Oct. 3, 1961 J. T. PRUDEK 3,002,195

SWIMMING POOL COVER AND SHADE

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Fig. 1.

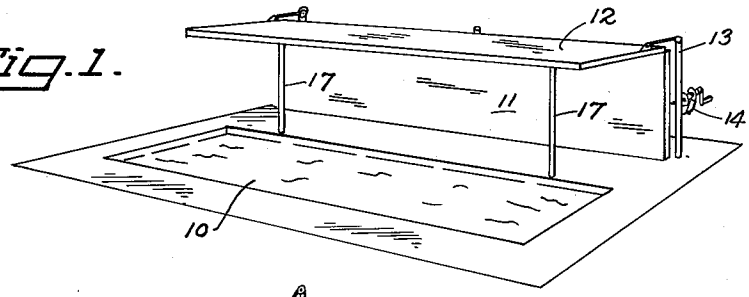


Fig. 2.

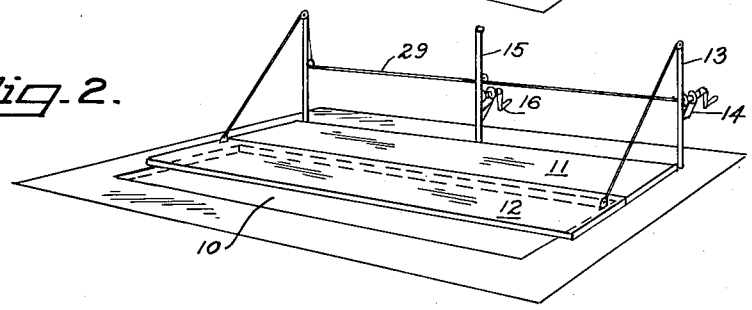


Fig. 3.

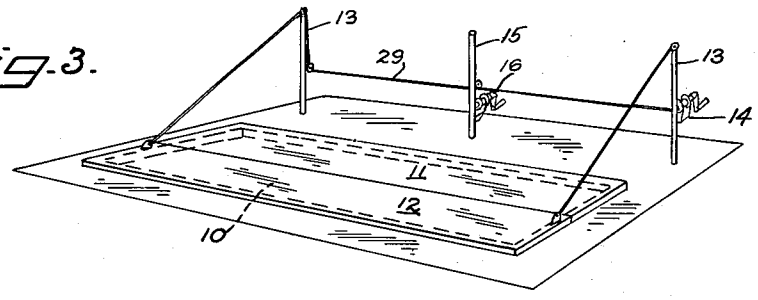
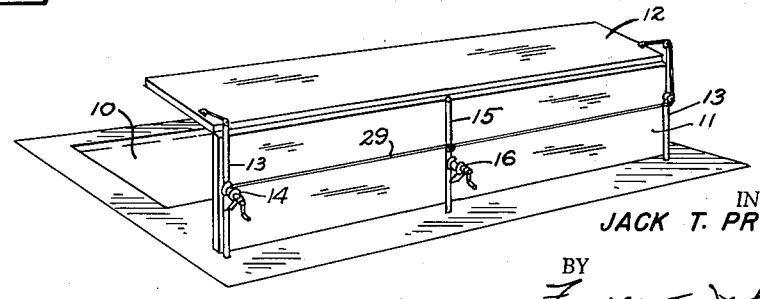


Fig. 4.



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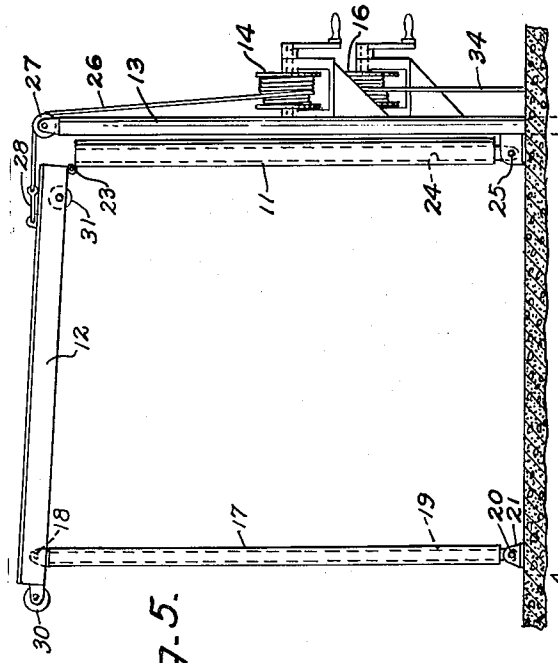


Fig. 5.

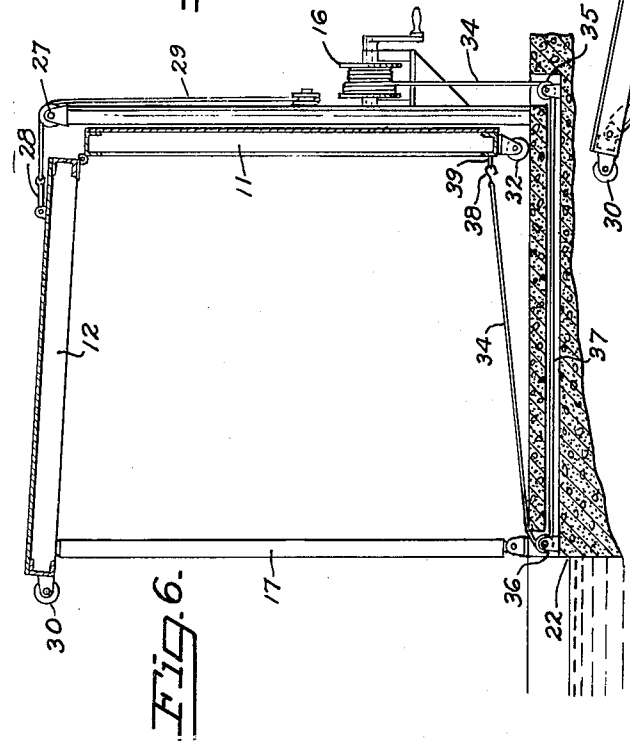


Fig. 6.

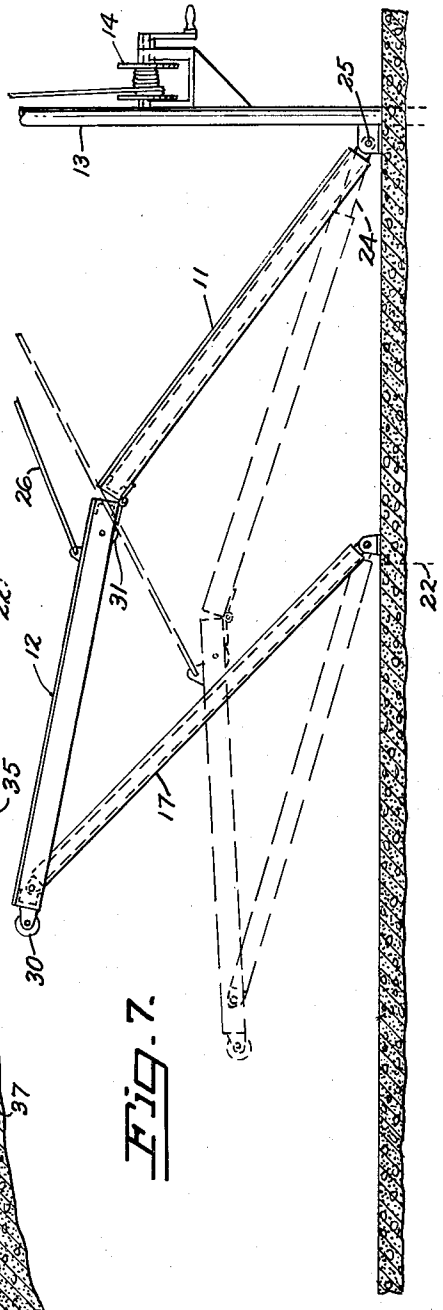


Fig. 7.

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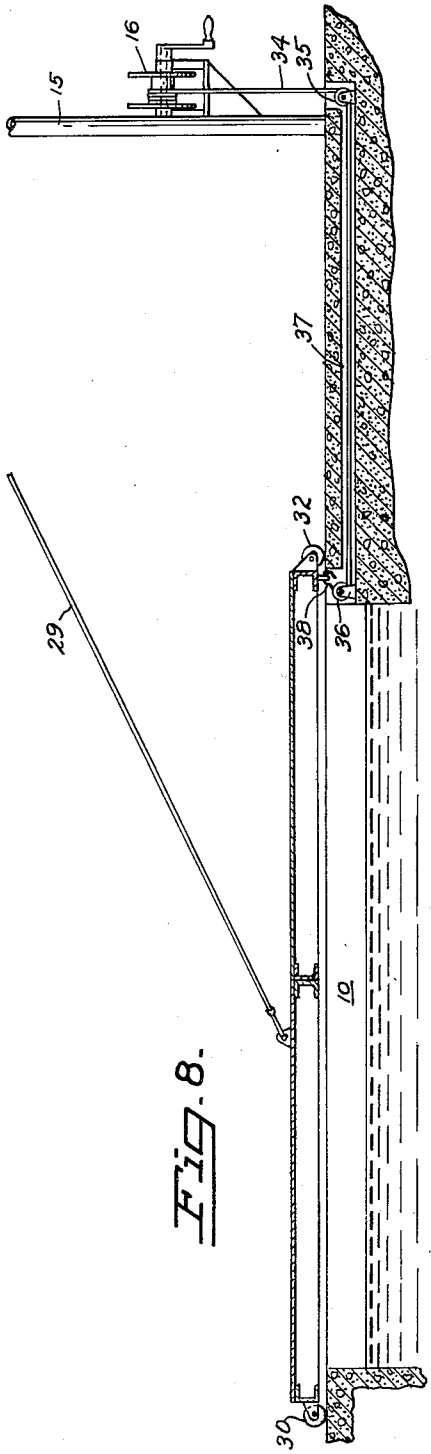


Fig. 8.

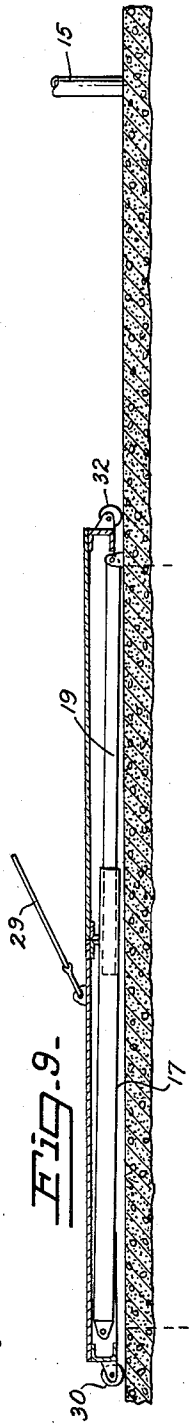


Fig. 9.

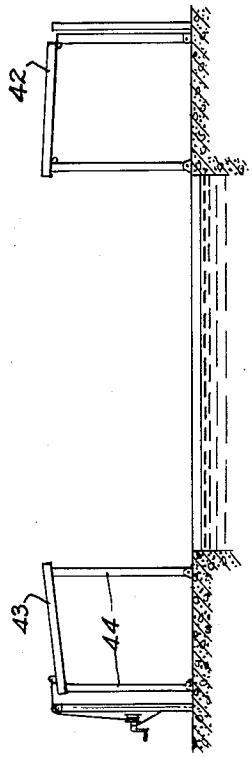


Fig. 10.

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SWIMMING POOL COVER AND SHADE

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4 Claims. (Cl. 4—172)

This invention relates to covers for swimming pools and particularly to a cover that serves, when not in use, for a sun shade and wind break beside the pool.

It is desirable to cover a swimming pool when it is not in use to afford protection to children and animals, to prevent dust and debris from entering the water, to inhibit evaporation of volatile chemicals added to the water for control of bacterial growth and to aid in the prevention of freezing in cold weather.

It is common practice to build a so-called lanai or open front shade structure along one side of swimming pools to protect swimmers and spectators from the direct rays of the sun in warm weather or from wind, and it is an object of the present invention to provide a structure that will serve through simple adjustment as such a lanai while the pool is in use and as a cover for the pool when it is not in use.

A further object of the invention is to provide a light weight structure of hinged panels and means for moving the panels from a flat position over a pool to an erect position where they form a wall and roof beside the pool.

A further object of the invention is to provide means to adjust a structure of the kind described quickly and easily so that it may be completely moved from one functional position to the other by a single person in a matter of moments.

Further and more specific objects and advantages of the invention are made apparent in the following specification wherein it is described in detail by reference to the accompanying drawings.

In the drawings:

FIG. 1 is a perspective schematic view illustrating a pool cover constructed in accordance with the present invention in its upright position to serve as a shade beside a pool;

FIG. 2 is a similar view illustrating the cover after it has been lowered to the deck surrounding the pool;

FIG. 3 is a view similar to FIGS. 1 and 2 showing the cover after it has been drawn to a position overlying the pool;

FIG. 4 is a similar schematic view showing the cover in its upright position as viewed from the rear;

FIG. 5 is a view in end elevation of the cover;

FIG. 6 is a central vertical sectional view of the cover in its upright position;

FIG. 7 is a fragmentary view in end elevation showing the cover in a partially lowered position and also illustrating it in broken lines as more fully lowered;

FIG. 8 is a central sectional view of the cover after it has been drawn over the pool;

FIG. 9 is a sectional view of the cover in the same position as FIG. 8, the section being taken at the position of one of the forward supports; and

FIG. 10 is a schematic view illustrating a modification of the invention.

For a general understanding of the manner in which the pool cover of the present invention serves alternately as a pool side shade or lanai or as a pool cover, reference is first made to FIGS. 1 to 4, inclusive, wherein a pool with a surrounding deck of concrete or the like is shown at **10** and the pool cover is shown as in FIGS. 1 and 4 as having a back wall **11** and a top panel **12**. The wall **11** and panel **12** are both panel-like members made up of a main frame of channels of aluminum or

other light-weight material suitably braced and covered with paneling, such for example as corrugated aluminum roofing material. The structural details of these panels is, however, subject to the choice of the builder and since it does not form a part of the present invention, the panel parts are not illustrated or described in detail herein.

Directly behind the wall panel **11** when it is in its vertical position are a plurality, herein shown as 3 in number, of rigid posts securely anchored in the concrete deck surrounding the pool. One of the endmost posts shown at **13** supports a winch **14** which controls cables for raising and lowering the cover as between the positions illustrated in FIGS. 1 and 2. The central post shown at **15** supports a winch **16** controlling a cable which draws the cover from its lowered position shown in FIG. 2 to its pool covering position illustrated in FIG. 3. In its upright position, the forward end of the roof panel **12** is supported adjacent its forward edge by vertical posts **17** which, as shown in FIG. 5, are made of two telescoping parts, the outer or main part **17** being pivoted as at **18** to the roof panel **12** and the inner telescoping part **19** being pivoted as at **20** to a bracket **21** securely fixed to the deck adjacent the edge of the pool, the position of which is indicated at **22** in FIG. 5. The panels **11** and **12** are shown as hingedly connected at their meeting edges by hinges, one of which is illustrated at **23** and the end member of the wall panel **11** is of box-like construction having a telescoping insert illustrated in dotted lines at **24** which is pivotally connected as by a pin **25** extending through a bracket **26** welded or otherwise suitably secured to the face of the post **13** and this construction is duplicated at the opposite end of the pool.

The winch **14** carries two cables, one of which extends upwardly as shown at **26** in FIG. 5 over a sheave **27** at the top of the post **13** and is connected at its end by a hook **28** to a suitable eye on the top of the roof panel **12**. The other cable which is best shown at **29** in FIGS. 2, 3 and 4 extends horizontally across the back of the posts **13** and **15** and is trained upwardly over suitable sheaves at the opposite end post **13** to be secured to the opposite end of the roof panel in an identical manner.

With the construction so far described, spooling out of cables **26** and **29** by rotation of the winch **14** permits the pool cover to descend by gravity through the position illustrated in FIG. 7 and eventually down through the broken line position until it is flat upon the pool deck but only partially extended toward its covering position.

The forward edge of the roof panel **12** is provided with a caster illustrated at **30** at each end and these casters project downwardly from the underside of the panel sufficiently to support it a very short distance, say one-half inch or less above the pool deck, and to enable it to be easily moved across the deck. Similar casters are provided at opposite edges of the panel as illustrated at **31**, and casters **32** as shown in FIGS. 6, 8 and 9 are provided on the lower rear edge of the wall panel **11**. The centers of the casters **32** are coaxial with the pivot pin **25** at the ends of the wall panel **11** so that these casters serve as pivot points about which the wall panel **11** swings toward its downward position, and thereafter act, as the other casters described, to facilitate movement of the cover over the pool deck.

The manner in which the cover is moved from its initial lowered position to its extended position where it covers the pool as in FIG. 3, is best illustrated in FIGS. 6 and 8 wherein the winch **16** on the central post **15** is illustrated as controlling a cable **34** extending

downwardly and guided by suitable sheaves 35 and 36 through a tubular conduit 37 underlying the pool deck and terminating in a hook 38 normally concealed in a recess which contains the sheave 36 at the pool edge. The recess may be covered with a small metal plate or the like (not shown) when the cover is in its upright position. Before the cover is lowered, the cable 34 is withdrawn from the winch 16 and its hook is engaged with an eye 39 at the central portion of the lower front edge of the wall panel 11. Thus after the cover has been lowered to the position of FIG. 2, actuation of the winch 16 will draw it outwardly until it attains the position illustrated in FIG. 8. In this position, the telescoping front supports which comprise the parts 17 and 19 are extended as shown in FIG. 9 and serve as a beam completely spanning the pool and lending rigidity to the structure. For the sake of appearance when the pool is covered and also to remove unnecessary obstructions, it is desirable to withdraw the pivot pins 25 at the ends of the wall panel 11 and slide the telescoping members 24 into the end frame members of the panel leaving a clear deck surrounding the cover. It is also desirable that the cables 26 and 29 be disengaged at their extremities from the roof panel 12 and rewound upon the winch 14 until they assume out-of-the-way positions.

Restoring the cover to its erect position is accomplished by simply attaching the cables 26 and 29 and actuating the winch 14, first to pull the cover back from the pool to the position of FIG. 2 and then to raise it to the position of FIG. 1. After it is raised, the cable 34 is released and rewound to its original position.

It is found that pools up to fourteen or sixteen feet wide may be covered in a satisfactory manner with a structure of the kind herein described which is sufficiently light to be actuated easily without power yet has sufficient strength to support the weight of a man walking across the cover in its lowered position. Suitable power means may be supplied to the winches 14 and 16 for larger pools but it is also possible to cover larger pools with light weight structures by variations in design. One such variation is illustrated for example in FIG. 10 wherein a cover such as that herein described is schematically illustrated at 42 and a similar cover having a roof but no back wall is illustrated at 43 as supported on hinged and telescoping legs 44 enabling it to be lowered over one side of a wide pool that is not completely covered by the structure shown at 42. It is, of course, possible to duplicate the structure of the present application on both sides of a pool if it is very wide. Other combinations of the structures embodying the present invention will readily suggest themselves.

In actual operation, the raising or lowering of the cover on an average sized private pool can be accomplished even by a child in a very few minutes and it has been shown that the cost of such a cover in rustproof durable material fully installed is in most cases less than the cost of erecting a satisfactory fence surrounding a garden area in which the pool is installed and which, in some vicinities, is required by law as a safety measure.

I claim:

1. A combination pool cover and pool-side shade comprising two panels, a hinged connection between one of said panels and a deck beside the pool whereby said one panel may stand as a wall spaced from an edge of the pool, a hinged connection between the upper edge of said one panel when standing and an edge of the second panel whereby the second panel may extend as a roof toward the pool, substantially vertical telescoping members pivoted to the deck beside the pool and to the roof panel adjacent the edge nearest the pool, means to lower the panels to a coplanar position on the pool deck whereby said telescoping members will be substantially parallel to the deck, and means to move the lowered panels to a pool covering position with said telescoping members in extended condition.

2. The structure defined in claim 1 in which the telescoping members span the pool when the panels are lowered to form beams supporting the panels.

3. The structure defined in claim 1 in which the means to lower the panel comprises upstanding support means behind the wall panel, and winch means fixed with relation to the support and controlling a cable which passes over the support and is anchored to the roof panel.

4. The structure defined in claim 1 in which the means to move the lowered panels to a pool covering position comprises, a winch fixed with relation to the deck behind the wall panel, a sheave adjacent the pool edge, a cable controlled by said winch leading under the deck and over said sheave, and means to connect the free end of said cable to said wall panel before it is lowered.

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