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SWIMMING POOL COVER

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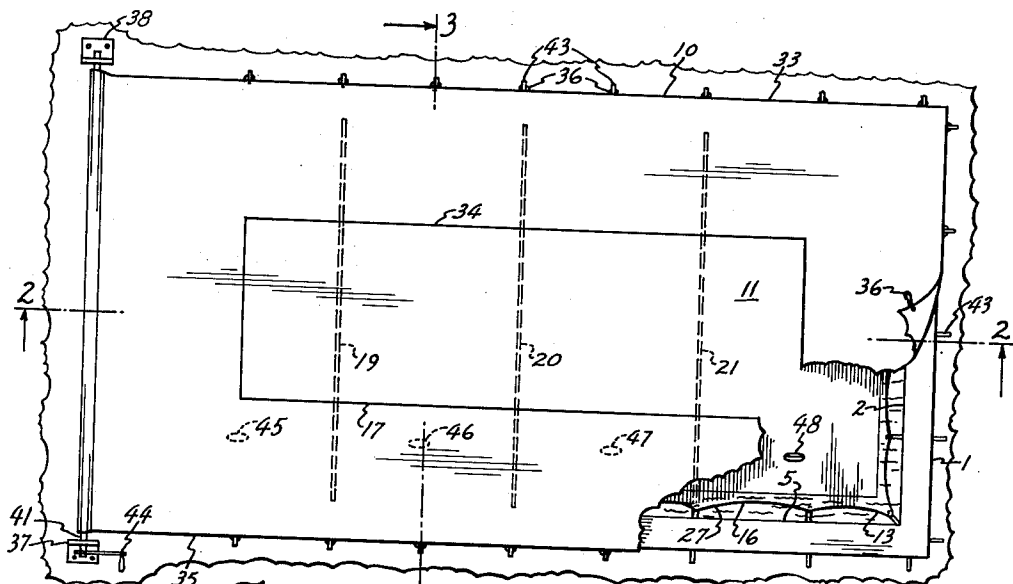


Fig. 1.

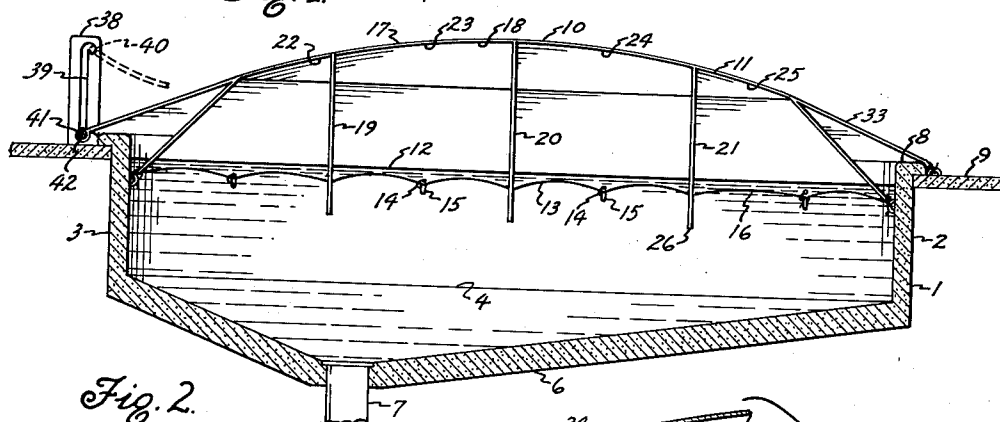


Fig. 2.

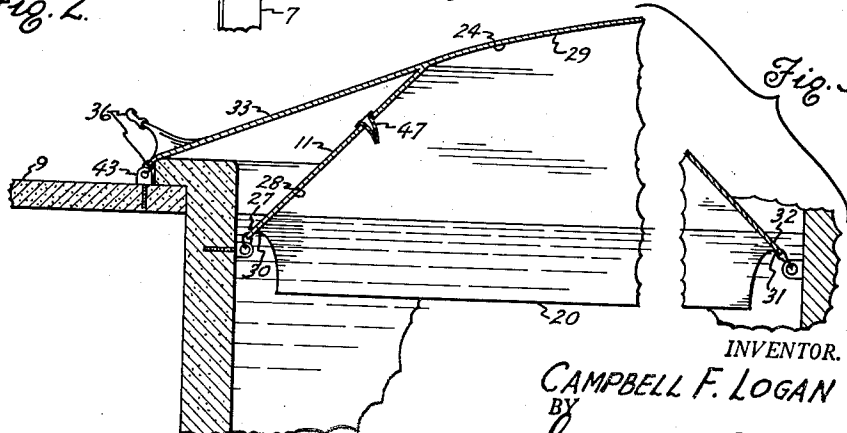


Fig. 3.

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SWIMMING POOL COVER
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This invention relates to a pool cover and more particularly to a swimming pool cover.

An object of the invention is to provide a protective cover for swimming pools.

Another object is to provide an inflatable cover for swimming pools which functions as a guard against the drowning of individuals who might accidentally fall into the pool.

A specific object is to provide a swimming pool cover which will protect the pool from leaves, dirt and other debris which is blown about in the air and thereby aid in maintaining the pool in a clean condition.

Another specific object is to provide an inexpensive pool cover which, in use, is buoyantly supported above the water by means of air between the surface of the water in the pool and the cover and which when thus supported provides adequate protection against drownings, as might happen when individuals inadvertently fall onto the cover for the pool, and which further provides means for protecting the pool when not in use from dirt, leaves, twigs and other debris blown about in the air.

An additional object is to provide in a swimming pool cover greater convenience in positioning the cover on the pool and removing it therefrom.

The novel features which are believed to be characteristic of this invention are set forth with particularity in the appended claims. The invention itself, however, both as to its organization and method of operation, together with further objects and advantages thereof, may best be understood by reference to the following description taken in connection with the accompanying drawing, in which:

FIG. 1 is a top view of a rectangular swimming pool and cover in accord with a preferred embodiment of the invention, certain parts of the cover being broken away to promote clarity;

FIG. 2 is a longitudinal sectional view along the line 2—2 of FIG. 1; and

FIG. 3 is a fragmentary sectional view on an enlarged scale taken along the line 3—3 of FIG. 2.

With particular reference to FIGS. 1 and 2, the swimming pool is generally designated therein at 1 and is shown in the embodiment as being generally rectangular in shape. The pool 1 includes opposite end walls, 2 and 3, and opposite side walls, 4 and 5, which together with the bottom portion 6 of the pool confine the water therein. As seen in FIG. 2 the bottom portion 6 of the pool may slope downwardly to a suitable drain pipe 7, and a suitable curbing 8 or coping may be provided on top of the walls, all of which may be surrounded by a suitable walkway 9.

The cover for the pool is generally designated at 10 in FIGS. 1 and 2 and includes a continuous sheet 11 which is impervious to air and which may be composed of suitable materials such as rubber, polyethylene, or the like, or which may be composed of canvas duck materials or the like which have been rendered air impervious by suitable impregnation or coating. As will be apparent hereinafter one function of sheet 11 is to provide a chamber in which air is trapped. The sheet is continuous throughout its dimensions in the sense that there are no apertures and holes in the sheet through which air may escape when being employed as contemplated in accord with the invention.

The shape of the sheet conforms generally to the shape

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of the pool at the surface 12 of the water and in the case of the illustrated embodiment the sheet 11 is rectangular in shape. The size of the sheet 11, however, is somewhat larger than the size of the pool 1 at the water surface 12 so as to enable the sheet 11, when employed in the manner contemplated by the invention, to extend substantially to the walls of the pool while bulging upwardly under the influence of air which may be inserted beneath the sheet.

Sheet 11 has a peripheral edge portion 13 which is disposed below the surface 12 of the water when the cover 10 is secured in pool covering position. The sheet 11 is attached to the walls of the pool by means of suitably spaced hook snaps 14 which are suitably attached along the peripheral edge portion 13 of the sheet 11. The snaps engage similarly spaced eyelets 15 which are fixedly mounted on the walls of the pool beneath the surface 12 of the water therein. This arrangement insures that the extreme peripheral edge 16 of the sheet will always be disposed below the water surface and thereby enable entrapment of air beneath the medial portions 17 of the sheet.

It is evident that sheet 11 forms an airtight chamber 18 when the sheet 11 is attached in closure position and that the sheet confines the air in the chamber above the water surface. It is preferable that the chamber 18 be divided into respective airtight compartments to avoid unnecessary changes in the general inflated shape of the sheet by wind and the like currents of air and to provide localized buoyancy at any part of the sheet onto which a person might fall. Accordingly a plurality of elongated and continuous flaps or partitions 19, 20 and 21 which are respectively composed of air impervious material like or similar to sheet 11 are attached dependently beneath the sheet 11 in parallel spaced relationship so as to divide the chamber 18 into respective airtight compartments 22, 23, 24 and 25. Each of the flaps extend across the sheet 11 from one side edge portion, such as 27 in FIG. 1, of the peripheral edge portion 13 to the side edge portion thereof which is opposite thereto. Each flap also has a lower portion, such as portion 26, shown in FIG. 2, which extends beneath the water surface, thereby rendering each compartment airtight.

As is evident in FIG. 3 with respect to flap 20, the compartment forming flaps are initially cut to conform with the underside transverse contour assumed by sheet 11 when the sheet is fully inflated and disposed in pool attached closure position. Flap 20 has an upper edge 28 which is curvilinear in shape and which is suitably attached to the underside of sheet 11 to form an airtight joint 29. The edge 28 extends from the end portion 30 of the flap to the opposite end portion 31 of the flap. End portion 30 is joined to side edge portion 22 of sheet 11 whereas end portion 31 of the flap is joined to sheet 11 at the opposite side edge portion 32. It will be apparent that the opposite end portions of the flap, 30 and 31, are spaced from one another at a distance slightly less than the width of the pool. Furthermore when the cover 10 is attached to the pool, it is evident that the linear dimension between the opposite end portions, 30 and 32, is less than the length of the curvilinear upper edge 28.

To facilitate complete closure of the pool 1, a marginal flap 33 is provided which extends along the peripheral edge portion 13 of the sheet 11 and which is attached along its inner edge 34 to the upper side of sheet 11 spacedly inwardly of the peripheral edge portion 13. Marginal flap 33 overlies the peripheral edge portion 13 and extends over the top portion of the walls of the pool 1 to the outer edge portion 35 of the flap. Spaced hook snaps 36 are secured along three sides of the outer edge portion 35 and these snaps engage respective eyelets 43

which are mounted spacedly along the curbing in walk-way 9 and which thereby hold the flap in position.

Each of the compartments has a means for inserting air into the compartment. Thus as shown in FIG. 1, each compartment has a rubber check valve, such as valves 45, 46, 47, and 48, which is mounted in sheet 11 adjacent the peripheral edge portion 13. As shown in FIG. 3 with respect to valve 47 of compartment 24 the valve extends into the compartment. Each valve is adapted to receive the end of an air hose, such as the end of a vacuum cleaner hose, and to guide the air into the compartment.

Roller supporting and upstanding spaced brackets 37 and 38 are mounted at one end of pool 1 as shown in FIGS. 1 and 2. Each bracket is provided with a vertical slot, such as slot 39, shown in FIG. 2, which, at its upper end, has a forwardly curved portion 40 that terminates downwardly in a seat for an end portion of roller 41. The portion of outer edge 29 of flap 33 which extends above wall 3 is attached to the roller and the flap is held in closure position at the roller end of the pool when the roller is disposed at the bottom of slot 39 as shown in FIG. 2.

To roll the cover onto the roller, the roller is first lifted and its opposite ends positioned in the forwardly curved seat portions of the respective bracket slots. Thereafter the hook snaps 36 are released from eyelets 43, and the snaps 14 are released from wall eyelets 15. Upon releasing snaps 14 the air beneath sheet 11 escapes and, of course, the cover becomes deflated. Thereafter by means of handle 44 which is attached to roller 41 outwardly of bracket 37 the cover may be rolled on roller 41 and retained in its rolled position with the roller seated in the forward curved portion 40 of the vertical slots 39.

To secure the cover on the pool, the cover is unwound from the roller 41 and the sheet 11 thereof is attached to the walls of the pool by means of the hook snaps 14 and eyelets 15. Thereafter air is inserted in the respective compartments through the respective check valves associated therewith. Thereafter the marginal flap is secured in position along the sides of the pool adjacent walls 2, 4 and 5 by means of hook type snaps 36 and cooperating eyelets 43. Following this, roller 41 may be lowered to the bottom 42 of slot 39 whereat it functions by reason of its weight in holding the attached portion of the marginal flap in closure position.

From the foregoing it is evident that sheet 11 may conform to the exact shape of the pool at the surface of the water or may take a shape varying slightly therefrom but in substantial conformance thereto so as to be inflatable and thereby cover substantially the entire surface of the pool. When fully inflated the cover acts under the buoyant force of the confined air as a guard against accidental drownings.

While only a certain preferred embodiment of this invention has been shown and described by way of illustration, many modifications will occur to those skilled in the art and it is, therefore, desired that it be understood that it is intended in the appended claims to cover all such modifications as fall within the true spirit and scope of this invention.

What is claimed as new and what it is desired to secure by Letters Patent of the United States is:

1. A cover for a swimming pool which has water confining walls and which is of determined size and shape at the surface of the water, said cover comprising an air impervious continuous sheet having opposite sides and a shape substantially conforming to the shape of the pool at the water surface, said sheet being of greater size than said determined size, means along the peripheral edge portion of said sheet for attaching said sheet to the walls and for retaining said peripheral edge portion below the water surface, an air impervious partition for defining compartments on opposite sides of said partition beneath

said sheet, said partition having opposite end portions and an upper edge portion, said edge portion terminating at said opposite end portions, said partition being attached along its said upper edge portion to the underside of said sheet and depending from said sheet, said opposite end portions of said partition being disposed at said peripheral edge portion of said sheet and on respective said opposite sides of said sheet and having a linear dimension therebetween which is less than the length of said upper edge whereby air admitted beneath said sheet on respective opposite sides of said partition when said sheet is attached to the walls is confined in respective adjacent compartments and the air buoyantly maintains a portion of said sheet spacedly supported above the water surface.

2. The cover as defined in claim 1 further comprising means extending through said sheet for inserting air beneath said sheet on respective opposite sides of said partition.

3. A cover for a swimming pool which has water confining walls and which is of determined size and shape at the surface of the water, said cover comprising an air impervious continuous sheet having opposite sides and a shape substantially conforming to the shape of the pool at the water surface, said sheet being of greater size than said determined size, means along the peripheral edge portion of said sheet for attaching said sheet to the walls and for retaining said peripheral edge portion below the water surface, a plurality of air impervious partitions for defining compartments beneath said sheet, each of said partitions having opposite end portions and an upper edge portion which terminates at said opposite end portions, said each partition being attached along its said upper edge portion to the underside of said sheet and depending from said sheet substantially in parallel with the others of said partitions, said opposite end portions of said each partition being disposed at said peripheral edge portion and on said opposite sides of said sheet and having a linear dimension therebetween which is less than the length of said upper edge whereby air admitted beneath said sheet when said sheet is attached to the wall is confined in respective compartments and therein buoyantly maintains a major portion of said sheet spacedly supported above the water surface, said cover further comprising a marginal flap overlying and extending along said peripheral edge portion and having an outer edge portion, said marginal flap being attached to said sheet inwardly of said peripheral edge portion and being arranged and adapted to overlie the walls of the pool, and means along said outer edge for attaching said flap outwardly of the walls.

4. In combination with the cover claimed in claim 3, an elongated roller attached to said marginal flap arranged and adapted to roll said cover thereonto.

5. A cover for a swimming pool which has water confining walls and which is of determined size and shape at the surface of the water, said cover comprising an air impervious continuous sheet having a shape substantially conforming to the shape of the pool at the water surface, means connected along the peripheral edge portion of said sheet for attaching said sheet to said walls and for entirely retaining said peripheral edge portion below the water surface, and means extending through said sheet for inserting air beneath said sheet, said sheet being of greater size than said determined size whereby air admitted beneath said sheet when said sheet is attached to the walls with its said peripheral edge portion below the water surface buoyantly maintains a portion of said sheet spacedly supported above the water surface.

6. A cover for a swimming pool which has water confining walls and which is of determined size and shape at the surface of the water, said cover comprising an air impervious continuous sheet having a shape substantially conforming to the shape of the pool at the water surface, means connected along the peripheral edge portion of

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said sheet for attaching said sheet to the walls and for entirely retaining said peripheral edge portion below the water surface, a marginal flap overlying and extending along said peripheral edge portion and having an outer edge portion, said flap being attached to said sheet inwardly of said peripheral edge portion and being arranged and adapted to overlie the walls, means along said outer edge portion for attaching said marginal flap outwardly of the walls, and means extending through said sheet for inserting air therethrough, said sheet being of greater size than said determined size whereby air admitted beneath said sheet when said sheet is attached to the walls with its said peripheral edge portion below the water surface buoyantly maintains a major portion of said sheet spacedly supported above the water surface.

7. A swimming pool and a cover combination, said pool comprising side walls and containing water there-within and being of a determined size and shape at the surface of said water, said cover comprising an air impervious continuous sheet terminating in a peripheral edge portion and having a shape substantially conforming to said shape of said pool at the water surface, means below said water surface for attaching said sheet to said walls and for entirely retaining said peripheral edge portion of said sheet below said water surface of said pool all around said pool, said sheet being of greater size than said determined size, and air beneath said sheet for buoyantly maintaining a portion of said sheet spacedly above said water surface.

8. A swimming pool and a cover combination, said

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pool comprising side walls and containing water there-within and being of a determined size and shape, said cover comprising an air impervious continuous sheet terminating in a peripheral edge portion and having a shape substantially conforming to the shape of said pool at the water surface, means below said water surface for attaching said sheet to said walls and for entirely retaining below said water surface of said pool said peripheral edge portion of said sheet all around said pool, a marginal flap overlying and extending along said peripheral edge portion and having an outer edge portion, said flap being attached to said sheet inwardly and upwardly of said peripheral edge portion and being arranged and adapted to overlie the upper edges of said walls, and means along said outer edge portion for retaining said marginal flap outwardly of said walls, said sheet being bowed upwardly toward its center and entrapping air therebeneath, said entrapped air buoyantly maintaining a major portion of said sheet inwardly of its said peripheral edge portion spacedly above said water surface.

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