

Nov. 24, 1970

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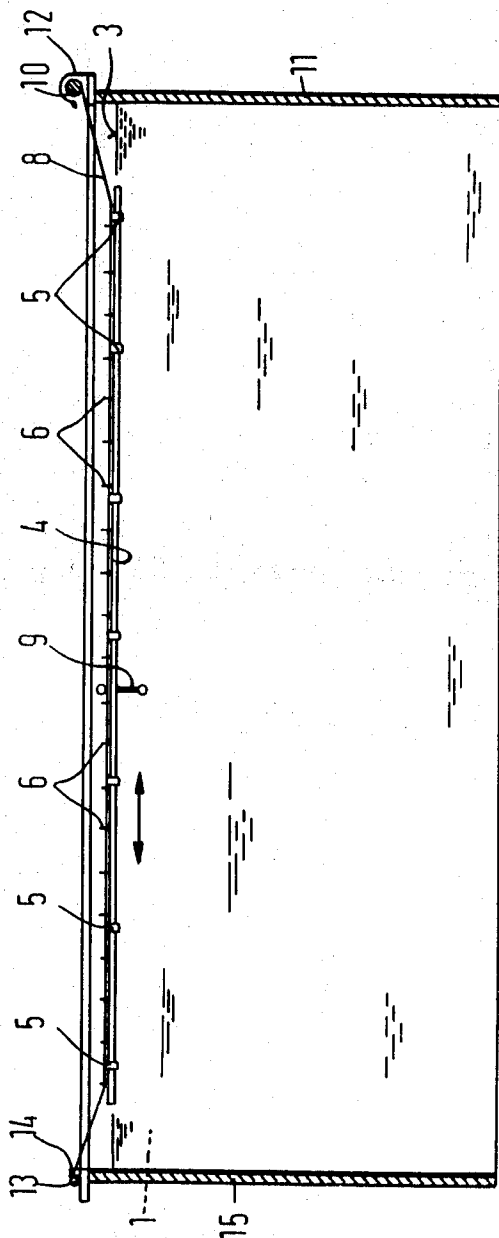
3,541,615

ROLLABLE COVERS FOR SWIMMING POOLS

Filed March 18, 1968

3 Sheets-Sheet 1

FIG. 1



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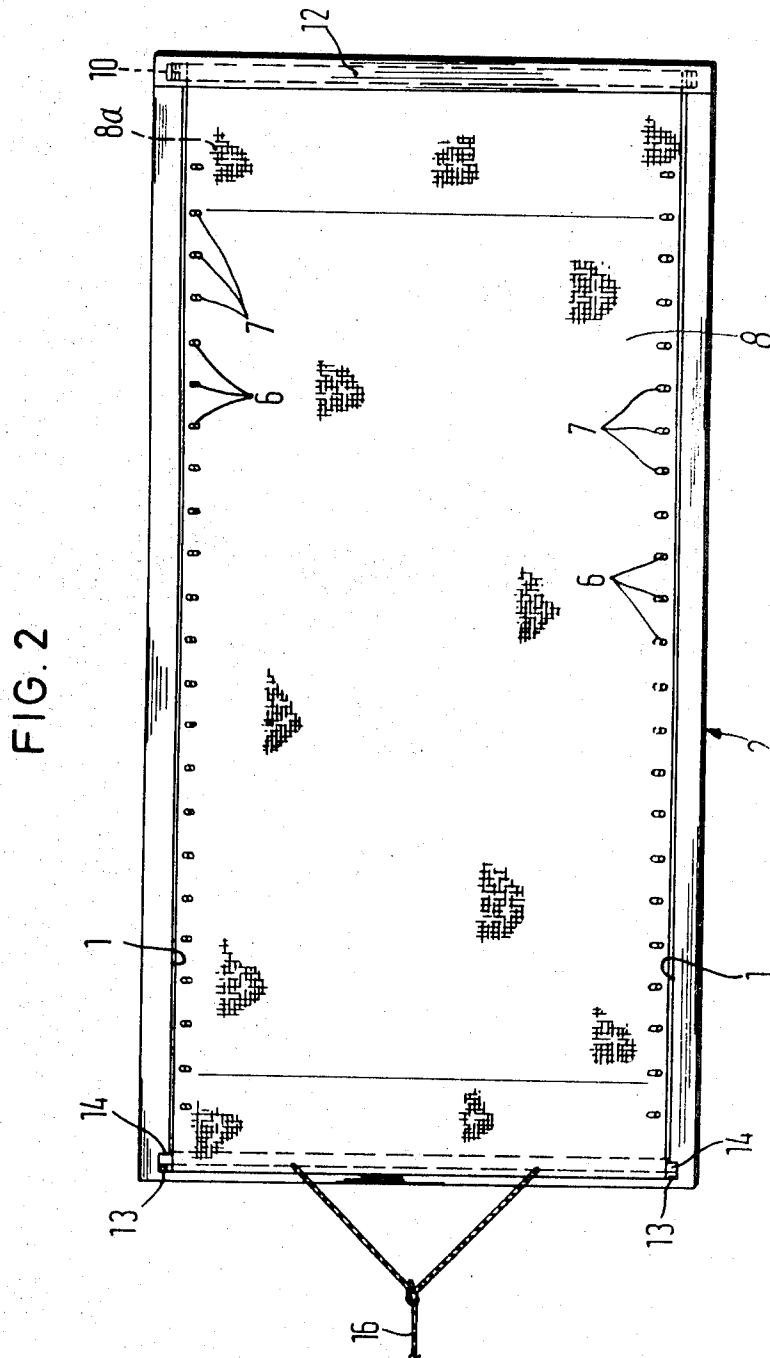
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ROLLABLE COVERS FOR SWIMMING POOLS

Filed March 18, 1968

3 Sheets-Sheet 2



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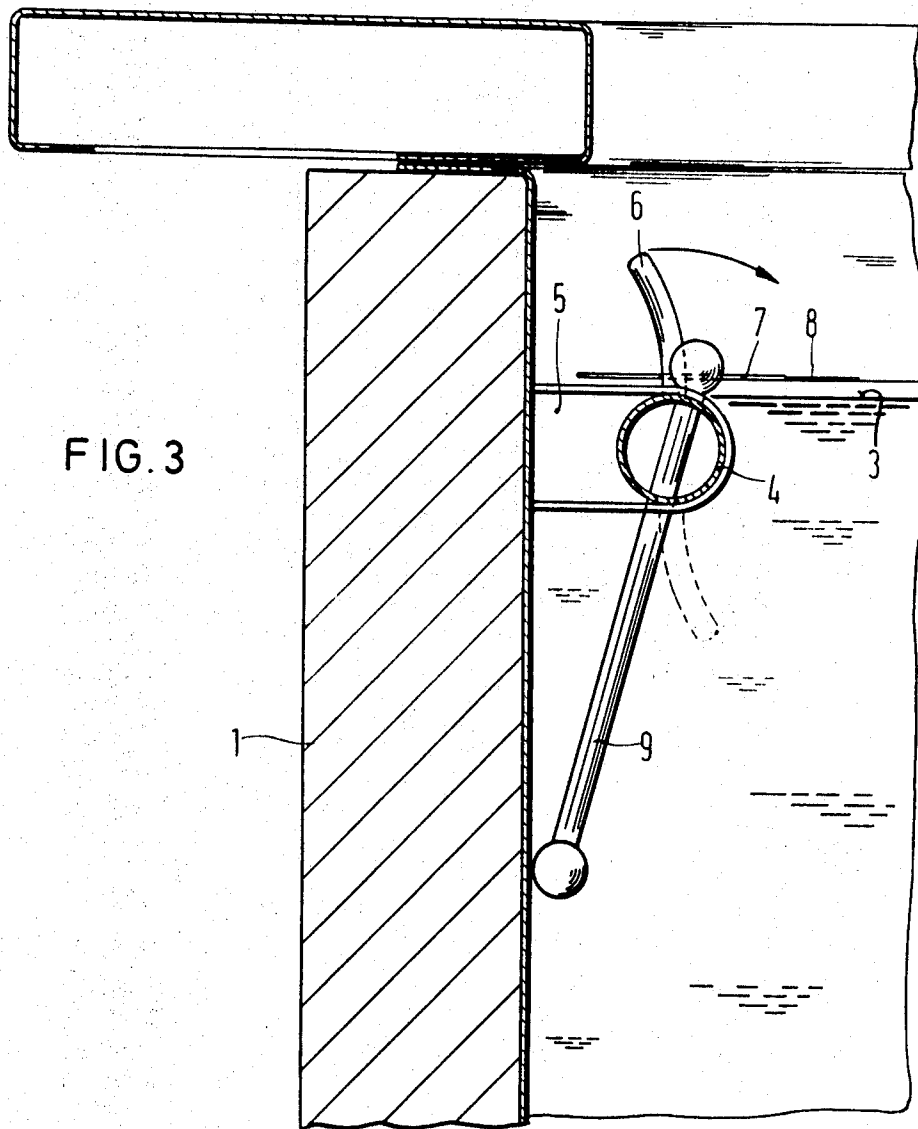
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3,541,615

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Filed March 18, 1968

3 Sheets-Sheet 3



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ROLLABLE COVERS FOR SWIMMING POOLS

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Filed Mar. 18, 1968, Ser. No. 713,597

Claims priority, application Germany, Apr. 20, 1967,

M 73,667

Int. Cl. E04h 3/16

U.S. Cl. 4—172.14

8 Claims

ABSTRACT OF THE DISCLOSURE

A cover for a swimming pool with opposite side walls and opposite end walls, with the cover being a sheet which in nonuse is lengthwise rolled up on a preferably spring-wound roll on one end wall of the pool, and in use is partly unwound from the roll and extended to the other end wall of the pool to which it is releasably anchored with its free end. The cover has in opposite side margins thereof longitudinally spaced slits, and the opposite side walls of the pool are provided with claws which are manipulatable from inoperative position into operative position in which they enter the adjacent slits in the extended cover and hold the latter taut across the side walls of the pool, with the claws being releasably lockable in their operative position.

This invention relates to covers for swimming pools in general, and to rollable pool covers in particular.

Known pool covers of this type are provided on their opposite sides with enlarged formations of round section which are slidable in grooves in the adjacent pool walls. While these covers are generally satisfactory, they are deficient in a few but important respects. Thus, due to the weight of these covers and also their required tension for tautness, operational friction between the enlarged cover formations and wall grooves is quite high which not only renders rolling and unrolling of the cover quite difficult, but also causes severe wear of the enlarged cover formations. Further, these cover formations interfere with smooth rolling of the cover, and the cover installation is also rather expensive owing to the enlarged cover formations and wall grooves.

It is the primary object of the present invention to provide a pool cover of this type which is easily and quickly rolled up and unrolled and also tensioned, covers the water in the pool except for narrow gaps between the cover sides and adjacent pool walls, and also lends itself to pools of different outlines. This is achieved according to the invention by providing the cover in its opposite sides with slits, and providing opposite pool walls with claws which align with the slits and are shiftable into the latter and lockable to hold the cover extended and in taut condition. With this arrangement, the cover may first be unrolled over the pool, whereupon the same is firmly anchored to the claws on the opposite pool walls, so that covering of the pool is facile and quick, the cover is adequately tensioned and its sides are spaced so narrowly from the adjacent pool walls that children cannot fall into the pool.

Further objects and advantages will appear to those skilled in the art from the following, considered in conjunction with the accompanying drawings.

In the accompanying drawings, in which certain modes of carrying out the present invention are shown for illustrative purposes:

FIG. 1 is a longitudinal section through a pool with a cover installation that embodies the invention;

FIG. 2 is a top view of the covered pool; and

FIG. 3 is an enlarged section through one of the longitudinal pool walls.

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Suitably secured to the opposite side walls 1 of a swimming pool 2 are brackets 5 which at the water level 3 rotatably and axially slidably support pipes or rods 4, preferably of aluminum. Depending on the length of the pool, one single pipe or rod 4 or several shorter lengths thereof may be provided along each side wall.

Secured to the pipes 4 are claws 6 which project into slots 7 in a cover sheet 8. The claws 6 are turnable with the pipes 4 and can be shifted from the full-line upper operative position into the dotted-line lower inoperative position. In order to turn the pipes 4 they carry hand levers 9 which are axially slidable in holes in the pipes. When the claws 6 have by the hand levers 9 been shifted from inoperative position into operative position in which they have entered the slits 7 in the cover, the hand lever 9 is slid downwardly so that the pipe 7 and claws 6 thereon are locked in operative position by this hand lever when the same rests against the side wall 1 as shown in FIG. 3. If the cover 8 is to be rolled back, the hand lever 9 is slid upwardly and pipe 4 turned clockwise (FIG. 3) to retract the claws 6 from the slits 7 in the cover 8.

The cover 8 is with one end suitably anchored to a shaft 10 which is rotatably supported on top of one end wall 11 of the pool, and is located in a casing 12 in which the wound-up cover is hidden and also protected. The shaft 10 may, for wind-on of the cover 8 thereon, be driven in any suitable manner, such as by a crank (not shown), but is preferably spring-loaded to this end (FIG. 4).

Provided on the free end of the cover 8 is a rod 13 which may releasably be interlocked with holders 14 on the other end wall 15 of the pool. Secured to the rod 13 or the cover 8 is a line 16 for handling the cover.

If the cover 8 is wound-up on the spring-loaded shaft 10, and it is desired to unwind the same to cover the pool, an attendant will grasp the line 16 and proceed to the opposite end wall 15. The attendant will then unwind the cover 8 from the shaft 10 to the end wall 15 with the line 16 and anchors the same with the rod 13 behind the holders 14. The cover then sags downwardly onto the water level. One may then determine whether the claws 6 are in alignment with the slits 7, and if need be slide the pipes axially to reach such alignment. Once the claws 6 are in alignment with the slits 7, the pipes 4 are at their hand levers 9 turned to project the claws 6 into the slits 7 and also tension the cover widthwise and keep it under quite substantial tension, whereupon the pipes 4 and claws 6 are locked in operative position through inter-mediation of the hand levers 9. Both sides of the cover are then also so close to the adjacent side walls of the pool that virtually nothing may there drop into the pool. Also, inasmuch as the shaft 10 is spring-loaded and the rod rests behind the holders 14, the cover is also longitudinally tensioned, wherefore the cover is taut in all directions. Since such tension may be comparatively high, the cover must obviously be of a material which is highly tear-resistant and, moreover, may be wound. Such a material may be suitable plastic, or even plastic reinforced by an embedded screen 8a (FIG. 2). Such material is also heat-insulating and, hence, has the great advantage of keeping heat dissipation from the pool water at a minimum. This is of particular importance in the case of outdoor pools, because heat loss from the pool water at night or at a cloud-covered sky is negligible. This may be of equal importance in the case of indoor pools or pools with heated water. Further, the cover is preferably of transparent material to pass sun rays that heat the pool water.

Since the cover extends virtually over the entire confines of the pool, the heretofore usual water evaporation, which may amount to tens of gallons per day, is also

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largely prevented, whereby a considerable saving in the cost of heating the air in indoor pools is achieved.

Of course, it is entirely feasible to use for the cover any tear-resistant and rollable material other than the one described. Thus, the cover may be of canvas, or nylon or other netting, for example, as long as they are sufficiently tear-resistant and may be adequately tensioned.

The side pipes 4 serve also as hand rails which are highly desirable in pools.

The cover is adaptable to all kinds of pools, such as concrete, steel, aluminum and other pools. Furthermore, the cover may readily be installed in existing pools.

A considerable advantage of the present cover installation over prior installations of this type lies also in the absence of unsightly upwardly projecting parts. In this connection, also the cover casing 12 may be of neat appearance so that the pleasing appearance of the pool is in no wise adversely affected.

The invention may be carried out in other specific ways than those herein set forth without departing from the spirit and essential characteristics of the invention, and the present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive.

What is claimed is:

1. A cover installation for a swimming pool with two opposite walls, having a flexible cover sheet with opposite margins next to said walls, respectively, and spaced slits in said sheet margins, respectively; brackets secured to said pool walls; rails turnably mounted on said brackets along said pool walls, respectively; claws mounted on said rails at the spacing of said slits in the adjacent sheet margins for turnability of said claws into and from register with the adjacent slits to hold said sheet spread substantially over the expanse of the pool when said claws are in register with said slits; and means for releasably locking said rails against turning with their claws from register with said slits.

2. A cover installation as in claim 1, in which the pool has a given water level, and said rails are substantially at said water level.

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3. A cover installation as in claim 1, in which said rails are also axially slidable on said brackets.

4. A cover installation as in claim 1, which further provides hand levers mounted for axial movement in said rails, respectively.

5. A cover installation as in claim 1 and with the pool having two further opposite walls, which further provides on one of said further pool walls a turnably mounted shaft to which another margin of said sheet is secured, with said sheet being windable on and unwindable from said shaft on rotation of the latter in opposite directions.

6. A cover installation as in claim 5, in which said sheet is of tear-resistant plastic with an embedded screen reinforcement.

7. A cover installation as in claim 5, which further provides holder means on the other of said further pool walls, and said sheet is provided at its margin opposite to said other margin with a rod which is releasably lockable to said holder means.

8. A cover installation as in claim 5, which further provides on the other of said further pool walls spaced upright shoulders facing away from said shaft, and said sheet is provided at its margin opposite to said other margin with a rod having ends beyond said sheet to rest against said shoulders, respectively, for holding said sheet against spring-urged wind-up on said shaft.

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