Feb. 17, 1970 A. B. REGAN ETAL 3,495,279

INTERLOCKING SWIMMING POOL COVER

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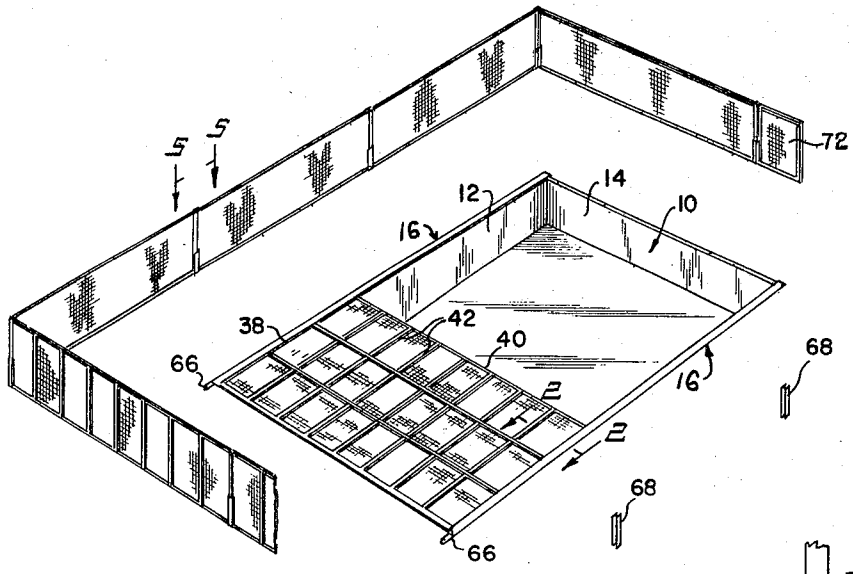


Fig. 1

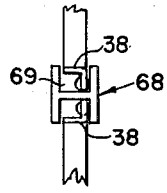


Fig. 5

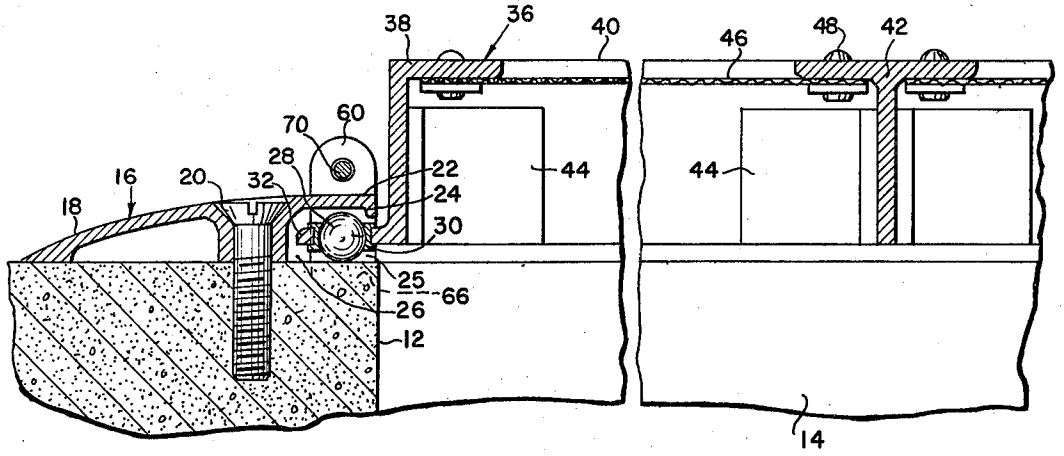


Fig. 2

INVENTORS

ANN B. REGAN
ALEEN B. DAWSON

BY
Scrivener Parker Scrivener & Clarke
ATTORNEYS

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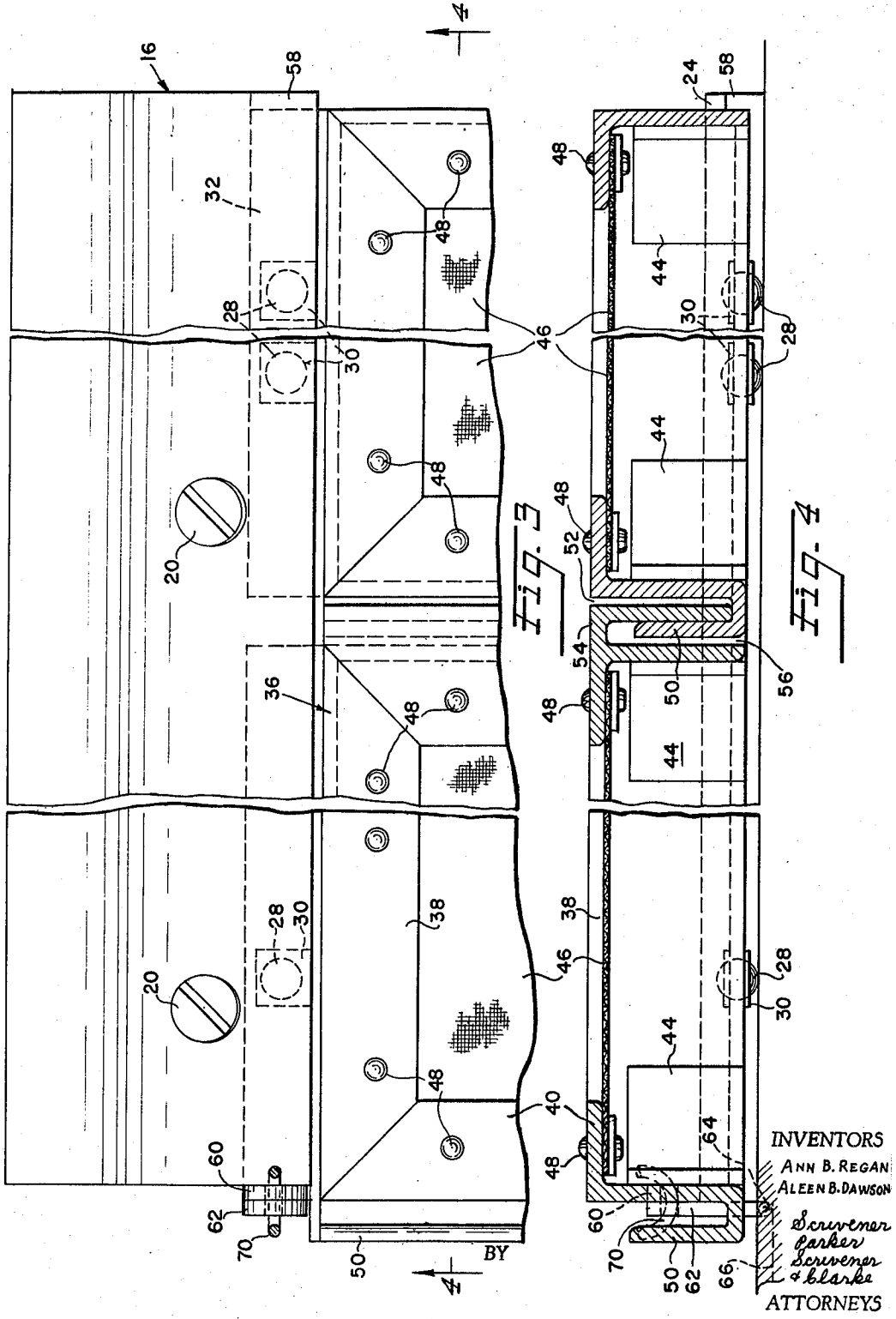


Fig. 3

Fig. 4

INVENTORS
ANN B. REGAN
ALEEN B. DAWSON
Scrivener Parker Scrivener & Clarke
ATTORNEYS

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INTERLOCKING SWIMMING POOL COVER

Ann B. Regan, 830 Amies Lane, Bryn Mawr, Pa. 19010, and Aleen B. Dawson, The Chimneys, Stockton, N.J. 08559

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ABSTRACT OF THE DISCLOSURE

A swimming pool cover composed of a plurality of rigid panels including interengaging channel means along their contiguous sides and rollers at their ends engaging in enclosed longitudinally extending guide means adjacent each side of the pool, the panels being removable from the guide means and readily separated for use as a fence or enclosure surrounding the pool.

This invention relates to swimming pools and more particularly to a combined swimming pool cover and protective fence.

Though heretofore it has been known to utilize panels for covering a swimming pool as a fence when the pool is in an uncovered condition, the panels have been designed to cooperate with permanently mounted fence portions, the arrangement usually being such that the panels form a portion of two opposed sides of the fence with mechanical means being provided to move the panel portions over the pool so that they extend longitudinally of the pool and abut intermediate thereof whereby the pool is covered by only two panels. Obviously, where the pool is of a reasonably large size, the distance that must be spanned longitudinally by the panels is excessive and furthermore the panels are extremely heavy and cumbersome and usually require expensive conveying means for transferring the panels from their vertical, fence-forming position to their position over the pool.

The object of the present invention is to provide a pool cover composed of a plurality of rigid individual panels which span the width of a pool and are thus adaptable to a pool of any length, the panels being capable of being transferred manually from their positions covering the pool to vertical positions surrounding the pool whereby the panels serve as a fence.

A more detailed object of the invention is to provide a pool cover of the foregoing nature including interlocking means for each of the panels whereby once they have been moved into their position of use over the pool they may be locked in position, it being thereafter virtually impossible to remove any panel with respect to another except in a deliberate and pre-determined manner following the release of locking means.

Other objects and their attendant advantages will become apparent as the following detailed description is read in conjunction with the accompanying drawing wherein:

FIG. 1 is a perspective view showing the panels of the invention partly covering a pool and partly forming a fence around the pool;

FIG. 2 is an enlarged vertical cross-sectional view taken substantially on line 2—2 of FIG. 1;

FIG. 3 is a broken horizontal plan view showing the manner in which the panels of the invention may cooperate with each other and with the ends of the pool against unintended removal;

FIG. 4 is a vertical cross-sectional view taken substantially on line 4—4 of FIG. 3; and

FIG. 5 is an enlarged broken horizontal plan view looking in the direction of the line 5—5 of FIG. 1.

Referrig now to the drawings, the numeral 10 designates a swimming pool of conventional construction having

side walls 12 and end walls 14. Extending along the sides of the pool and coextensive with each of the upper edges thereof is a guide member 16 which may be of extruded aluminum or the like having a gently curving upper side 18 and a plurality of longitudinally spaced openings adapted to receive fasteners 20. The member 16 is provided with an outer overhanging portion 22 having a down-turned outer lip 24 which is adapted to be spaced above the side 12 of the pool to define a longitudinal slot leading into a longitudinally extending housing or passageway 26 of greater vertical dimension than the slot 25 so as to provide a longitudinally extending guide means for roller means such as balls 28 which are caged by retainer means 30 in the horizontal flanges 32 of panels 36 constructed in accordance with the invention.

As can be seen, each of the panels comprises a rigid, open frame composed of end and side channel members 38, 40 and a plurality of spaced, T-shaped intermediate channel member 42, all of which are joined together at their points of intersection with the side members 40 by suitable angles 44 as can be clearly seen in FIGS. 2 and 4. The end and side frame members 38, 40 are of inverted L-shaped configuration in cross-section with each having horizontal leg parts atop vertical leg parts, the horizontal leg parts facing toward each other and cooperating with the corresponding parts of the T-shaped intermediate members 42 to provide supports for mesh 46, which may be aluminum wire, fiberglass or the like, and which may be peripherally fastened across the open spaces defined by the horizontal parts of the frame members by rivets 48.

The side members 40 of the respective panels have a length corresponding to the width of the pool and each member 40 on one of the panel sides is provided with an integral L-shaped channel part 50 defining an upwardly opening recess 52 extending along that side of each panel. On the opposite side there is an inverted L-shaped channel member 54 (see FIG. 4), which defines a downwardly opening recess 56, the upwardly opening recess 52 of one panel cooperating with the downwardly opening recess 54 on the contiguous side of the next adjacent panel as clearly seen in FIG. 4 to provide an interlocking connection between the two panels which positively prevents the removal of one panel relative to another when the rollers 28 are within the guides 26 in the side members 16.

In use, the individual panels are positioned over the pool by insertion of the horizontal flanges 32 into open ends of the longitudinal passages 26 defined by the members 16 along the side edges of the pool. For the panel construction shown in FIGS. 3 and 4, the open end of the members 16 would be on the left hand side so that the flanges 32 of the panels would be inserted from left to right whereby the upwardly open recess 52 would be the last to move past the ends of the members 16, the arrangement being such that just before the panel is moved to the right completely clear of the left hand end of the guide members 16, the downwardly opening recess 56 of the next adjacent panel would be engaged with the upwardly open channel 52 of the first panel whereupon the second panel would have its flanges inserted into the open end of the guides, with this process being repeated until all of the panels are in their position of use covering the pool. Desirably, the first and last panels would not be provided with the L-shaped recessed portions 50, 54 on their outer sides so that the outer side edge of the first panel would move into abutting enagagement with stop member 58 closing off the right hand ends of the guide passages 26 for the ball rollers 28 as best seen in FIG. 4.

On the left hand side of the last panel the flange part 32 at each end of the panel may be provided with an upstanding integral tang 60 having an opening therethrough adapted to register with a mating opening in a hasp 62

which is hinged at **64** for movement from a position of storage in a recess **66** in the upper surface of the pool side to a vertical position as indicated in FIG. 3 to receive the locking member **68** of a suitable padlock or the like.

As illustrated in FIG. 1, the panels when not serving as a cover may serve as a fence surrounding the pool. Desirably, each panel may be supported in a vertical position by the provision of a plurality of spaced H-beam members **69** whose flanges, as seen in FIG. 5, extend on opposite sides from the central web to afford aligned slots **69** adapted to accommodate the end channel members **38** of the panels when they are slid into the slots in a vertical disposition. As can be seen in FIG. 1, this arrangement affords a fencing around the pool which not only is a safety barrier but also provides convenient storage for the panels. Desirably, a gate **72** may be provided along the line of support member **68** at either or both ends of the pool as shown in FIG. 1, it being understood that the gate or gates would be more or less permanently erected to cooperate with the panels and provide the closeable access to the fenced enclosure when the panels are serving this purpose. The gate may be of any width and can normally be stored, as desired, until the fence is erected.

Local regulations normally specify the height of fences surrounding pool areas and, to maintain an attractive appearance and confirm to local ordinances, the height and width should be properly proportioned.

From the foregoing description, it will be seen that the present invention has provided a pool cover composed of a series of rigid panels which may be releasably interlocked together against inadvertent or unintended displacement from over the pool yet are readily separable one from the other so as to be utilized as a fence or enclosure for the pool when the panels are not serving their function as a cover. Those skilled in the art will recognize that the invention is susceptible of a variety of changes and modifications without, however, departng from the scope and spirit of the appended claims.

What is claimed is:

1. A cover member for extending horizontally over a swimming pool comprising a plurality of individual panels, each said panel having sides of a length sufficient to enable the panel to span said pool, panel locking means mounted on said panels to selectively interlock or release adjacent panels upon relative movement thereof in given opposed locking and unlocking directions to engage or release said locking means, said panel locking means including panel mating sections along said panel sides, said panel mating sections having upwardly opening channel means extending along one side of each said panel adapted to receive a downwardly opening channel means extending along a contiguous side of an adjacent panel and a downwardly opening channel means extending along the opposite side of each said panel for engagement with an upwardly opening channel means extending along the contiguous side of an adjacent panel and housing means mounted adjacent opposite sides of said pool to receive opposite ends of each said panel, said housing means being formed to permit horizontal movement of such panels in said opposed locking and unlocking directions.

2. The cover member of claim **1** wherein projecting means adapted to be received in said housing means are secured to opposite ends of each said panel, each said housing means including a slot extending longitudinally thereof along said pool to receive said projecting means.

3. The cover member of claim **2** including, in combination, elongated upright support members spaced away from the side of said pool, each upright support member being formed with vertically extending slots along two opposite sides thereof, each said slot being adapted to receive the projecting means at the end of one of said panels, said upright support members being relatively spaced to permit a panel to span two adjacent support members.

4. The cover member of claim **1** wherein roller means are mounted at the opposite ends of each said panel to be received in said housing means, said housing means including a longitudinal slot opening towards the side of said pool, and a longitudinal passage of greater vertical dimension than said slot, said roller means at the ends of each said panel being received in said passage for guiding said panel in its movement over said pool.

5. The cover member of claim **4** including stop means at one end of said passage, and releasable locking means at other end of said passage said releasable locking means cooperating with said cover to prevent inadvertent removal of said cover from its position covering said pool.

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LAVERNE D. GEIGER, Primary Examiner

H. K. ARTIS, Assistant Examiner