Nov. 14, 1961 J. A. VIERLING 3,008,148

POLYGONAL SWIMMING POOL COVER

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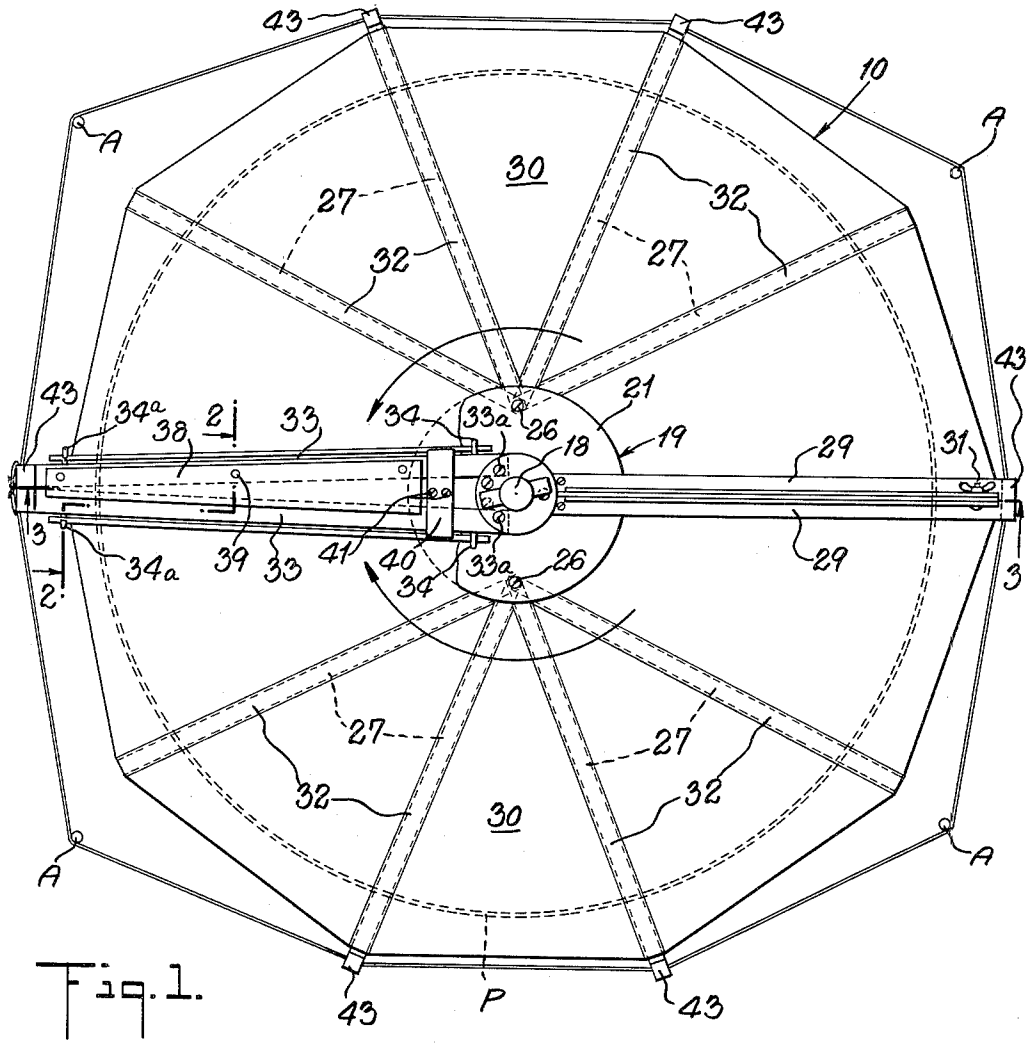


Fig. 1.

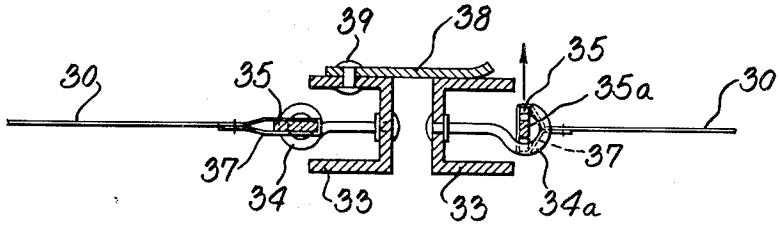


Fig. 2.

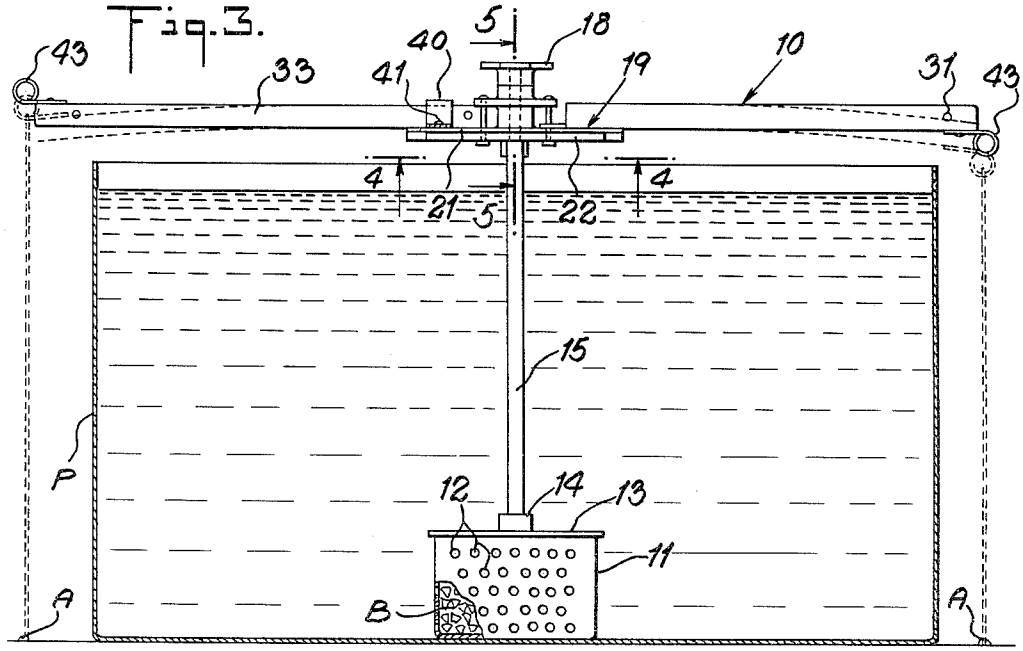
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Fig. 3.



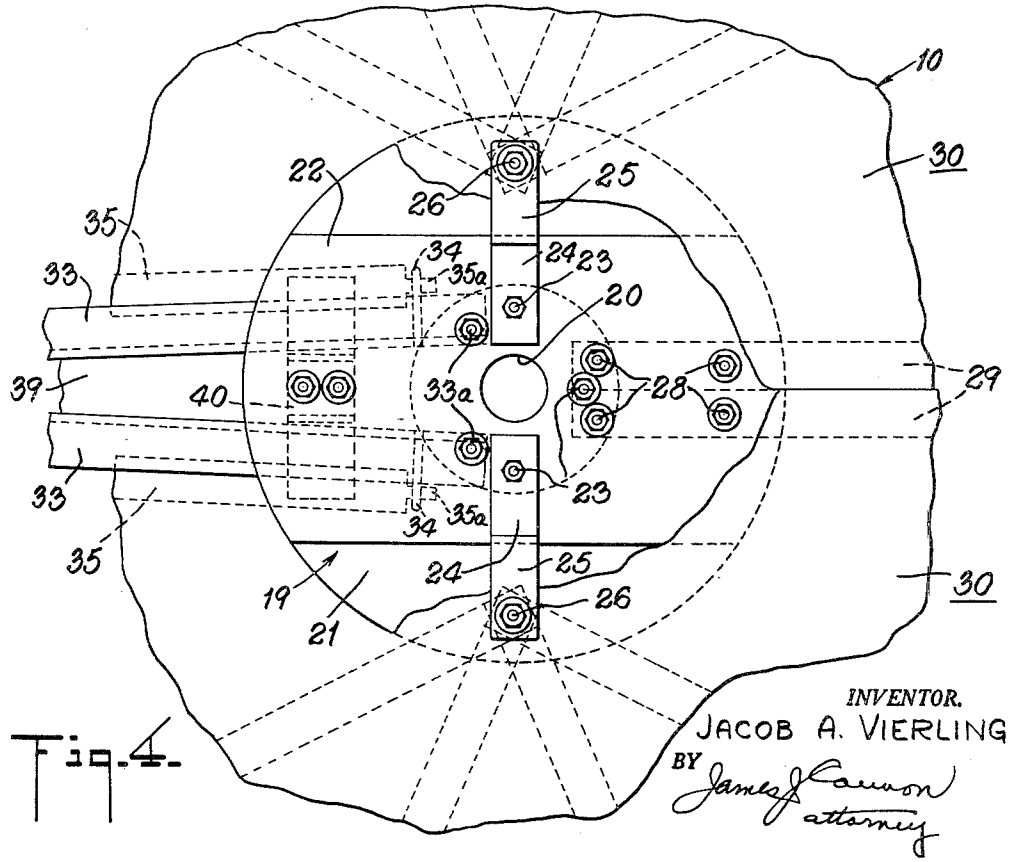


Fig. 4.

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Fig. 5.

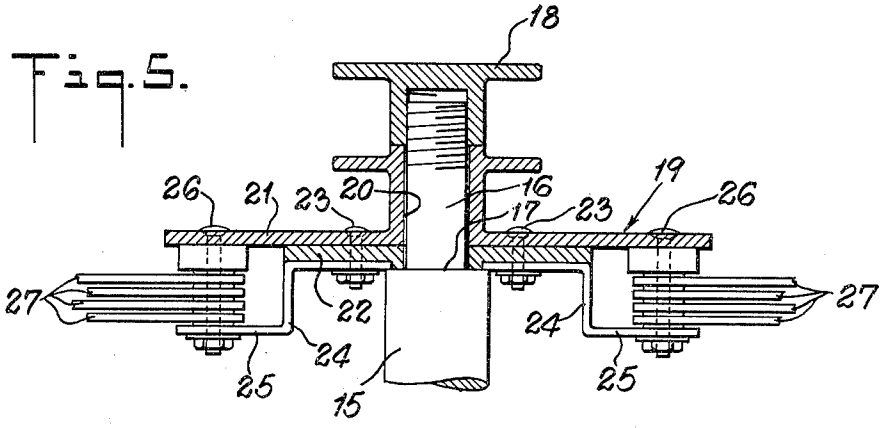
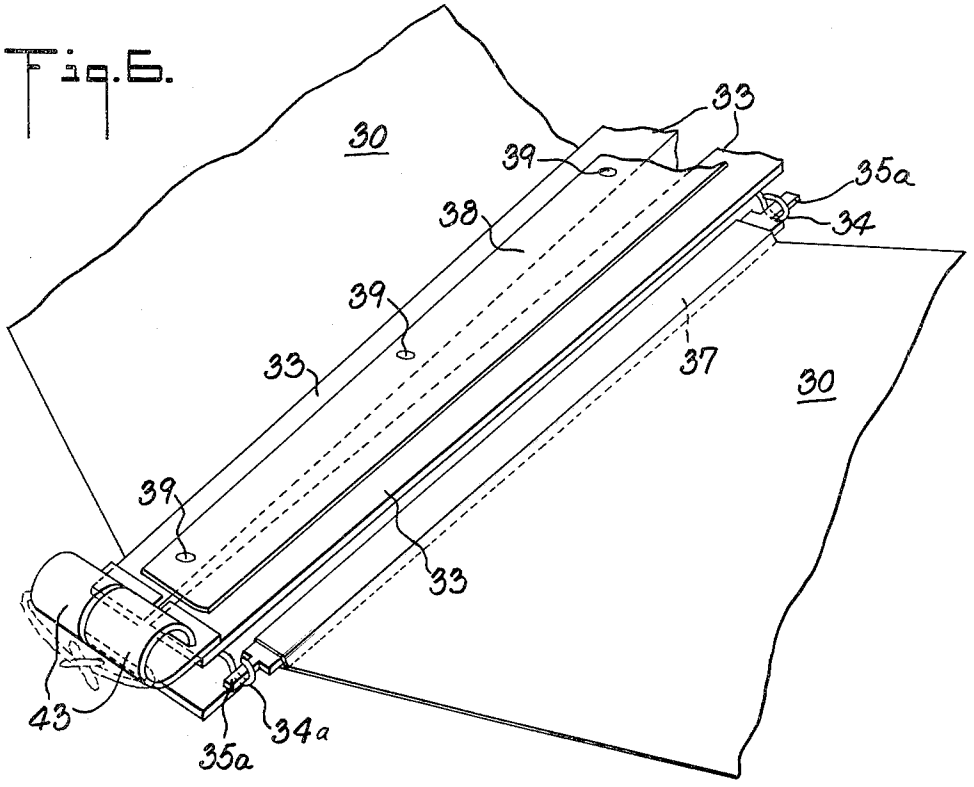


Fig. 6.



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POLYGONAL SWIMMING POOL COVER

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My invention relates to swimming pools and is directed particularly to a collapsible polygonal swimming pool cover particularly for use with round, back-yard swimming pools, also adaptable to oval and other various shapes of swimming pools with slight modifications.

The principal object of the invention is to provide a swimming pool cover of the above nature which can readily be installed in place by one person and extended in covering relation over a pool to prevent debris, leaves and rain from entering the pool, as well as to prevent accidental falling in of small children and pets, when the pool is not in use.

A more particular object of the invention is to provide a collapsible and portable pool cover of the character described which comprises a ballast container supporting a central support post or standard, and a collapsible awning member removably attached to the upper end of the central support standard and extensible arcuately to provide a polygonal covering awning which can readily be tied down into secure covering relation over the pool.

Still another object of the invention is to provide a polygonal swimming pool cover of the above nature wherein the covering fabric comprising the awning can readily be replaced when worn out or torn by anyone capable of using a screwdriver.

Yet another object is to provide a swimming pool cover of the above nature which folds compactly for storage when not in use, which is easily portable by one person, which is simple and inexpensive to manufacture, and which will be long-wearing and highly effective for its intended purpose in use.

Other objects, features and advantages of the invention will be apparent from the following description when read with reference to the accompanying drawings.

In the drawings, wherein like reference numerals denote corresponding parts throughout the several views:

FIG. 1 is a plan view of a polygonal collapsible cover embodying the invention as applied to a pool,

FIG. 2 is a sectional view of movable arms thereof, taken on line 2—2 of FIG. 1,

FIG. 3 is a vertical sectional view of assembly thereof, taken substantially on line 3—3 of FIG. 1,

FIG. 4 is an enlarged bottom view of the cover member,

FIG. 5 is a vertical sectional view of the cover member, taken substantially on line 5—5 of FIG. 3, and

FIG. 6 is a perspective view of the movable arms in opened position, the cover being stretched as over a pool and the arms tied and secured to hold the cover in open position.

Referring now in detail to the drawings, 10 in FIGS. 1 and 3 designates generally a polygonal pool cover embodying the invention, shown installed in place and tied down in covering relation over a circular swimming pool P. The pool cover 10 comprises a cylindrical container 11 perforated with holes 12 and fitted with a detachable cover 13 to the upper end of which is centrally secured an internally-threaded standard support flange 14. Threadedly received in the support flange 14 is an upright pipe standard 15 long enough to extend a few inches above the surface of the pool when the perforated container 11 rests at the bottom of a pool P as shown in FIG. 3. The container 11 is filled with pebbles B to provide ballast for holding the pipe standard 15 in place.

The upper end of the pipe standard 15 is formed with

a reduced-diameter, externally-threaded upper end portion 16 providing an annular shoulder 17. Seatable against the annular shoulder 17 at the upper end of the pipe standard 15 and removably attachable thereat as by a locking cap 18 threadable upon said pipe standard is a circular cover plate member 19, said cover plate member being provided with a central opening 20 for this purpose. The cover plate member 19 comprises a circular top plate 21, reinforced along the underside with a diametrically-extending plate 22 secured thereto as by bolts 23. The bolts 23 also support angle-brackets 24 at diametrically opposed end portions of the plate member 19, said brackets providing end portions 25 extending in spaced parallel relation to the underside portion of the circular top plate 21.

Swingably pivoted on bolts 26 extending through the end portions 25 of the angle brackets 24 and the opposed end portions of the circular top plate 21 at each side thereof are one end each of a plurality (four in the embodiment illustrated) of cover support bars 27.

Secured against the top of top plate 21 of the cover plate member 19 as by bolts 28 and extending perpendicularly to the diametrical disposition of the angle brackets 24 are a pair of L-shaped clamp members 29 arranged back-to-back as best illustrated in FIG. 1. Removably clamped in place between the L-shaped clamp members 29 are fabric awning half-sections 30, which may be of waterproof canvas, for example. A wing nut 31 securing the outer ends of the L-shaped clamp members together may readily be removed for releasing the clamped end portions of the awning half sections 30 for replacement when necessary.

The arcuate awning half-sections 30 are provided with sewn sleeves 32 through which the cover support bars 27 extend.

Also swingably supported upon the top plate 21 of the cover plate member 19 as by bolts 33*a* at a position substantially diametrically opposed to the clamp members 29 are a pair of end arms 33, preferably U-shaped or channel-shaped in cross-section. As best illustrated in FIGS. 2 and 6, end hooks 34 are riveted or otherwise fixed within each end arms 33 and at each end thereof to hookingly engage the reduced width end portions 35*a* of end support rods 35 extending through sleeves 37 sewn in the free ends of the awning half sections 30. The awning ends will thus extend within the channels of the end arms 33, to minimize leakage of the cover. Moreover, a lap plate 38 is riveted by rivets 39 or otherwise secured against the top surface of one of the end arms 33 to lap over and seal the opening between said end arms when the cover is extended over a pool as illustrated in FIGS. 1 and 6. For changing the fabric after it is worn out, or when a change is desired, merely rotate rods 35 ninety degrees (90°), and by doing that it permits reduced end portions 35*a* of rods 35 to be removed from open end hooks 34*a* and the edge of end arms 33, as illustrated in FIG. 2, by direction of the arrows. After reduced end portions 35*a* are removed from end hooks 34*a* then the other reduced ends 35*a* of rods 35 are able to be slidably removed from closed hooks 34.

As illustrated in FIGS. 1, 3 and 4, a guide member 40 securable against the top plate 21 of the cover member 19 as by bolts 41 is provided for securing the end arms in contacting position when the awning sections are fully extended as when covering a pool. The end arms 33, the L-shaped members 29 and central pairs of the cover support bars 27 have welded or otherwise secured thereat short tubular members 43 adapted for passage therethrough of a rope for tie-down to four ground points A as illustrated by way of example in FIGS. 1 and 3. When it is desired to remove the cover for use of the pool, it is a simple matter to remove the tie-down rope, after

which the end arms 33 and the cover support bars 27 can be pushed back against the L-shaped members 29 to collapse the awning half sections 30. The awning structure can then readily be removed from the pipe standard 15 by removal of the locking cap 18 after which said standard together with its base container 11 can be lifted from the pool. The perforations 12 in the base container 11 allow rapid draining of water so as not to impede withdrawal thereof.

While I have illustrated and described herein only one form in which my invention may conveniently be embodied in practice, it will be understood that this form is presented only by way of example and not in a limiting sense. In short, my invention includes all modifications and embodiments coming within the scope and spirit of the following claims:

What I claim is:

1. A collapsible swimming pool cover comprising, in combination, a base support member, a standard extending upwardly from said base support member, a polygonal cover member, means for removably securing a central portion of said cover member upon the upper end of said standard, said polygonal cover member comprising a cover plate member, a pair of elongated clamp arms fixed to and extending radially outwardly of said cover plate member, a pair of hemi-polygonal fabric awning sections, means removably clamping one end each of said awning sections between said clamp arms, a plurality of cover support bars pivotally supported at one end by said cover plate, a pair of end arms pivotally secured at one end to said cover plate at a position substantially diametrically opposed to the position of said clamp arms, and means securing the other ends of said awning sections along one each of said end arms.

2. A collapsible swimming pool cover as defined in claim 1, including means for holding said end arms in clamped together relation at a position extending outwardly substantially oppositely to the direction of extension of said clamp arms for supporting said awning sections in arcuately extended position about said support plate.

3. A collapsible swimming pool cover as defined in claim 2 including pockets sewn in said awning sections for receiving said support bars in fan-like, spaced relation when said awning sections are in said extended position.

4. A collapsible swimming pool cover as defined in claim 3 wherein said end arms are channel-shaped in cross-section and when in said extended position have their channels in oppositely-directed relation, said securing means for the other ends of said awning sections comprising sleeves formed along said other ends of said awning sections, end support rods extending through each of said sleeves and projecting through at each end thereof, and hooks provided in the channels of said end arms for hookingly engaging said projecting ends of said support rods.

5. A collapsible swimming pool cover as defined in claim 3 including a lap plate secured along the top surface of one of said end arms and adapted to overlap the top surface of the other of said end arms when said end arms are in said extended position.

6. A collapsible swimming pool cover as defined in claim 3 including short tubular members secured at the outer ends of said clamp members, said cover support bars, and said end arms for receiving a tie-down rope.

7. A collapsible swimming pool cover as defined in claim 3, said base support member comprising a perforated cylindrical container adapted to hold ballast material for adding weight thereto.

8. A collapsible swimming pool cover as defined in claim 4, one of said hooks being substantially closed and the other hook being partially opened.

9. A collapsible swimming pool cover as defined in claim 8, wherein the turning of said end support rods through ninety degrees (90°) releases them from the opened hooks on the end arms causing said end support rods to be removable endwise from said substantially closed hooks.

10. A collapsible swimming pool cover as defined in claim 9, wherein the cover can be removed from the support arms after removing the end support rods and the means securing the elongated clamping arms.

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