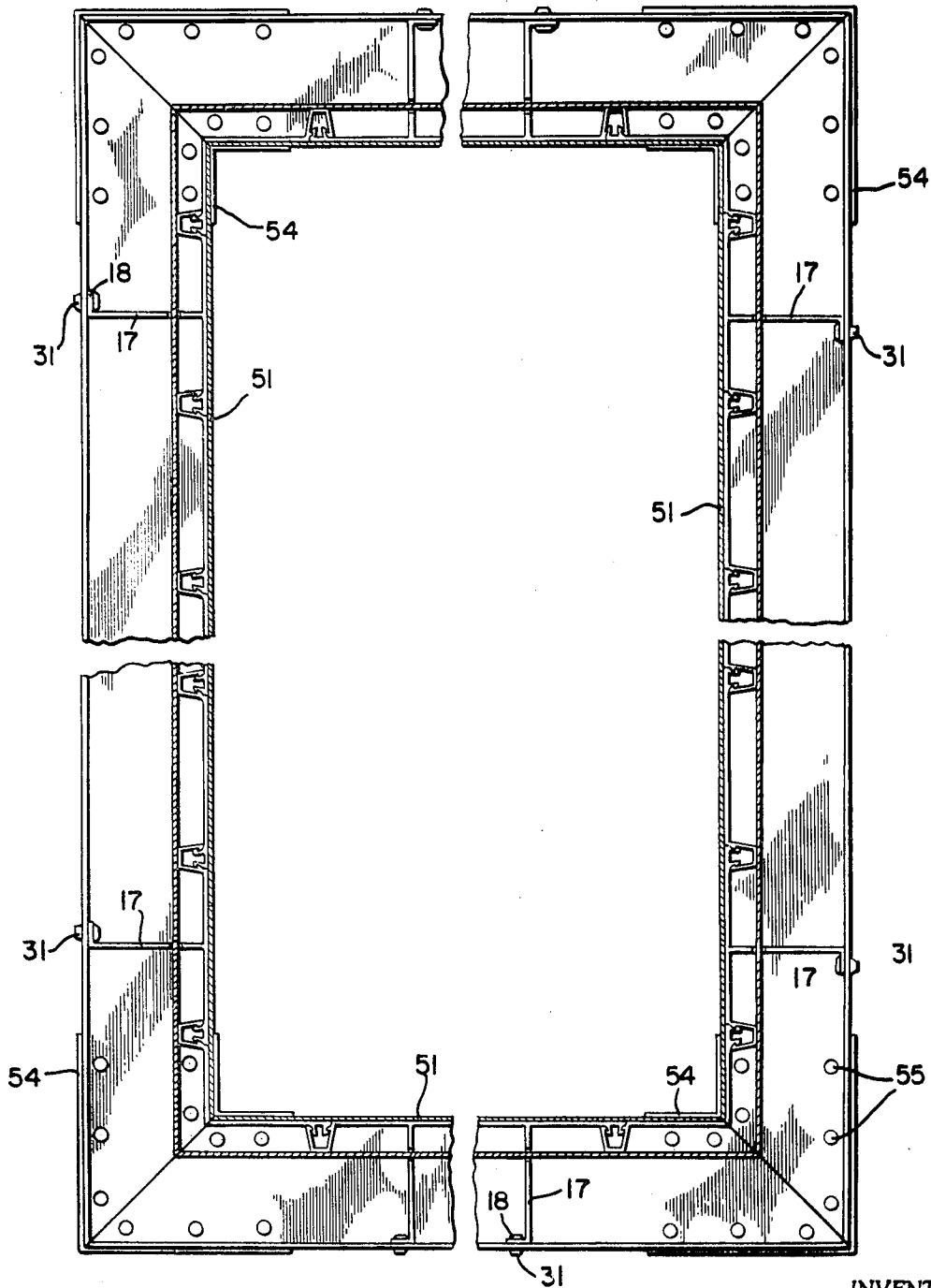
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Filed Oct. 11, 1967

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FIG. 3



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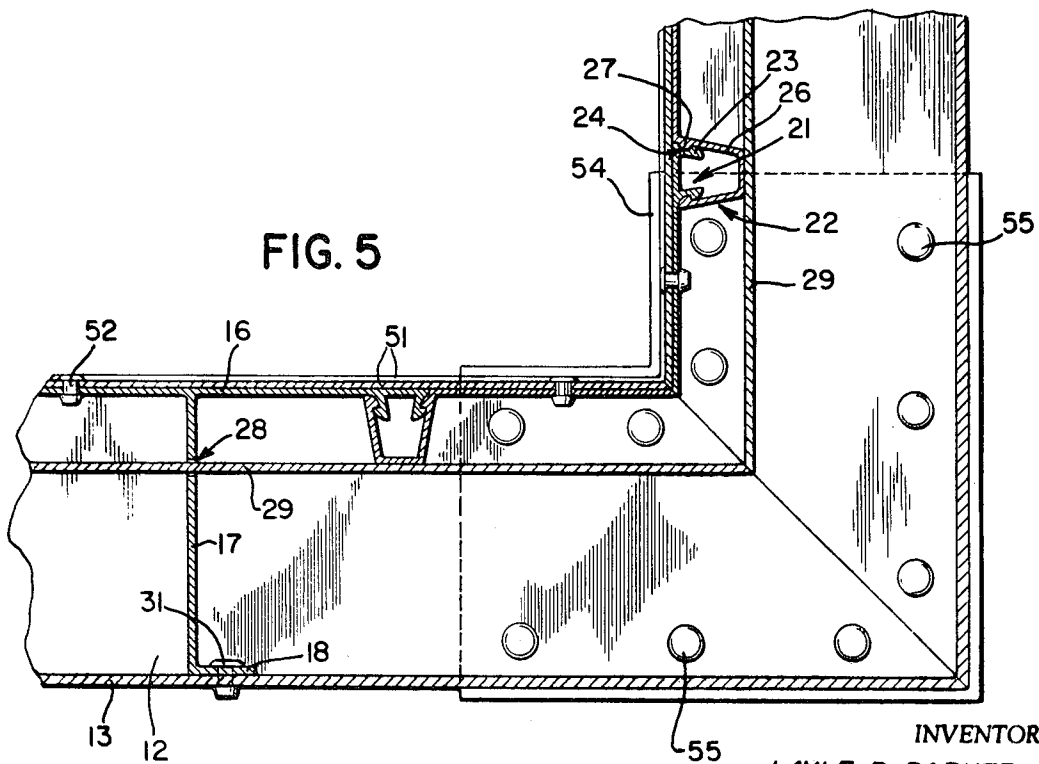
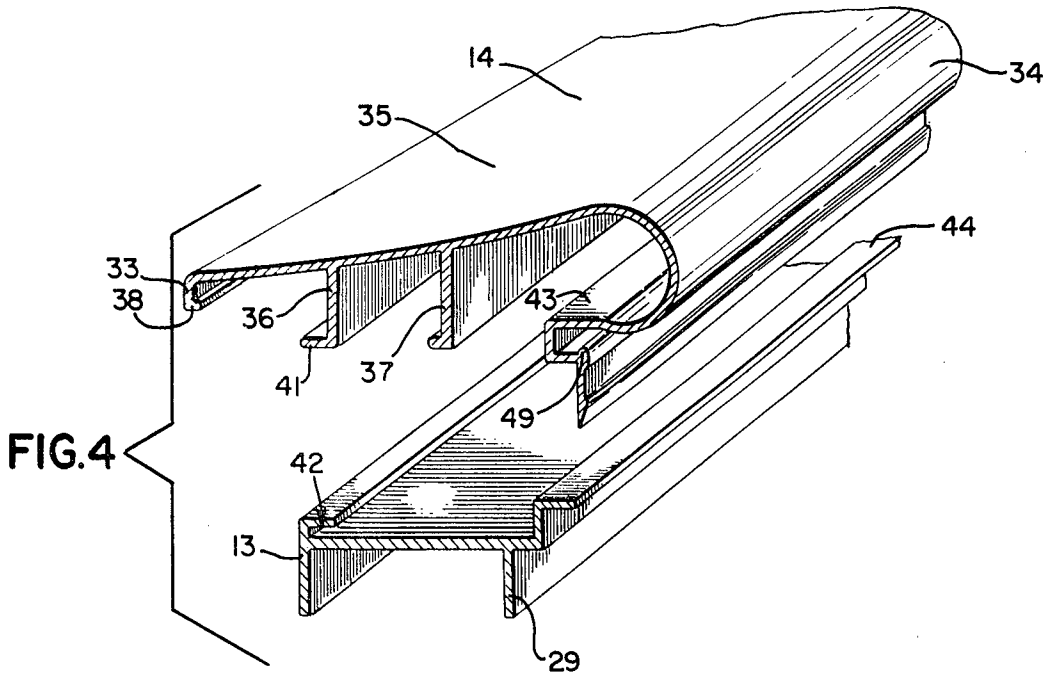
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SWIMMING POOL STRUCTURE

Filed Oct. 11, 1967

5 Sheets-Sheet 4



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Filed Oct. 11, 1967

5 Sheets-Sheet 5

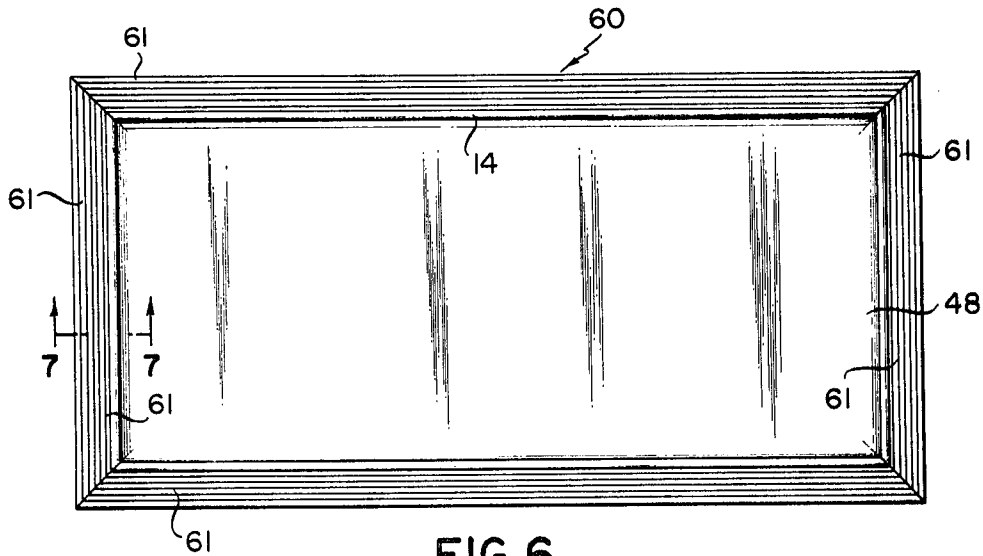


FIG. 6

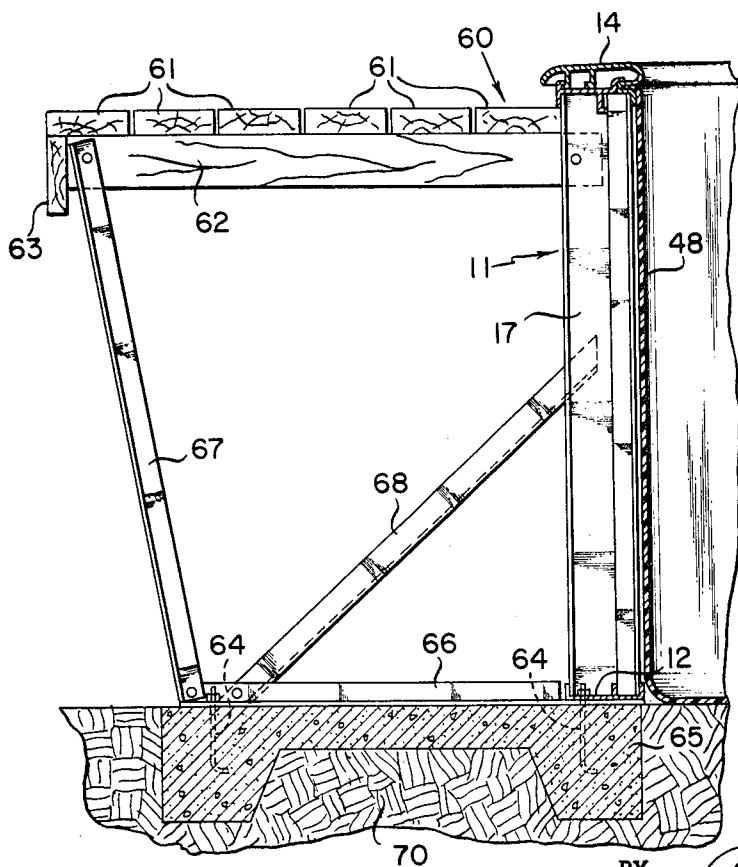


FIG. 7

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3,579,665

SWIMMING POOL STRUCTURE

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Filed Oct. 11, 1967, Ser. No. 674,391

Int. Cl. E04h 3/16

U.S. Cl. 4—172.19

11 Claims

ABSTRACT OF THE DISCLOSURE

A swimming pool structure wherein a combination of interlocking aluminum side wall members are retained at their lower and upper ends in channels of lower and upper channel members, and a coping member surmounts the upper channel member. The coping and upper channel members are provided with mutually interlocking means, and a portion of the latter is formed with a retaining channel to receive the edge of a pool liner.

BACKGROUND AND FIELD OF THE INVENTION

In the swimming pool construction art numerous combinations of structural elements are to be found, including pool side wall panels secured together at their lateral portions and carrying, along their upper ends, a coping that may also retain the upper edge of a pool liner.

However, the prior art does not show the novel structure of pool side wall members formed from interlocking aluminum extrusions which are capped top and bottom with channel members to form a rigid structure. The upper capping or channel member interlocks with and positions a novel coping member which gives a pleasing appearance to the composite structure. The use of interlocking extrusions as side wall members facilitates rapid and economical on the job assembly of the structure.

Numerous objects and advantages of the instant invention will become apparent as it is better understood from the following description thereof taken in connection with the accompanying drawings.

Referring to the drawings:

FIG. 1 is a plan view of a rectangular swimming pool embodying the present invention;

FIG. 2 is a vertical transverse section of the pool taken at 2—2 in FIG. 1;

FIG. 3 is a horizontal section taken at 3—3 in FIG. 2 of the assembled side wall members only;

FIG. 4 is an isometric exploded view of two members of the pool side wall;

FIG. 5 is an enlarged view of a pool corner shown in FIG. 3, taken on a horizontal plane slightly lower than at 3—3 in FIG. 2;

FIG. 6 is a plan view of a pool erected above ground level; and

FIG. 7 is a vertical section taken at 7—7 in FIG. 6.

With further reference to the drawings, the pool side wall is indicated, generally, by the numeral 10. It comprises a plurality of vertical panel members 11 retained at their lower ends within lower channel members 12, and at their upper ends within upper channel members 13, the latter being surmounted by coping members 14 to which they are secured.

Each panel member 11 is formed with a panel wall 16. Some of the panel members are provided with a medial web 17 which extends outwardly, relative to the pool, to terminate in a flange 18. The lateral portions of each panel wall 16 are provided with locking and

2

counterpart locking formations indicated, respectively, by the numerals 21, 22 (FIG. 5). The locking formation 21 may be a pair of parallel ribs 23 each having a longitudinal groove 24 in its outer lateral face, while counterpart formation 22 may be a channel 26 having projecting ribs 27 adapted to snap into grooves 24 of ribs 23 of a contiguous panel wall when the panel members are assembled.

Each medial web 17 of a panel member is transversely slotted at bottom and top as indicated by the numeral 28; and the lower and upper channels 12, 13 are each formed with a longitudinal medial wall 29 that engages within a slot 28 in a plurality of webs 17 when the members are assembled. The slots 28 are spaced back from the panel walls 16 a distance equal substantially to the depth of the channel formation 22 so that the outermost surface of the latter is supported by the medial walls 29 against lateral pressure applied to the panel walls.

The lower and upper ends of each panel member are secured to the channel members 12, 13 by suitable means such as rivets 31 which fasten the flange 18 of the panel member to a side wall of each channel member (FIGS. 2 and 5).

The coping member 14 is of inverted channel formation having an outer short wall 33 and an inner curved wall 34 joined by an upper, inclined wall 35 from which depend outer and inner medial webs 36 and 37 respectively. The outer wall 33 terminates downwardly in a short inturned flange 38 adapted to rest on the decking 39 (FIG. 2) which borders the pool, while the medial webs 36, 37 and the inner wall 34 engage the upper channel member 13. The lower end of medial web 37 rests on upper channel member 13 (FIG. 2) and thus lends rigidity to the coping upper wall 35.

Interengagement of said coping and channel members is effected, at assembly, by a horizontal relative movement between the members to insert an outturned flange or foot 41, at the base of web 36, into a horizontal channel 42, formed on an outer and upper portion of upper channel member 13, and simultaneously sliding a horizontal flange 43, on the curved wall 34, under a shelf 44 on the channel member 13.

The coping flange 43 terminates in a horizontal channel 46 underlying the flange and opening inwardly relative to the pool, and thus adapted to receive the beaded edge 47 of a conventional pool liner 48. A ridge 49 (FIGS. 2 and 4) on the lower side of the liner-retaining horizontal channel 46 restricts the entrance to the channel so that the liner bead 47 must be forced past it into the channel and is thereby secured in the channel.

The lower wall of the liner-retaining channel 46 terminates inwardly, relative to the pool, in a downwardly extending flange 51 that is secured to the panel walls 16 by any suitable means, such as by rivets 52. The heads of these rivets are flush with the inner surface of the flange, and the lower edge of the flange is beveled so that the liner, in this area, will be smooth, showing no evidence of the rivets and flange under it. The flange 51 forms a fascia for coping member 14.

When the pool requires relatively sharp angular turns in the side wall, as in the rectangular form shown in the drawings, the side wall may be formed in sections, mitered at the ends (FIGS. 1, 3, and 5), and the mitered ends united by corner joints 54 secured by rivets 55 to the mitered ends of the channel members.

FIGS. 6 and 7 of the drawings illustrate a construction of a pool above ground level, and embodying the inven-



5

- (b) a fascia member integral therewith and depending downwardly from said coping member;
- (c) said fascia member adapted to receive fastening means for attaching said fascia member to said vertical support walls;
- (d) said swimming pool liner covering said fastening means when said liner is received in said channel of said coping member thereby providing a concealed fastening means.
11. In a swimming pool side wall, the combination of structural members comprising:
- vertical side wall panel members;
 - an upper inverted channel member overlying the upper ends of said panel members;
 - panel securing means for connecting said panel members to said upper channel member;
 - coping securing means for connecting said coping member to said upper channel member;
 - whereby said panel, upper channel and coping members are secured together in a unitary side wall;
- said side wall further comprising:
- a lower channel member underlying the lower ends of said panel members;
 - at least one of said panel members being formed with a medial web extending outwardly from its panel wall;
 - at least one of said channel members being formed with a medial channel wall; and,
 - the adjacent medial web of said panel member being formed with a slot in which said medial channel wall is retained.

6

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H. K. ARTIS, Assistant Examiner

U.S. Cl. X.R.

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