Jan. 18, 1966 R. R. KNODEL 3,229,309

SWIMMING POOL COVER

Filed April 8, 1963

FIG. 1

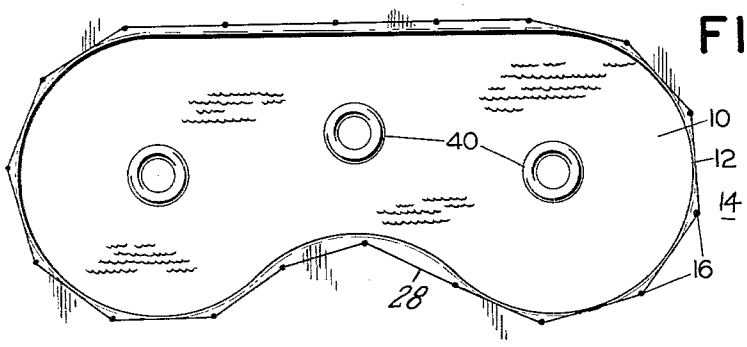


FIG. 2

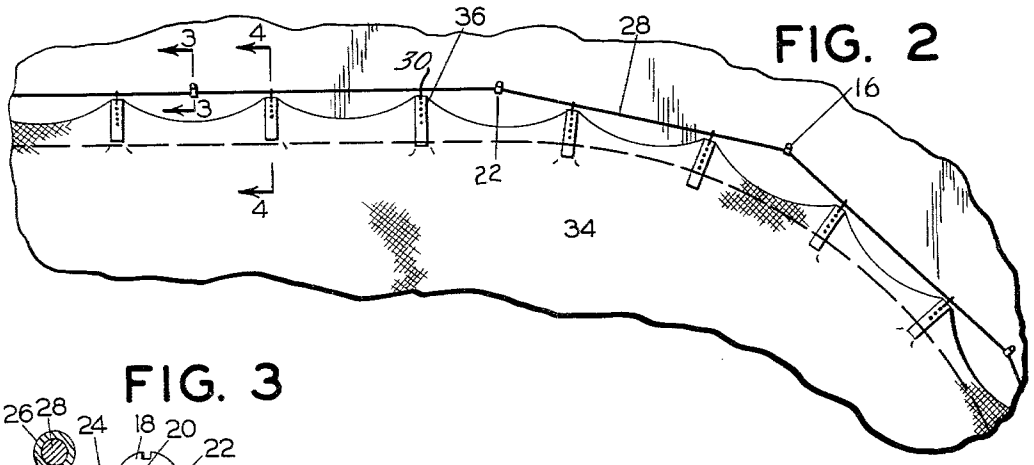


FIG. 3

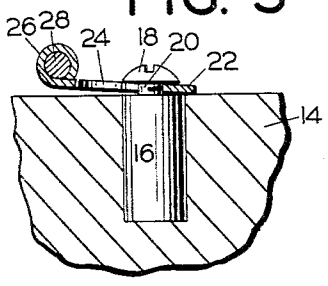
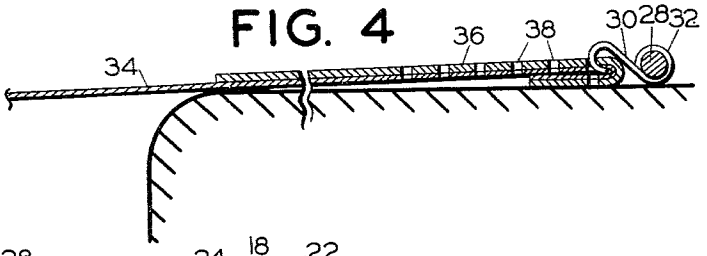


FIG. 4



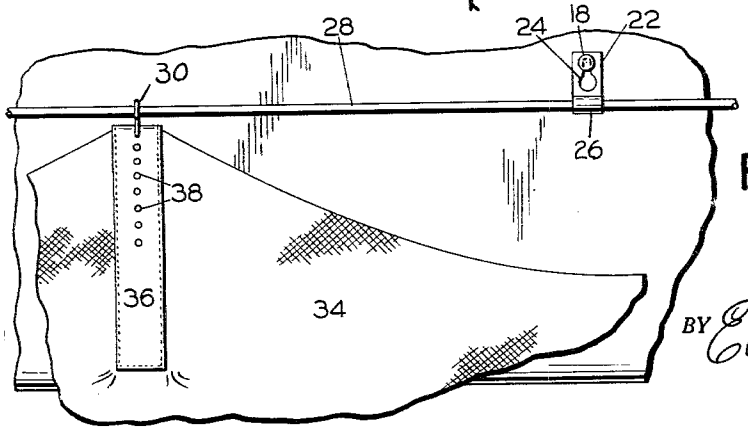


FIG. 5

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SWIMMING POOL COVER

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This invention relates to new and useful improvements in swimming pool covers.

A broad objective of the present invention is to provide a swimming pool cover which is simplified in its construction and application and which functions efficiently to cover the pool to keep out foreign articles.

More particular objects of the present invention comprise the provision of a swimming pool cover which in a preferred arrangement utilizes a stretch material as the cover, facilitating the application of the cover to pools of various sizes and shapes and which due to its stretch construction is, prior to installation, small in size and thus compact for storage and handling; and to provide novel mounting means for the cover facilitating ready mounting and dismounting thereof.

Another object is to provide a swimming pool cover employing a stretch fabric and variable connecting means to accomplish selected connected engagement of said cover.

Briefly stated, the present swimming pool cover employs an anchor cord extending around the periphery of the pool on the deck surface thereof and disposed a short distance back from the pool edge. Mounted on this anchor cord are hook members arranged releasably to engage a cover member adapted to span the pool. The engageable connection of the hook members and the cover is accomplished through the medium of reinforced strip portions on the cover having a plurality of apertures for adjustable connection to the hook members. In a preferred arrangement, the cover member is constructed of a stretch material readily conformable to the shape of the pool.

The invention will be better understood and additional objects thereof will become more apparent from the accompanying specification and claims considered together with the accompanying drawings, wherein like numerals of reference indicate like parts, and wherein:

FIGURE 1 is a top plan view of a swimming pool showing the peripheral anchor cord installed in place, the cover member itself not being shown;

FIGURE 2 is an enlarged view of a pool section showing the cover member installed thereon;

FIGURE 3 is an enlarged fragmentary sectional view taken on the line 3—3 of FIGURE 2;

FIGURE 4 is an enlarged fragmentary sectional view taken on the line 4—4 of FIGURE 2; and

FIGURE 5 is a fragmentary plan view similar to FIGURE 2 but greatly enlarged.

Referring in particular to the drawings and first to FIGURE 1 there is shown a swimming pool **10** having an inner defining edge **12**. The pool **10** may be of varied shapes such as rectangular, oval, etc., but is shown herein as being of irregular shape to illustrate the functionality of the present cover, as will be pointed out in more detail hereinafter. The pool **10** has the usual surrounding deck **14**.

Forming a part of the invention are a plurality of anchor bolts **16**, FIGURE 3, permanently set in the deck **14**. Bolts **16** have head portions **18** elevated from the body thereof by neck portions **20** of reduced diameter.

Adapted for releasable connection with the bolts **16** are anchor clips **22** having keyhole slots **24**, FIGURES 3 and 5, which receive the necks **20**. The end of anchor clips **22** have eye portions **26**.

Mounted in the eyes **26** of clips **22** is an anchor cord or line **28**. This cord preferably is formed of a substantially non-stretchable rope material or wire. The anchor clips **22** may, as shown in FIGURE 3, be permanently connected to the cord but alternatively the eye **26** thereof may be partly open for releasable engagement. At any rate, it is preferred that the clips **22** be slidable on the cord **28** for slidable adjustment on the cord to the position of the anchor bolts **16**.

Mounted on the anchor cord **28** are a plurality of hooks **30**, best seen in FIGURE 4, having an eye portion **32** for attachment to the cord. As in the case of the anchor clips **22**, the hooks **30** may have releasable connection with the cord **28** but in any event such hooks are slidably associated with said cord.

Adapted to be connected to the anchor cord **28** through the medium of hooks **30** is a cover member **34** which employs a plurality of equally spaced, integral reinforcing strips **36** leading inwardly from the peripheral edge thereof at substantially a right angle to the edge. These strips may comprise heavy fabric such as canvas or other suitable rugged and weather resisting material, and are applied by adhesive, stitching or other appropriate means. Strips **36** are provided with a plurality of apertures **38** disposed in spaced relation along the longitudinal center thereof and are adapted for engagement by the hooks **30** to support the cover in spanned relation across the pool on the anchor cord **28**.

In a preferred construction the cover member **34** is formed of a stretch material. Such material is presently available to the trade and comprises a rugged and weather resistant material, usually principally nylon. Such structure is woven in the form of a mesh which has minute apertures and prevents the penetration therethrough of all foreign articles except extremely fine material, even in its fully expanded condition. Thus, even though fully expanded, the present cover prevents substantially all dirt and foreign articles from getting into the pool. Illustrative material available in the trade for use as the cover member comprise "Antron" and "Spandex."

In the installation of the present pool cover the anchor bolts **16** are set in the decking a few inches back from the pool edge. Anchor clips **22** are mounted on the cord **28** and then attached to the bolts **16**. As stated hereinbefore, the clips **22** are slidably mounted on the anchor cord **28** and thus adjustment of the clips to the bolts **16** is readily accomplished.

Thereupon, the hooks **30** are engaged with the apertures **38** in strips **36** on the cover, the cover first being attached at one end and being stretched and connected to succeeding hooks as it is stretched. Since the strips **36** employ a plurality of apertures **38**, adjustable connection to the cover is accomplished as required to tighten the fabric. FIGURE 2 illustrates adjustable connection of the hooks **30** with the strips **36** wherein connection to different ones of the holes **38** in the strips is accomplished. As seen in FIGURE 4, the end of the strips outwardly from the hole engaged by its hook **30**, together with the fabric, is turned under.

The stretch cover **34**, in adidtion to providing an effective pool cover, has a compact size when not in use, namely, in its contracted condition, and thus facilitates handling and storage. Furthermore, such material being expandable will readily conform to pools of varying size and shape.

Floats **40**, FIGURE 1, preferably are placed in the pool prior to application of the cover to hold the cover off the water surface. Although the floats are not necessary, they are desirable since when the cover **34** becomes wet by precipitation its weight increases and it may sag into the water. The floats prevent such water contact and of

course also assist in relieving excessive pull on the connecting strips **36** and anchor cord. It is preferred that the cover **34** be of sufficient elastic strength as to support a person should the latter accidentally fall on the cover. However, since floats **40** are used, no single span of the cover is over a few feet long and the cover material need not be so heavy as to make it economically unfeasible, since even though it may sag slightly under the weight of the person, he can still walk or crawl out.

It is to be understood that the form of my invention herein shown and described is to be taken as a preferred example of the same and that various changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of my invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. A cover for swimming pools having a bounding portion, said cover comprising a flexible anchor cord adapted to be secured peripherally of the pool to the bounding portion, a cover member of stretch material which in contracted condition is of less dimension than the defining area of a pool to be covered, hook means attached to said anchor cord, and means on said cover member releasably engageable by said hook means to hold the cover member in a stretched condition at least as large as and flatwise over the pool.

2. A cover for swimming pools having a bounding portion, said cover comprising a plurality of anchor bolts adapted to be secured in spaced relation in the bounding portion outwardly from the edge of the pool, clip members releasably attached to said anchor bolts, a flexible anchor cord extending around the pool in a secured sliding engagement with said clip members, hook means slidably secured to said anchor cord, a cover member of stretch material which in contracted condition is of less dimension than the defining area of a pool to be covered, and inwardly extending reinforcing strips on said cover member having a plurality of apertures spaced in a line longitudinally on said strips for selective engagement by said hook means to stretch the cover member in taut relation at least as large as and flatwise over the pool.

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