June 4, 1963 R. PEARLSON 3,091,777

SWIMMING POOL COVER

Filed July 27, 1960 3 Sheets-Sheet 1

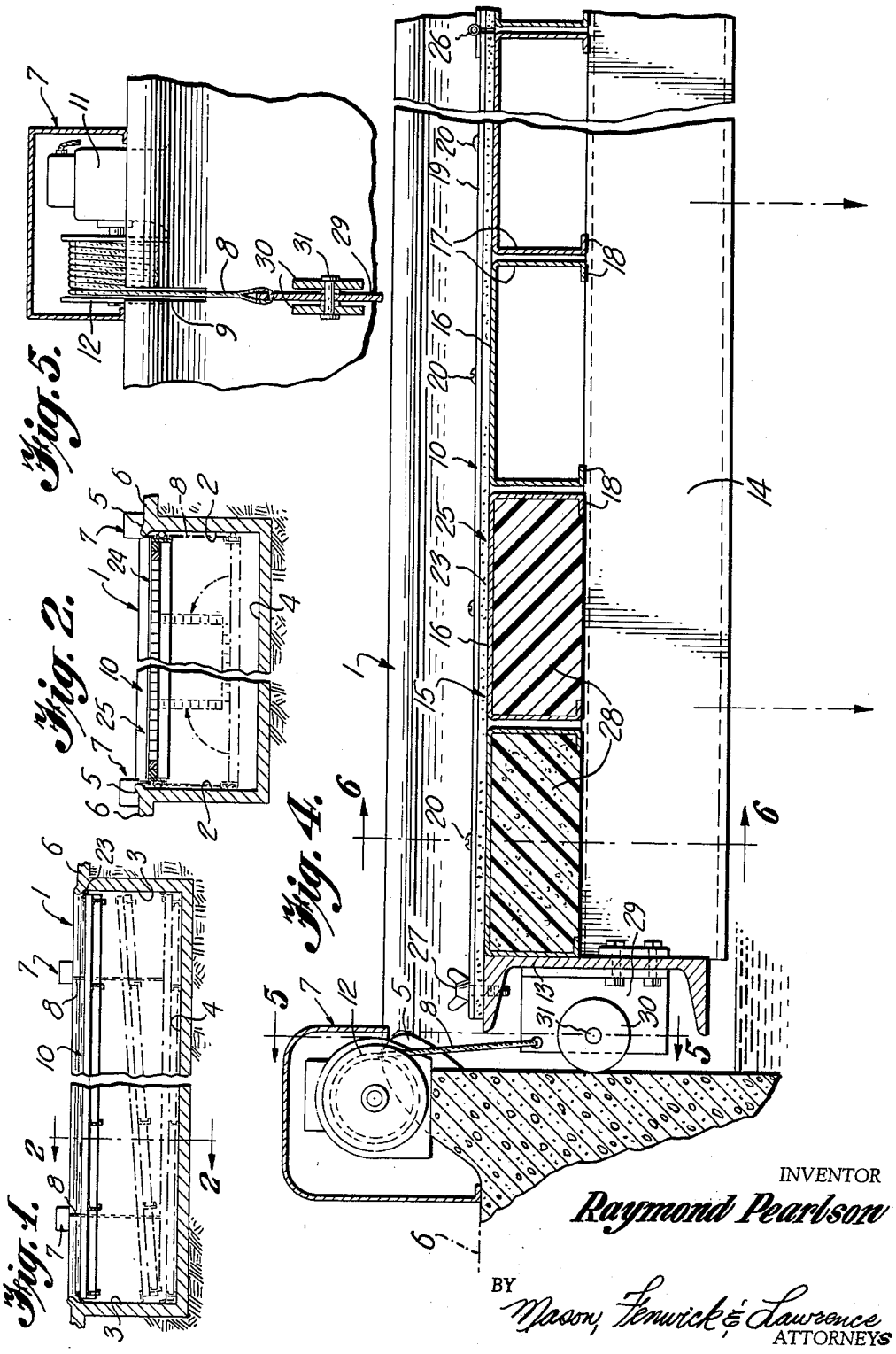

Fig. 1.

Fig. 2.

Fig. 5.

Fig. 4.

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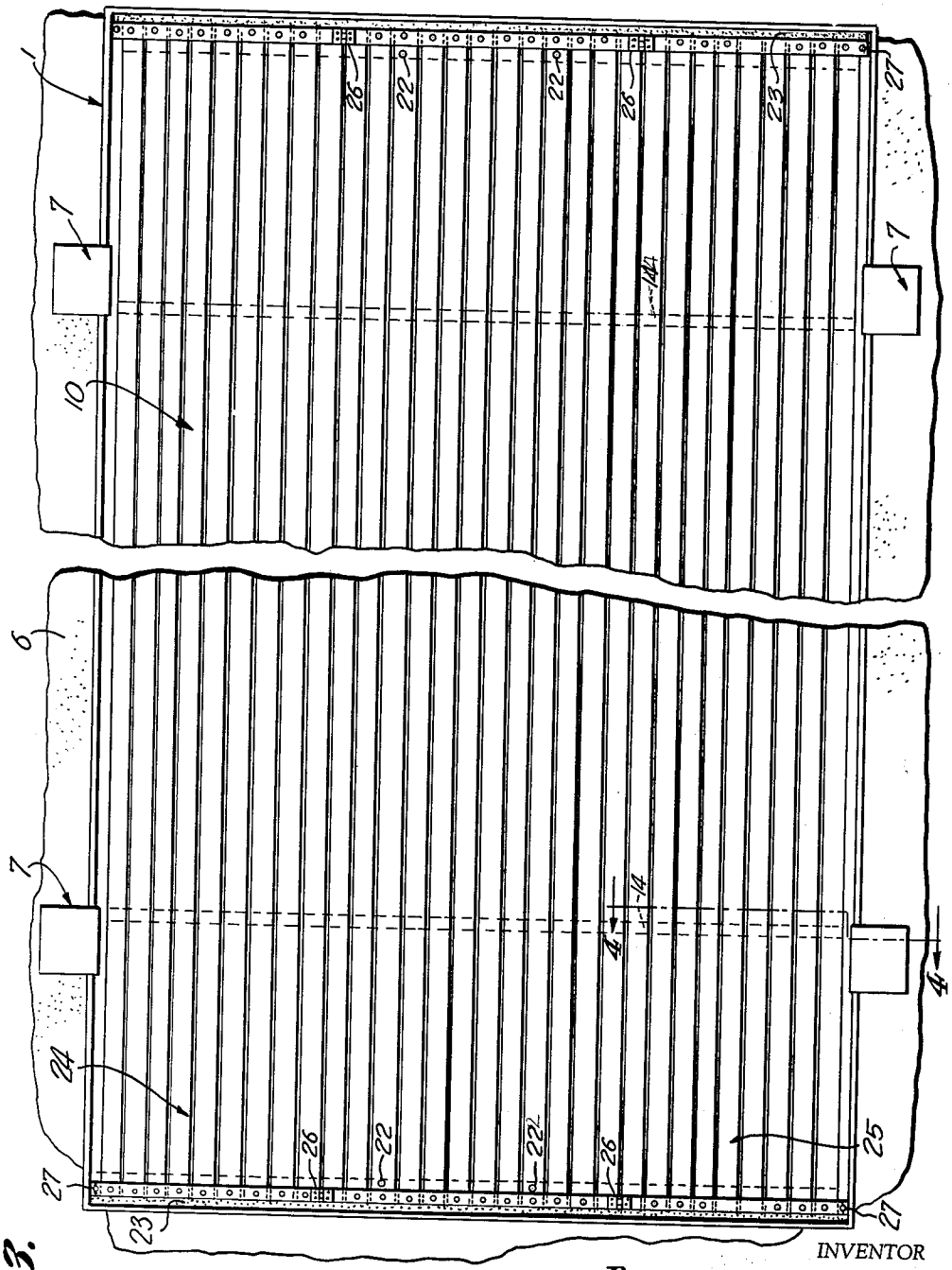


Fig. 3.

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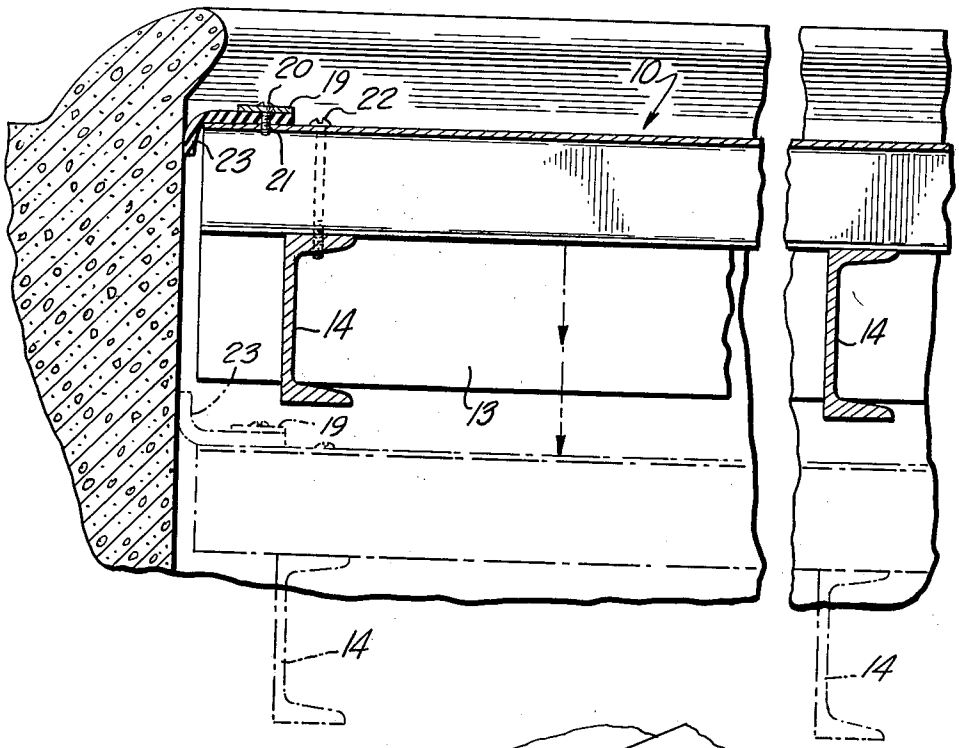
Fig. 6.



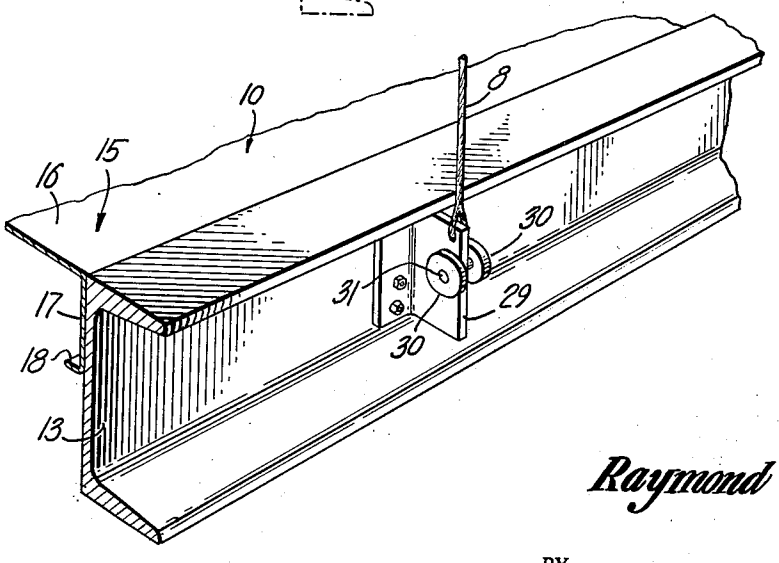




Fig. 7.

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3,091,777

# SWIMMING POOL COVER

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5 Claims. (Cl. 4—172)

This invention relates to swimming pool covers, and more particularly to a moveable platform which can serve as a pool cover and as a pool bottom.

Swimming pools are usually constructed with an inclined bottom so as to provide shallow, wading depth at one end and deep swimming and diving depth at the other end. This arrangement presents a dangerous condition in that small children may wade into water beyond a safe depth. At the same time, the area available for swimming is but a fraction of the total area of the pool. All pools represent a hazard, as children, and even adults, may fall into deep water when the pool is not attended. Frequently, a pool occupies a large portion of a yard, or other area, and represents a major area unusable for any other purpose.

It is the general object of the present invention to provide a vertically movable platform, substantially the size and shape of the pool which can provide a protective cover for the pool or a false bottom to change the usable pool depth at will.

A more specific object is to provide a platform of this nature which is supported by a plurality of hoists which can be operated to raise the platform to the top of the pool to become at once a cover and a recreation area, or to lower the platform to the pool bottom or any level, or at any angle, in between.

Another object is to provide a cover of this kind which will be of light, yet strong, materials for ease in handling and for strength.

A further object is to provide a platform which when raised, will present a flat, smooth surface so that the pool area becomes usable when the pool is not to be used.

Yet another object is the provision of a platform of aluminum, or similar material, which may be supplied permanently colored to enhance the beauty of the pool when the platform is lowered and to provide a colorful area when the platform is raised.

A still further object of the invention is to provide a platform which will serve as a pool cover and, at the same time provide ready access to the pool bottom for cleaning.

It is also an object to provide a platform of this type which will have movable floor sections to permit access to the pool bottom, with the sections being self-lifting when released and the platform lowered a predetermined depth in the pool.

Other objects of the invention will become apparent from the following description of one practical embodiment thereof, when taken in conjunction with the drawings which accompany, and form part of, this specification.

In the drawings:

FIGURE 1 is a longitudinal section through a swimming pool with a platform constructed in accordance with the present invention installed therein;

FIGURE 2 is a transverse vertical section, taken on the line 2—2 of FIGURE 1;

FIGURE 3 is a top plan view of the structure shown in FIGURE 1, parts being broken away to reduce the overall size;

FIGURE 4 is a fragmentary vertical section on an enlarged scale, taken on the line 4—4 of FIGURE 3;

FIGURE 5 is a section taken on the line 5—5 of FIGURE 4;



FIGURE 6 is a fragmentary section taken longitudinally through the platform, substantially on line 6—6 of FIGURE 4; and

FIGURE 7 is a perspective view of a portion of one of the side frame members, illustrating the connection to the hoist cable.

In general, the invention consists of a platform, of substantially the size and shape of a swimming pool, suspended by cables from hoists mounted around the pool edge, and movable vertically to different elevations and angles within the pool. The platform is of particular overall construction, and has at least one movable section to provide access through the platform to the pool bottom.

Referring to the drawings in detail, and first adverting to FIGURES 1 and 2, there is shown a swimming pool **1** which is of rectangular shape having parallel side walls **2** and end walls **3**. The pool may be of uniform depth throughout, and the bottom **4** may be at the depth usually provided at the deep end of a conventional pool. The pool has the usual coping **5** and walks **6** around the edge.

At opposed positions along the sides of the pool, hoists **7** are mounted. These may be set upon the walls and have their cables **8** extend through slots **9** in the coping to connect to the platform **10**. The hoists may be of any suitable type, including an electric motor **11** and a cable drum **12**. The hoists are located appropriate distances from the pool ends, and are provided in opposed pairs, one pair adjacent each end of the pool.

The platform is to cover the entire horizontal area of the pool, and is constructed upon a frame which includes side rails **13** and a plurality of transverse joists **14** interconnecting the side rails. Both the side rails and the joists are channel members. The rails are considerably deeper than the joists, and the joists connect to the rails in the region of the lower edges of the rails. It is contemplated that the rails and joists will be of aluminum, or other suitable light-weight and corrosion-free material.

The entire area of the platform between the side rails is filled with longitudinally extending planking **15**. The planks, or slots, **15** will be of light-weight corrosion proof material also. The slats will be extruded members, of a shape which will provide requisite strength combined with lightness. Thus, the box-like cross-section shown may be used, wherein there is a top surface panel **16**, vertical side walls **17** and inturned base flanges **18**. The slats will be of such depth that their top panels will lie in the plane of the tops of the side rails when the slats are seated upon the transverse joists.

The planks, or slats, will be held in proper spaced relation to one another, and fixed to the frame by means of tie-down strips **19** which extend transversely of the platform at either end. Strips **19** are flat strips which overlie the top flanges of the frame side rails and the ends of the planks. The strips are perforated at equi-spaced intervals, and screws **20** pass through the openings and thread into tapped holes **21** in the plank ends. By this arrangement, the planks will be equally spaced apart, to provide narrow slits between planks to allow free passage of water through the platform as the platform is raised and lowered in the water, and each plank will be secured to a tie-down strip at each end. Certain of the planks, or slats, **15** are also secured to the transverse joists by through bolts **22** so as to tie the planking to the frame.

Strips **19** may be used also as means for securing rubber wiper flaps **23** to the ends of the platform. The flaps will be secured between the planks and tie-down strips **19** and extend into curving contact with the pool end walls. The flaps will serve to hold the platform spaced from contact with the pool ends and to prevent debris

from falling between the platform ends and the pool walls. By having the flaps of some length and in curving contact with the pool walls, the flaps may adjust to bridge the spaces between the platform ends and pool walls when the effective platform length is varied due to tilting of the platform, as shown in dotted lines in FIGURE 1.

In order to permit access to the pool bottom, the platform may have one or more sections which can be lifted to provide an opening. In the drawings two such sections **24** and **25** are shown, one on each side of the platform. The movable sections are formed by cutting the tie-down strips **19** at points spaced from the side edges of the platform and inserting hinges **26**, so that a number of slats will be connected to each hinged section of strip. The free ends of the hinged sections of strip **19** will overlie the adjacent ends of the side rails and may be locked to the side rails by wing nuts **27**. It will be noted that the through bolts **22** secure the central section of the planking to the frame so that when the side sections are released the floor remains attached to the frame.

It is contemplated that at least several of the planks, or slats, of the hinged sections of flooring, those farthest from the hinges, will be filled with a buoyant material, such as styrofoam for example. This material may be made to shape to form a filler **28** which can be inserted into the ends of the hollow extruded planks. With this arrangement, the hinged sections will be self lifting when the wing bolts **27** are removed and the platform lowered in the water.

The platform has the hoist cables connected to it by securing the cable ends to brackets **29** which are bolted, or otherwise fastened, to the side rails of the platform at positions underlying the hoist locations. Brackets **29** also serve as mounting means for guide rollers **30**, which are supported upon axles **31** journalled in the brackets. The rollers are for contact with the side walls of the pool to allow free vertical movement of the platform without scraping against the walls.

It will be evident from the above description and a study of the accompanying drawings that the platform may be raised or lowered as desired by operation of the hoists. The platform can be lowered to the pool bottom (as shown in FIGURE 1) and will leave the entire body of water unimpeded. It can be raised to any height to serve as a false bottom and reduce the usable water depth for non-swimmers and children. By operating one pair of opposed hoists, one end of the platform can be raised, or lowered, to provide an inclined bottom, forming shallow and deep ends for the pool. After tilting, the four hoists can be operated simultaneously to raise, or lower, the platform in its inclined position. When the pool is not in use, the platform can be raised level with the walk surrounding the pool to form a protective cover and eliminate the hazard of an open, unattended pool. At the same time, the platform provides an additional play area for children, dance floor for adults, and a sizeable floor area for any desired use.

When it is necessary to clean the pool, the platform will be raised to its covering position and the wing bolts **27** will be removed to release the sections **24** and **25** for



hinging movement. If the platform is then lowered, the buoyant fillers in the outer planks will cause the hinged sections to swing, until the sections will assume a vertical position (as shown in FIGURE 2) when the platform has been lowered to a depth equal to the width of the hinged sections. The entire area along both sides of the pool will then be open for cleaning. When the cleaning is done, the platform can be raised and the hinged sections will drop gently into place. The sections may be locked down by refastening wing bolts **27**.

While one practical embodiment of the invention has been disclosed, it will be apparent that the specific details of structure shown and described are merely by way of illustration, and the invention may take other forms within the scope of the appended claims.

What is claimed is:

1. A cover for a swimming pool having side, end and bottom walls comprising, an open rigid frame having side rails connected by transverse joists, the joists being below the tops of the side rails, a plurality of closely spaced hollow planks seated upon the joists, lying parallel to the side rails and filling the space between the side rails, groups of adjacent planks forming sections, tie down strips overlying the ends of the planks of each section and secured thereto to join the planks of each section into a unit, means hingedly connecting one section of plank adjacent the edge of the frame to the next adjacent section to permit raising and lowering the hinged section, means releaseably securing the hinged section to the frame, and pairs of hoists mounted on top of the pool walls having cables connected to the frame at opposed positions adjacent the frame ends.

2. A swimming pool cover as claimed in claim 1 wherein there are flexible resilient members along the ends of the frame in flexed engagement with the pool end walls.

3. A cover for a swimming pool as claimed in claim 1, wherein there are means carried by the frame at its side edges for rolling contact with the pool side walls.

4. A cover for swimming pools as claimed in claim 1 wherein the planks are metal extrusions.

5. A swimming pool cover as claimed in claim 1 wherein buoyant material is carried within the hollow planks adjacent the side rails of the hinged section.

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