

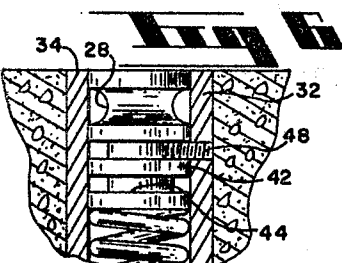
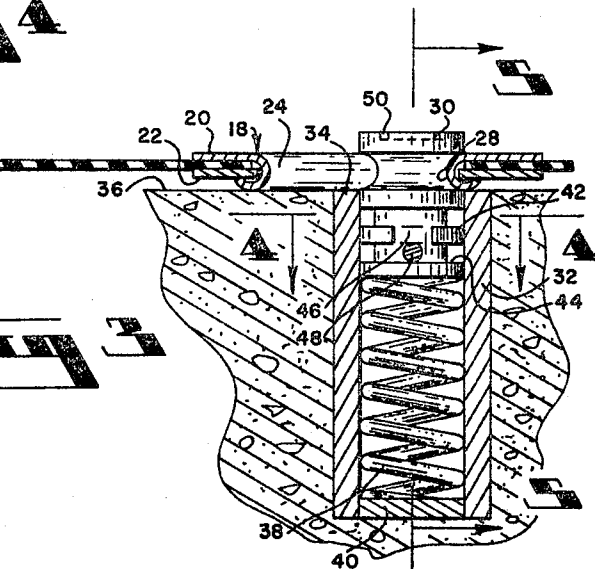
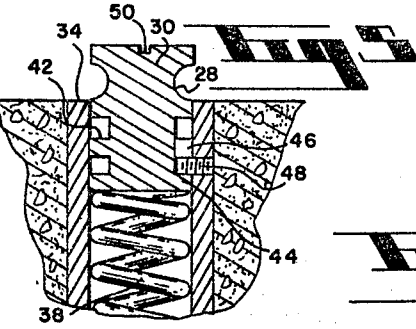
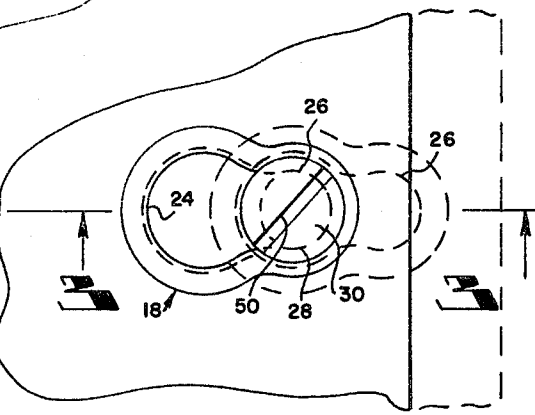
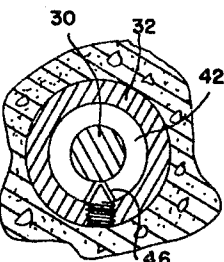
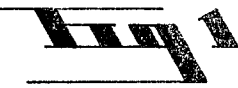
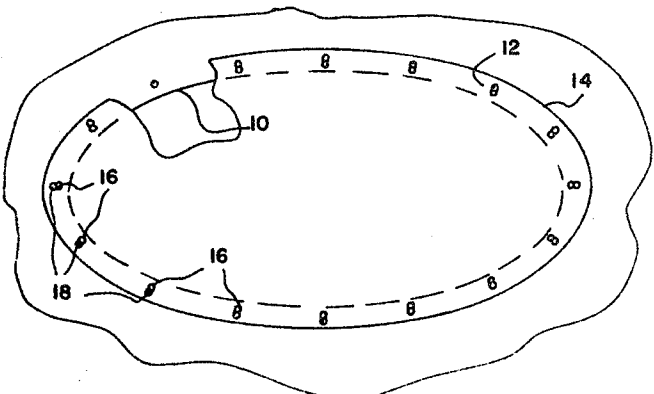
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3,264,656

POOL COVER AND ANCHOR MEANS THEREFOR

Filed April 23, 1964



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3,264,656

POOL COVER AND ANCHOR MEANS THEREFOR
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1 Claim. (Cl. 4—172)

This invention relates to a pool cover and anchor means, and, more particularly, to an anchor means which may be used in connection with pool covers or for other purposes, as desired.

In many areas, such as those surrounding swimming pools, it is desirable to employ anchors for holding covers and particularly anchors which may be connected with the covers above the surface of the pool decking or concrete surrounding the pool, and which may be flush with the upper surface of the pool decking or concrete when not in use.

The placement of a pool cover over a swimming pool or the like may be very quickly accomplished if the anchors or holding fixtures are convenient and easily operable, and such facilities provide for simple economy in the maintenance of a pool. As for example, when a storm arises a pool cover may quickly be installed to keep dirt out of the pool, and, further, the cover may be placed over the pool at any time the pool is not in use to conserve on chemical and pool maintenance.

Additionally, it has been recognized that any fixtures normally utilized to hold a pool cover in place must be flush with the upper surface of the decking or concrete surrounding the pool when not in use so that persons walking or playing in the pool area will not stumble on the fixtures.

Further, these fixtures must be readily and quickly available for use in attaching a cover when the need arises. Additionally, these fixtures must be strong, easily operable, and subject to a minimum of maintenance.

Accordingly, it is an object of the present invention to provide a very simple pool cover and anchor means therefor.

Another object of the invention is to provide a pool cover and anchor means, and, more particularly, a very novel anchor means which is normally flush with the upper surface of concrete or a decking surrounding a pool, and which is readily projectable upward by a captive spring in a casing embedded in the concrete when a plunger in the casing is rotated to a given location, thereby projecting the plunger and a fixture connector means thereon which may readily hold or support a peripheral edge of a swimming pool cover, rope, chain or other fixture.

Another object of the invention is to provide a novel anchor means which may be embedded in flush relationship with concrete or other structure, and which has a plunger which is extendable and retractable from flush position to an upstanding position above the surface of the concrete for engagement with various fixtures for anchoring various objects.

Another object of the invention is to provide a very novel anchor structure having a hollow body provided with a spring therein tending to project a plunger upwardly, which plunger is provided with a plurality of annular ledges having a passage therebetween for alternate engagement with a means projecting inwardly from the body whereby the plunger may be extended upward by the spring beyond the upper end of the body or may be locked downward into flush relation with the upper end of the body simply by inward pressure or downward pressure of the plunger against the spring and rotation of the plunger to a position at which the ledge means of the plunger is engaged by means projecting inwardly from the body to hold the plunger flush with the upper end of the body.

Another object of the invention is to provide a very novel retractable anchor plunger having an external recessed portion engagable by a novel grommet structure acting as a fixture for a peripheral portion of a pool cover or the like; said grommet having an enlarged open portion and a restricted portion whereby the enlarged open portion may be placed over the plunger and the restricted portion may slidably be engaged with an external recess structure of the plunger, thereby locking the fixture on the plunger.

Further objects and advantages of the invention may be apparent from the following specification, appended claim and accompanying drawings in which:

FIG. 1 is a top or plan view of a pool cover and anchor means in accordance with the present invention showing a portion thereof broken away to amplify the illustration, and showing the cover and anchor means installed over a pool and in connection with the surrounding pool decking;

FIG. 2 is an enlarged plan view of one of the anchor means and a portion of the pool cover and grommet means in accordance with the present invention, and showing by broken lines a varying position of the cover and grommet means with respect to the anchor for connecting the grommet means with the anchor;

FIG. 3 is an enlarged fragmentary sectional view taken from the line 3—3 of FIG. 2;

FIG. 4 is a fragmentary plan sectional view taken from the line 4—4 of FIG. 3;

FIG. 5 is a fragmentary sectional view taken from the line 5—5 of FIG. 3; and

FIG. 6 is a view similar to FIG. 5 showing the anchor plunger retracted into flush position with the upper end of the body when in a non-use position.

As shown in FIG. 1 of the drawings, a swimming pool having an inner side wall 10 is covered by a flexible cover 12 having a peripheral edge 14 which extends beyond the inner wall 10 of the pool. Grommet fixtures 16 are secured to the cover near its peripheral edge 14, and these fixtures engage anchors 18 of the invention, as will be hereinafter described.

Each grommet 18, as shown in FIG. 2 of the drawings, is preferably made of two pieces of brass designated 20 and 22, these pieces being connected in the usual manner by interlocking folds. The grommet 18, as shown in FIG. 2 of the drawings, is provided with an enlarged opening portion 24 communicating directly with a reduced opening portion 26. This reduced opening portion 26 engages an annular groove 28 of a plunger 30 of the invention, as shown best in FIGS. 2 and 3 of the drawings. As shown by broken lines in FIG. 2 of the drawings, the enlarged opening 24 of the grommet 18 is placed over the end of the plunger 30, and then the reduced opening 26 of the grommet is moved into engagement with the annular recess or groove 28 of the plunger 30, thereby interlocking the grommet with the plunger.

The plunger 30 is reciprocally and rotatably mounted in a hollow cylindrical body 32 having a normally upper open end 34 which is adapted to be installed in flush relationship with an upper surface 36 of concrete decking or other material surrounding the pool 10. Positioned in the hollow cylindrical body is a spring 38 tending to force the plunger 30 outwardly of the open end 34. This spring is held in the body 32 by an enclosed end 40 which may be integral or secured in the body, as desired.

The plunger 30 inward of the annular groove 28 is provided with a pair of ledge portions 42 and 44 which are axially spaced with each other and provided with an interconnecting passage 46 which is adapted to bypass a pin 48 projected inwardly from the side wall of the

body 32 whereby the pin 48 may be engaged on the ledge 44 or the ledge 42 simply by pressing the plunger inward to rotate it and permitting the spring 38 to force it outward. As shown in FIG. 5 of the drawings, the pin 48 is engaged by the ledge 44 and, as shown in FIG. 5, the pin 48 is engaged by the ledge 42 to hold the plunger flush with the open end 34 of the body 32.

It will be seen that the annular groove 28 may be extended beyond the open end of the body to be engaged by the grommet 18, or the outer end of the plunger 30 may be recessed into the body 32 in a flush relationship, as shown in FIG. 6 of the drawings, by rotating the plunger and pressing it inward against the spring 38 so that the passage 46 bypasses the pin 48, then the plunger is rotated until the pin 48 is engaged by the ledge 42. Thus the plunger is held in retracted flush position.

A screw driver slot 50 in the upper end of the plunger 30 may be engaged by a screw driver or other means for rotating the plunger 30 while it is depressed against the spring 38 to lock the plunger in flush position with the upper end 34 of the tubular body 32, or the slot 50 may be engaged simply to rotate the plunger and to permit the spring to project the plunger when the passage 46 aligns with the inwardly extending pin 48 which is termed a holding means for the plunger.

It will be obvious to those skilled in the art that various modifications of the present invention may be resorted to in a manner limited only by a just interpretation of the following claim.

We claim:

In a pool cover and anchor means the combination of: a flexible pool cover; fixtures connected therewith near a peripheral edge thereof; a plurality of anchor assemblies adapted to be recessed in concrete surrounding a pool; a cylindrical body of each assembly being tubular and having an upper open end adapted to be flush with an upper surface of concrete surrounding a pool; a plunger reciprocally and rotatably mounted in said body; a spring in said body tending to force said plunger to project upwardly above said open end of said body; holding means projecting inward from said body into interfering relation with said plunger; and a plurality of axially spaced ledge means on said plunger; said plunger having an axially extending passage between said ledge means adapted to bypass said holding means when said plunger

is rotated to align said bypass with said holding means whereby a normally upper end of said plunger may be flush with said open end of said body when one of said ledges is engaged by said holding means and said upper end of said plunger may be projected upward by said spring to cause engagement of said holding means by another of said ledges when said passage is rotated into alignment with said holding means; and connector means at an upper portion of each plunger adapted to be connected to one of said fixtures; said fixtures comprising converging grommet structures; said connector means being an external annular recess in each respective plunger; said converging grommet structures each having an opening therein; said opening being elongated; the elongated axis of each opening directed from an outer edge portion of said cover toward a central portion thereof; an inwardly directed portion of said opening being slightly larger than the upper end of said plunger so as to fit thereover; an outer portion of said opening being reduced so as to fit in said annular recess of each respective plunger; said outer portion of said opening thus being smaller than the normally upper end of said plunger, whereby tension of said cover holds each outer portion of each respective opening in position around a respective annular recess.

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