Nov. 14, 1967 E. H. SHIELDS 3,351,958

CUSHIONED COPING FOR SWIMMING POOL WALLS

Filed Aug. 24, 1965 2 Sheets-Sheet 1

Fig. 1

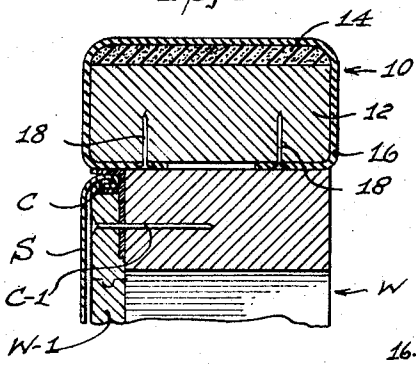


Fig. 2

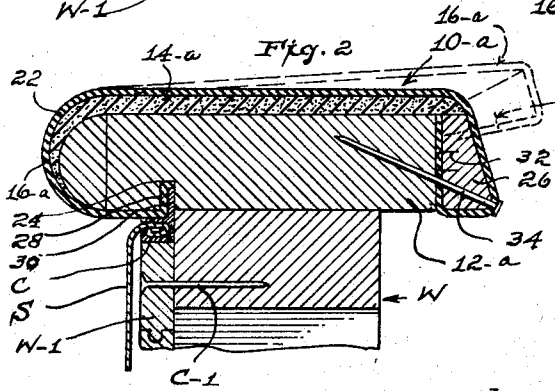


Fig. 3

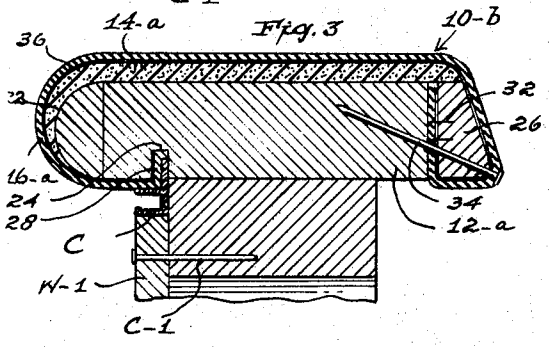


Fig. 4

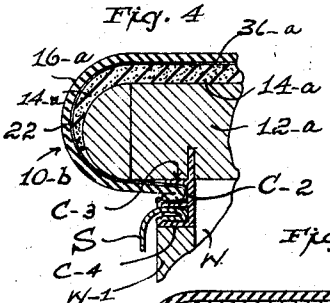


Fig. 5

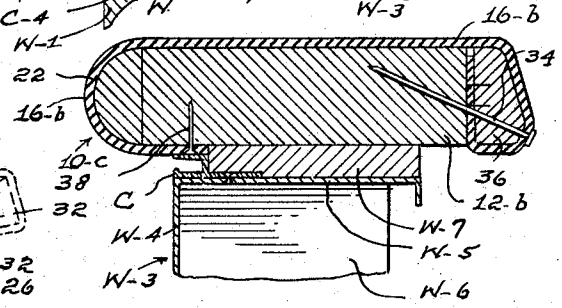


Fig. 6

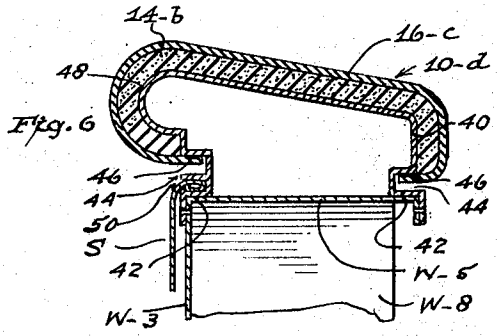


Fig. 7

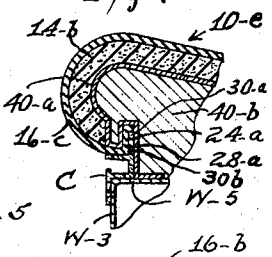


Fig. 8

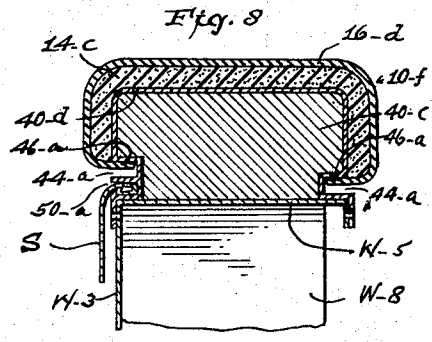


Fig. 9

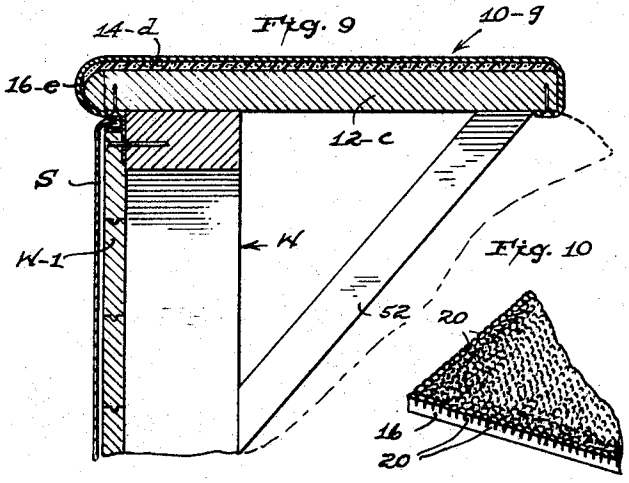


Fig. 10

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Nov. 14, 1967 E. H. SHIELDS 3,351,958

CUSHIONED COPING FOR SWIMMING POOL WALLS

Filed Aug. 24, 1965 2 Sheets-Sheet 2

Fig. 11

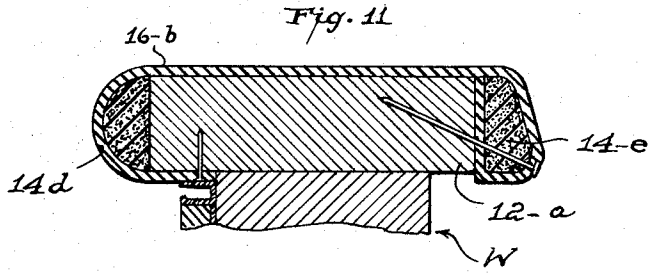


Fig. 12

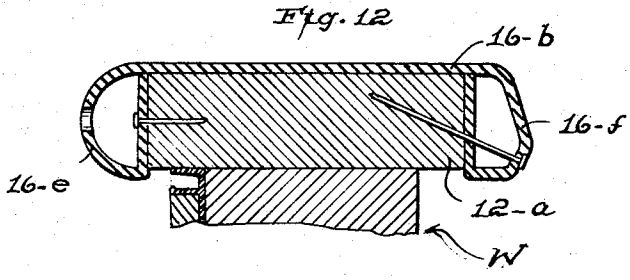


Fig. 13

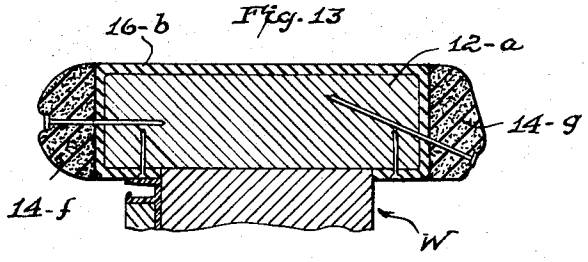
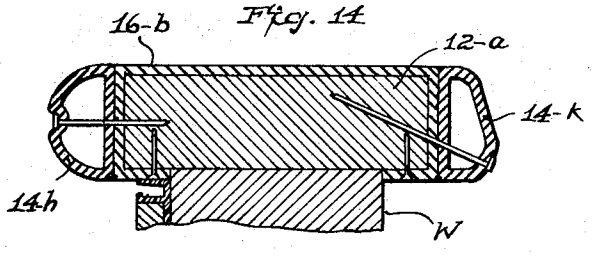


Fig. 14



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CUSHIONED COPING FOR SWIMMING POOL WALLS

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Filed Aug. 24, 1965, Ser. No. 482,068
17 Claims. (Cl. 4—172)

ABSTRACT OF THE DISCLOSURE

The combination with a swimming pool wall having a horizontal top surface of a cushioned coping including a rail member mounted on the top surface of the wall and having a resilient sheet cover for the rail member with a sheet of soft resilient material between the rail and sheet cover.

This invention relates to swimming pool constructions of the general type shown and described in my copending application Ser. No. 407,815, filed Oct. 30, 1964, which includes a wall enclosure and a flexible sheet of vinyl or other waterproof material suspended from the upper edge of the wall and resting on a smooth sand bottom of the desired contour for containing water.

In swimming pool constructions of the type referred to, it is customary to mount a smooth coping on top of the wall to provide a hand support as well as a finished appearance to the wall. Heretofore such copings have been made of wood, metal, concrete, or other hard material which presents a danger of injury to a person grabbing it from the pool, falling on it or other violent contacts with the coping.

Another dangerous condition around private swimming pools is that the lack of a safe walking surface around the edge of the pool for barefooted persons subjects them to injury from pebbles or other objects on the ground.

Therefore, one of the principal objects of the present invention is to provide a safety coping for a swimming pool wall having its outer surface enclosed in a sheet cover of plastic or other soft resilient material to serve as a cushion to preclude injury to a child or other person who may suddenly grasp it or accidentally fall upon the coping.

A further object of the invention is to provide the cover referred to with anti-skid means, which may consist of various types of interruptions in its outer surface such, for example, as small closely arranged and smooth ended projections which will inflict no injury to the hands or body of a person.

A still further object of this invention is to provide a coping and cover of the character referred to which is of substantially greater width than that of the usual coping which can easily be swept clean of pebbles and dirt to serve as a safety deck, or walk, for barefooted persons in walking around the edge of the pool.

Another object of the invention is to provide additional cushioning means for either the safety coping or the safety deck by inserting a thick sheet of soft resilient material between the top of the coping rail and the resilient cover therefor.

Another object of this invention is to provide the safety coping or safety deck referred to with means near its inner edge for supporting the upper edge of a flexible water containing sheet which may be of vinyl or the like.

My improved safety coping consists primarily of a supporting rail member of wood or other suitable material, and a resilient sheet cover enclosing the rail member and having its edges attached to the rail member by staples, nails or other suitable means. The construction of my safety deck may be the same as that of my safety

coping, except of greater width. In either case the additional cushioning means is inserted between the rail member and the resilient sheet cover.

For the additional cushioning material referred to I have found that a sponge rubber-like, waterproof material available in the market when tightly bound with the resilient cover mentioned will provide a cushion of ample yieldability for safety and comfort but with the requisite firmness for durability in all kinds of weather.

The swimming pool wall may be made of wood, concrete, metal or other suitable material having a horizontal top surface on which the safety coping or safety deck rail member is mounted.

For swimming pools having wholly or partially curved walls the safety coping or deck may be made in short sections with mitered ends in the general manner shown in my copending application previously mentioned, or in curved sections.

Other objects and advantages of my improved safety coping and safety deck will be apparent or pointed out in the following specification in which reference is directed to the accompanying drawings forming a part thereof, and in which

FIG. 1 is a transverse section of a swimming pool wall with one form of safety coping in accordance with my invention;

FIG. 2 is a section similar to FIG. 1 but showing another form of my improved safety coping;

FIG. 3 is a section similar to FIG. 2, but with a waterproof gasket between the rail and cover;

FIG. 4 is a detail section showing a modified means of anchoring one end of the resilient cover;

FIG. 5 is a sectional view showing a resilient cover for the coping rail member as the sole means of cushioning the rail member;

FIG. 6 is a sectional view showing a form of molded plastic or die cast metal coping in accordance with my invention;

FIG. 7 is a detail section similar to FIG. 6 but showing a modified means of support for the vinyl water containing sheet;

FIG. 8 is a sectional view similar to FIG. 6, but showing another form of plastic or metal coping;

FIG. 9 is a sectional view showing a form of safety deck in accordance with my invention;

FIG. 10 is a detail perspective showing one form of resilient cover for the coping; and

FIGS. 11, 12, 13 and 14 are sectional views similar to FIG. 5, but showing further modified forms of my invention.

Referring to the drawings in which like numerals designate like parts in the several views, and referring first to FIG. 1, showing one form of my improved safety coping, indicated generally by the numeral **10**, mounted on top of a swimming pool wall frame W, as shown, which is of wooden construction with its top frame portion formed by 2″ x 4″ lumber or the like. The safety coping may consist of a flat rail member **12** having a relatively thick sheet of spongy, rubber-like and waterproof material **14** mounted on top of the wall frame W with its outer surface enclosed by a soft, resilient sheet cover **16**, the ends of which may be attached to the bottom of the rail member **12** by means of nails **18** or other suitable means, in tight enclosing contact with the outer surface of the material **14** to add to the cushioning function of the cover. In this form of my invention, the safety coping is of greater width than the wall frame and projects inwardly over the solid portion W–**1** of the wall. A conventional channel member C is for supporting the upper end of a flexible water containing sheet S of vinyl; or other suitable waterproof material, this channel having a projecting flange for attaching

it to the wall frame with the channel portion between the coping and the top of the solid wall portion W–1 by means of nails C–1. The resilient sheet cover **16** is preferably provided on its outer surface with anti-skid interruptions such, for example, as small, closely arranged and smooth ended projections **20**, as shown in FIG. 10, which will inflict no injury to a person suddenly grasping at or falling on the coping.

In the form of my safety coping **10**–*a* shown in FIG. 2, the rail member, designated as **12**–*a*, is of substantially greater width than that of the wall frame W so that it projects laterally beyond both the inner edge and outer edge of the wall structure. The inner edge of the rail member is rounded as indicated at **22** and has a vertical, longitudinally extending groove **24** in its bottom surface near its inner edge. The outer edge of the rail member **12**–*a* is flat and vertical to accommodate a corresponding flat surface of a strip **26** when assembled therewith. The sheet of cushioning material **14**–*a* is of greater width than that of the rail member **12**–*a* and extends almost around the rounded edge **22**, where it is pressed into a thin edge by the resilient sheet cover **16**–*a*, as shown.

The inner edge of the cover **16**–*a* is upturned into a vertical portion **28** which is inserted in the groove **24**. A vertically extending flange **30** of the channel member C for supporting the upper edge of the flexible water containing sheet S is forcibly inserted in the groove **24** against the upturned portion **28** of the sheet cover **16**–*a* thereby firmly wedging the sheet cover in the groove. The sheet cover is then wound about the strip **26** and fastened to its inner flat side by means of staples **32**, or other suitable means, as indicated in broken lines, after which the strip is forced downwardly into its assembled position, thereby clamping the cover between the outer end of the rail member **12**–*a* and the strip **26**. The strip **26** is then securely fastened to the rail member by means of diagonally inserted nails **34**, or other suitable means, with the resilient sheet cover in tightly stretched, enclosing relation with the outer surface of the sheet of cushioning material **14**–*a*.

The form of my safety coping **10**–*b* shown in FIG. 3 differs from that of FIG. 2 only in the insertion of a waterproof gasket or liner **36** between the resilient sheet cover **16**–*a* and the cushioning material **14**–*a*. This gasket or liner may be made of waterproof paper or other suitable thin waterproof sheet material.

The form of my invention shown in FIG. 4 is similar to that of FIG. 3, except that the holder C–2 for the water containing sheet S is formed with two channels, including an upper channel C–3 in which the inner end of the resilient cover **16**–*b*, together with that of the gasket **36**–*a*, is secured and a lower channel C–4 in which the upper edge portion of the water containing sheet S is secured, as shown.

In FIG. 5 the form of safety coping **10**–*c* as illustrated in FIG. 2 is shown mounted on the wall W–3 comprising a vertical metal portion W–4 merging at its upper end into an integral outwardly projecting horizontal top portion W–5 seated upon vertical supports W–6 and having a flat board W–7 on its top surface upon which the rail member **12**–*a* of the coping **10**–*c* is seated. The channel member C for supporting the water containing sheet S may be mounted on the inner margin of the horizontal top portion W–5. As shown in FIG. 5, the sheet cover **16**–*b* may be made of sufficiently thick and soft resilient material to provide adequate safety cushion without any additional enclosed cushioning material, such as **14**–*a*.

In the form of my invention shown in FIG. 6 the safety coping **10**–*d* consists of a molded plastic or die cast metal shell **40**, which, in the embodiment illustrated, has a horizontal base portion **42** for seating on the top portion W–5 of the metal wall W–4, shown in FIG. 5, this shell having formed in its opposite edges horizontal channels **44** for the reception of the edge portion of the resilient sheet cover **16**–*c* enclosing the sheet of resilient cushioning material **14**–*b*. The ends of the cover may be heat sealed to the bottom surfaces of the channels, as indicated at **46**, or by other suitable means. The inner edge of the shell may project inwardly in a rounded form **48**, and also with an inner channel **50** below the inner channel **46** for supporting the flexible water containing sheet S. In this embodiment the top surface of the shell **40** may slope downwardly and outwardly as shown, or may have a horizontal top surface corresponding to the top surfaces of the forms shown in the preceding views. The vertical wall portions W–8 may be in the form of concrete posts or a solid wall.

In FIG. 7 is shown a modified form of safety coping **10**–*e* in which the shell **40**–*a* is formed with a longitudinal groove **30**–*a* in which the resilient cover **16**–*c* may be anchored by upturning the end portion, as indicated at **28**–*a* and wedging the upturned end in the groove **24**–*a* by means of a vertical flange **30**–*b* on the member C, for supporting the water containing sheet S in the same general manner as shown in FIGS. 2 and 3. Also, as shown in this view, a filler molding **40**–*b*, of wood or other suitable solid material may be enclosed in the shell **40**–*a* to reinforce it, as shown if desired. It should be understood that a similar filler may be applied to the form of coping shown in FIG. 6.

The form of my safety coping **10**–*f* shown in FIG. 8 is similar to that shown in FIG. 6, except that it is of a different cross-sectional shape. A filler molding **40**–*c* may be enclosed within the shell **40**–*d*, in the same manner as that of the molding **40**–*b* shown in FIG. 7.

In FIG. 9 is shown a form of my safety coping **10**–**9** in which the rail member **12**–*c* is of sufficient width to serve not only as a safety coping, but also as a safety walking deck for barefooted persons in walking around the edge of the swimming pool wall. As illustrated, the outer surface of the rail, or board, member **12**–*c* is enclosed by a resilient sheet cover **16**–*e* which may be the same kind of anti-skid plastic material illustrated in FIG. 10. If desired a sheet of the same kind of additional cushioning material **14**–*d* as in the preceding forms of my invention may be inserted between the rail member **12**–*c* and the cover **16**–*e*. The outer edge of the member **12**–*c* may be supported by diagonal braces **52** against upright portions of the wall W. As previously mentioned the safety coping and deck **10**–**9** can easily be swept clean of pebbles and dirt which could injured the feet of barefooted persons.

From the foregoing description it will be seen that I have provided a safety construction for swimming pool wall copings and walking decks which not only affords greater safety and comfort to persons in the use of swimming pools but also enhances the appearance of such pools.

As pointed out in connection with the form of my invention shown in FIG. 5 a sheet cover for any of the safety copings, illustrated in the drawings will provide adequate cushioning for the safety of persons grasping or falling on the copings, or walking on the combined coping and deck shown in FIG. 9 if the sheet cover is of sufficient thickness, softness and resiliency, without the necessity of an additional sheet of cushioning material between the coping rail, or deck board and the sheet cover, and especially when the sheet cover is formed with the smooth ended projections as shown in FIG. 10.

It will be seen further that a gasket similar to the gasket **36** or **36**–*a*, shown in FIGS. 3 and 4 may be applied to either of the other forms of my invention illustrated.

My improved safety coping can be fabricated in various materials such, for example, as wood, plastic or metal and applied to swimming pool walls of various constructions. It will also be seen that my improved coping construction lends itself to various attractive cross-sectional shapes without increasing the cost of the swimming pool installation.

As shown in FIG. 11 a strip of soft cushioned material **14**–*d* is inserted between the resilient cover **16**–*b* and the inner edge of the rail member **12**–*a*, and another strip of

like material 14–*e* is inserted between the cover and outer edge of the rail member. These strips or bumpers will prevent injury to the head of a backward swimmer and to the feet of barefooted persons.

As shown in FIG. 12 the cushion strips are omitted and the cushion effect is derived from the hollow rolls 16–*e* and 16–*f* at the edges of the rail member.

As shown in FIG. 13, the resilient cover 16–*b* is wound about the edges of the rail member 12–*a* and separate cushion strips 14–*f* and 14–*g* are attached to the respective inner and outer edges over the edges of the cover.

The form of my invention shown in FIG. 14 is similar to that of FIG. 13, except that the strips 14–*h* and 14–*k* consist of resilient tubes.

Obviously, various other modifications or changes in the construction of my improved safety coping and deck may be made without departing from the spirit or scope of my invention. Therefore, it should be understood that the embodiments of my invention shown and described are intended to be illustrative only, and restricted only by the appended claims.

I claim:

1. In combination with a swimming pool wall having a horizontal top surface, a cushioned coping for said wall comprising a rail member mounted on the top surface of said wall, a resilient sheet cover for said rail member including a sheet of soft resilient material between said rail member and the resilient sheet cover, and means for attaching the edges of said cover to said rail member with said cover in tight enclosing contact with said rail member.

2. A combination as in claim 1 in which said rail member has a flat top surface and is of a width projecting a substantial distance beyond the outer edge of said wall to provide a cushioned walking deck around the pool area enclosed by said wall.

3. A combination as in claim 1 in which the material of said sheet cover is both resilient and soft.

4. A combination as in claim 1 and including interruptions in the outer surface of the resilient sheet providing anti-skid means therefor.

5. A combination as in claim 1 and including a flexible water containing sheet having means on its upper edge coengageable with means in the bottom side of said rail member for detachably suspending said sheet from said rail member adjacent to the inner surface of said wall.

6. A combination as in claim 1 in which the top portion of said wall consists of a horizontal wooden member having a flat top surface upon which the rail member is mounted.

7. A combination as in claim 1 in which said wall is formed from sheet metal including a vertical wall portion merging at its top into an integral, outwardly projecting horizontal portion upon which the rail member is mounted.

8. A combination as in claim 1 in which the rail member is of shell-like cross-sectional formation having an open bottom and having a base portion for seating on the top surface of said wall.

9. A combination as in claim 1 and including a waterproof sheet gasket between the sheet of soft resilient material and the resilient sheet cover.

10. A combination as in claim 8 in which the rail member is provided in its edges with a horizontal channel for the reception therein of the edge portions of the resilient sheet cover and in its inner edge with another horizontal channel for the insertion therein of the upper edge portion of a flexible water containing sheet.

11. A combination as in claim 8 and including a longitudinally extending groove in its bottom side for insertion therein of an upturned end portion of the resilient seat cover and a vertical flange portion of a holder for the flexible water containing sheet in adjacent wedged relation.

12. A combination as in claim 8 in which the means for attaching the edges of the resilient cover to the rail member include horizontal channels in the edges of said rail member for the reception therein of the edge portions of said cover and also including means for attaching the edge portions of said cover to the inner walls of said channels.

13. A combination as in claim 8 and including a second channel in the inner edge of the rail member for the insertion therein of the upper edge portion of the flexible water containing sheet.

14. In combination with a swimming pool wall having a horizontal top surface, a cushioned coping for said wall comprising a rail member mounted on the top surface of said wall, a resilient sheet cover for said rail member including a sheet of soft resilient material between said rail member and the resilient sheet cover, said rail member having a vertical, longitudinally extending groove in its bottom side adjacent to the inner surface of the wall, the inner portion of the resilient sheet cover being upturned and inserted in said groove, a channel member for supporting a flexible water containing sheet, said channel member having a vertically projecting, longitudinally extending flange for tight fitting insertion in said groove against the upturned end portion of said cover for wedging said flange and said upturned portion of said cover in fixed position in said groove.

15. A combination as in claim 14 in which the outer edge surface of the rail member is flat, and including a narrow strip of solid material having a flat inner surface corresponding to that of said outer edge surface of the rail member, the outer edge portion of the resilient sheet cover for the sheet of resilient material being partially wound about said strip and affixed thereto; and means engageable with said strip and rail member for attaching said strip and resilient cover to the outer edge surface of said rail member with said cover in tight enclosing contact with the outer surface of said rail member.

16. In combination with a swimming pool wall having a longitudinal top surface, a cushioned coping for said wall including a rail member having a horizontal top surface, said member being of greater width than that of the top surface of said wall, said rail member being mounted on the top of said wall with, at least, its inner edge projecting laterally beyond said wall, a sheet of soft resilient material mounted on top of said rail member, a resilient sheet cover for said sheet of resilient material, and means for attaching the edge portions of said cover to said rail member in tight, enclosing contact with the outer surface of said sheet of resilient material.

17. In combination with a swimming pool wall having a horizontal top surface, a cushioned coping for said wall, comprising a rail member mounted on the top surface of said wall, a resilient sheet cover for said rail member including a sheet of soft resilient material between said rail member and the resilient sheet cover, and means for attaching the edges of said cover to said rail member, said rail member being of shell-like cross-sectional formation.

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