

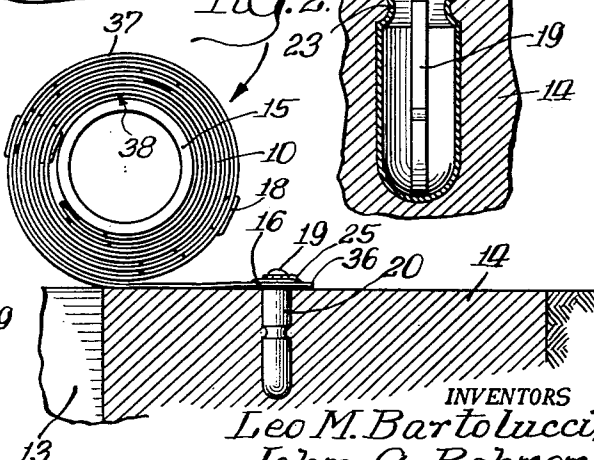
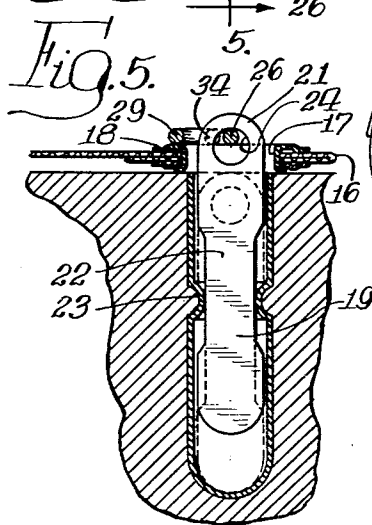
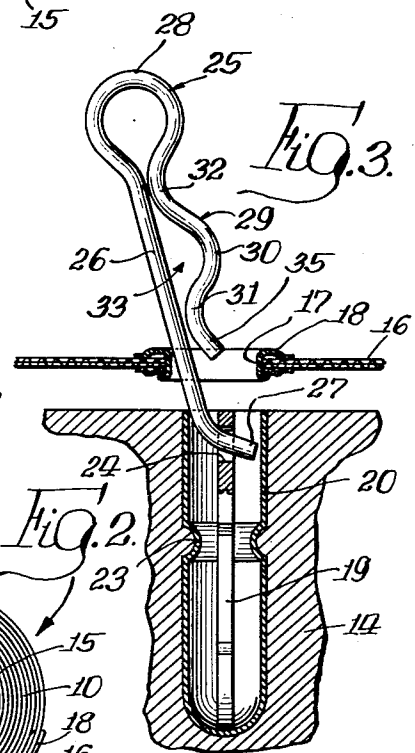
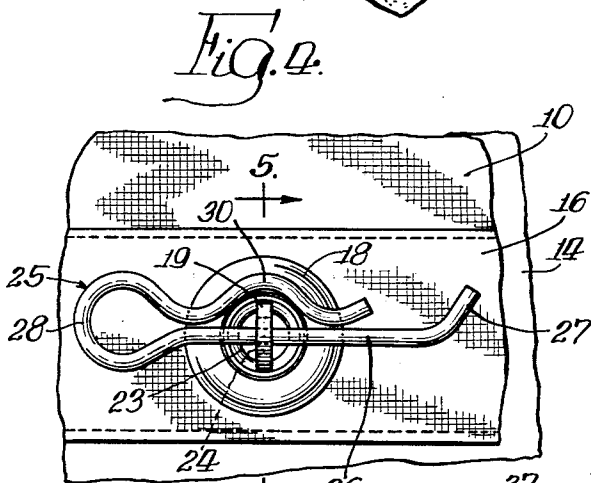
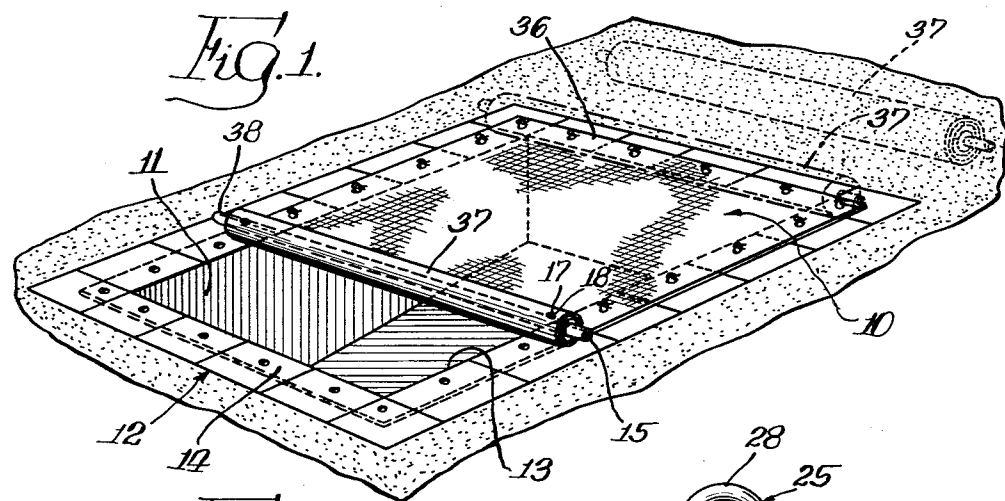
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STRUCTURE FOR COVERING A SWIMMING POOL

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1

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STRUCTURE FOR COVERING A SWIMMING POOL
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1 Claim. (Cl. 4-172)

This invention relates to swimming pools and in particular to a structure for covering swimming pools.

A number of structures are known in the art for covering swimming pools, an example of an improved form of swimming pool cover being shown in Bartolucci, U.S. Patent No. 2,952,024, issued September 13, 1960. The pool cover means disclosed in said patent is an excellent example of a pool cover means arranged to cover a pool, such as a swimming pool, as during the winter months to preclude deposition of debris, leaves, etc. in the pool and prevent injury to children, animals, etc. who might inadvertently fall into the empty pool. The present invention is concerned with an improved structure for covering such a swimming pool for short periods of time, such as overnight, and comprehends means providing a facilitated installation and removal of the cover.

Thus, one feature of the present invention is the provision of a new and improved covering for a swimming pool.

Another feature of the invention is the provision of new and improved structure for covering a swimming pool.

A further feature of the invention is the provision of a new and improved method of securing a cover sheet to opposite side walls defining lateral boundaries of a swimming pool space, including the steps of wrapping around a spindle a flexible cover sheet adapted to extend across the pool space and peripherally overlie the wall, whereby the assembled cover sheet and spindle define a roll, withdrawing the cover sheet from the roll by rolling the same with the opposite ends of the roll overlying the side walls of the pool, and securing the side edges of the cover sheet successively to the side walls of the pool at spaced points thereof closely adjacent the roll as it is moved progressively toward one end of the pool space.

Still another feature of the invention is the provision of new and improved structure for covering a swimming pool space defined by spaced side walls including a spindle having a length greater than the maximum width of the pool space to be covered, a flexible cover sheet adapted to extend across the pool space and peripherally overlie the side walls, the cover sheet being wrapped around the mid-portion of the spindle to define a roll, and means associated with a peripheral portion of the cover sheet for releasably securing the peripheral portion to the pool side walls.

A still further feature of the invention is the provision of a new and improved locking element for use in readily removably securing a pool cover across a pool space.

Other features and advantages of the invention will be apparent from the following description taken in connection with the accompanying drawing wherein:

FIGURE 1 is a perspective view of a swimming pool with a cover structure embodying the invention shown in partial covering relationship therewith, the cover being illustrated in broken lines at one end of the pool as at the beginning of the pool covering operation, and in dashed lines spaced from one end of the pool as during a storage period;

FIGURE 2 is a fragmentary vertical section illustrating the arrangement of the cover at the beginning of the pool covering operation;

FIGURE 3 is a fragmentary enlarged vertical section showing the cover securing means in greater detail;

2

FIGURE 4 is a plan view thereof, illustrating the arrangement of the securing means in the cover securing arrangement; and

FIGURE 5 is a vertical section taken substantially along the line 5-5 of FIGURE 4.

In the exemplary embodiment of the invention as disclosed in the drawing, a cover generally designated 10 is provided for readily removably covering the swimming space 11 of a pool, generally designated 12, having side walls 13 and end walls 14 defining the boundaries of the space 11. In the illustrated embodiment the pool is shown as substantially rectangular, it should be understood, however, that the pool may have any desirable configuration, cover 10 being arranged suitably to extend over the swimming space 11 thereof.

As indicated briefly above, the present invention is concerned with readily removably securing the cover 10 across the pool space and to this end, the cover is wrapped around a spindle 15, as best seen in FIGURES 1 and 2, to permit the facilitated disposition of the cover across the pool space 11 by the simple unrolling of the cover from the spindle while translating the spindle from one end of the pool to the other, as illustrated in FIGURE 1. The cover is preferably formed of a suitable flexible material, such as plastic, fabric, and the like.

As best seen in FIGURE 4, the cover may be provided with a turned edge 16 defining a reinforced peripheral portion. At edgewise spaced points, the cover is provided with openings 17 reinforced with suitable grommets 18 arranged to be disposed in overlying relationship to the pool walls 13 and 14 when the cover is extended over the pool.

As best seen in FIGURES 1, 3 and 5, a plurality of connector members 19 are secured in the pool walls 13 and 14 in generally tubular socket elements 20. The specific structures of the connector members 19 and socket elements 20 are disclosed in our copending application Serial No. 110,015, to which application reference may be had for a complete description thereof. Briefly, however, the connector members 19 comprise elongated members axially movable in the socket elements to dispose an upper portion 21 of the connector members selectively in an upwardly projecting position, as shown in full lines in FIGURE 5 and in a recessed position as shown in dotted lines in FIGURE 5. The connector members are provided intermediate the ends thereof with a narrowed portion 22 and the socket elements 20 are provided with corresponding constricted mid-portions 23 movably securing the connector members in the socket elements for limited axial movement and free rotational movement about the vertical axis of the socket elements.

The upper portion 21 of each socket element 20 is provided with an aperture 24 as shown in FIGURES 3 through 5. A locking element 25 is provided for cooperation with the connector members 19 to retain the connector members readily removably in the upper position, as shown in FIGURE 5, extending through the opening 17 in the pool cover edge portion 16, thereby retaining the edge portion 16 in position on the pool wall.

More specifically, locking element 25 herein comprises a bifurcated wire clip having a long arm 26 provided with a turned distal end 27, a resilient arcuate bight 28, and a short arm 29 including a mid-portion 30 spaced substantially laterally from long arm 26 and spaced portions 31 and 32 at the opposite ends of midportion 30 normally closely juxtaposed to the long arm 26. Thusly, the arms 26 and 29 cooperatively define a space 33 in which a portion 34 of the connector members 19 is releasably retained when the long arm 26 is inserted through opening 24 as shown in FIGURES 4 and 5 to dispose the

3

mid-portion 30 of short arm 29 in alignment with the connector member portion 34.

The distal end 27 of the long arm preferably extends sufficiently beyond the short arm 29 to permit facilitated insertion thereof through cover opening 17 and into engagement with the connector members 19 in opening 24 thereof, whereby a simple upward movement of the locking element brings the connector member to the upper position of FIGURE 5 permitting the locking element to be positioned as shown in FIGURE 4 by the simple further urging of the long arm 26 through the opening 24. To prevent catching of the distal end 35 of the short arm 29 on the connector member portion 34 as the long arm 26 is moved through the opening 24, short arm end 35 may be turned slightly outwardly as shown in FIGURES 3 and 4.

The installation of the cover 10 over the pool 12 is extremely simple. The cover sheet wrapped on spindle 15 is firstly positioned on one end wall 14 of the pool 12 with the free end 36 of the cover sheet lowermost and extending away from the opposite end wall of the pool with the openings 17 in the peripheral position 16 thereof aligned with the connector members 19 disposed in the one end wall. The connector members are extended upwardly through the openings in cover end 36 and the end 36 is secured thereto by the locking elements 25 as discussed above. The cover sheet roll 37 is now unwound by advancing it toward the opposite end wall 14. Preferably, two persons may effect this operation, one at each end of the roll engaging the spindle 15 which, as shown in FIGURE 1, preferably is longer than the cover width to have its opposite ends 38 project outwardly from the cover edges. As the roll 37 is progressively advanced toward the opposite end wall 14, the respective openings 17 of the cover sheet 10 are disposed in overlying alignment with the connector members in the side walls 13. The connector members are raised serially and retained by the locking elements 25 as discussed above to secure progressively the portions of the cover edge 16 to the pool side walls 13. Illustratively, the roll 37 may be advanced in step-by-step fashion from one opening 17 to the next whereby, as each opening is disposed above its corresponding connector member, the above described retention of the cover edge may be effected.

The retention of the cover 10 on the far end wall may be effected by means of connector members therein cooperating with corresponding openings 18 in the end of the cover sheet comprising the inner end of the roll 37. Alternatively, this end of the cover sheet may be secured to the spindle 15 by suitable means such as connectors 38 permitting the spindle retained on the end wall 14 to hold the end of the cover sheet.

The cover 10 is removed from the extended arrangement across the pool 12 by a reverse operation wherein the sheet is rolled back onto the spindle 15, the locking elements 25 being removed from the connector members 19 successively as the sheet is rolled back to the position

4

of FIGURE 2. The cover may be completely disassociated from the pool by removing all the locking elements including those securing the end 36 to the end wall, and then rolling the roll 37 to the dashed position of FIGURE 1.

Thus it may be seen that locking elements 25 cooperate with the connector members 19 in an improved simple manner permitting the facilitated installation and removal of the cover across the pool by the simple progressive unrolling and rerolling thereof, effectively minimizing the number of people and time necessary to effect the covering and uncovering of the pool.

While we have shown and described correct embodiment of our invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as defined in the appended claim.

We claim:

In a swimming pool having a swimming space defined by spaced side and end walls, structure for covering said space, comprising: a spindle having a length substantially greater than the maximum spacing of said side walls; a flexible cover sheet adapted to extend across the pool space and peripherally overlie said side walls, said cover sheet being wrapped around the mid-portion of the spindle to define a roll, said cover sheet further defining a plurality of openings spaced edgewise thereof along the sides and ends of the sheet; and a plurality of connectors including members connected to said pool side and end walls and removably extendible through said openings when the sheet is unrolled from said spindle to have its sides and ends overlie the side and end walls of the pool and said connectors, and a plurality of individual locking elements for releasably retaining said members extended through said openings thereby to secure the edges of the cover to the pool walls while permitting the space laterally circumjacent the cover to be free of cover securing means, each locking element comprising a clip having a first portion removably extendible through a cover sheet opening and provided with a turned distal end for engaging said connector to cause the connector to extend through the opening, said clip having a second portion cooperating with the first portion to retain the clip in removable relationship with the connector to retain the connector extended through said cover sheet opening.

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