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SAFETY PLATFORM FOR SWIMMING POOLS

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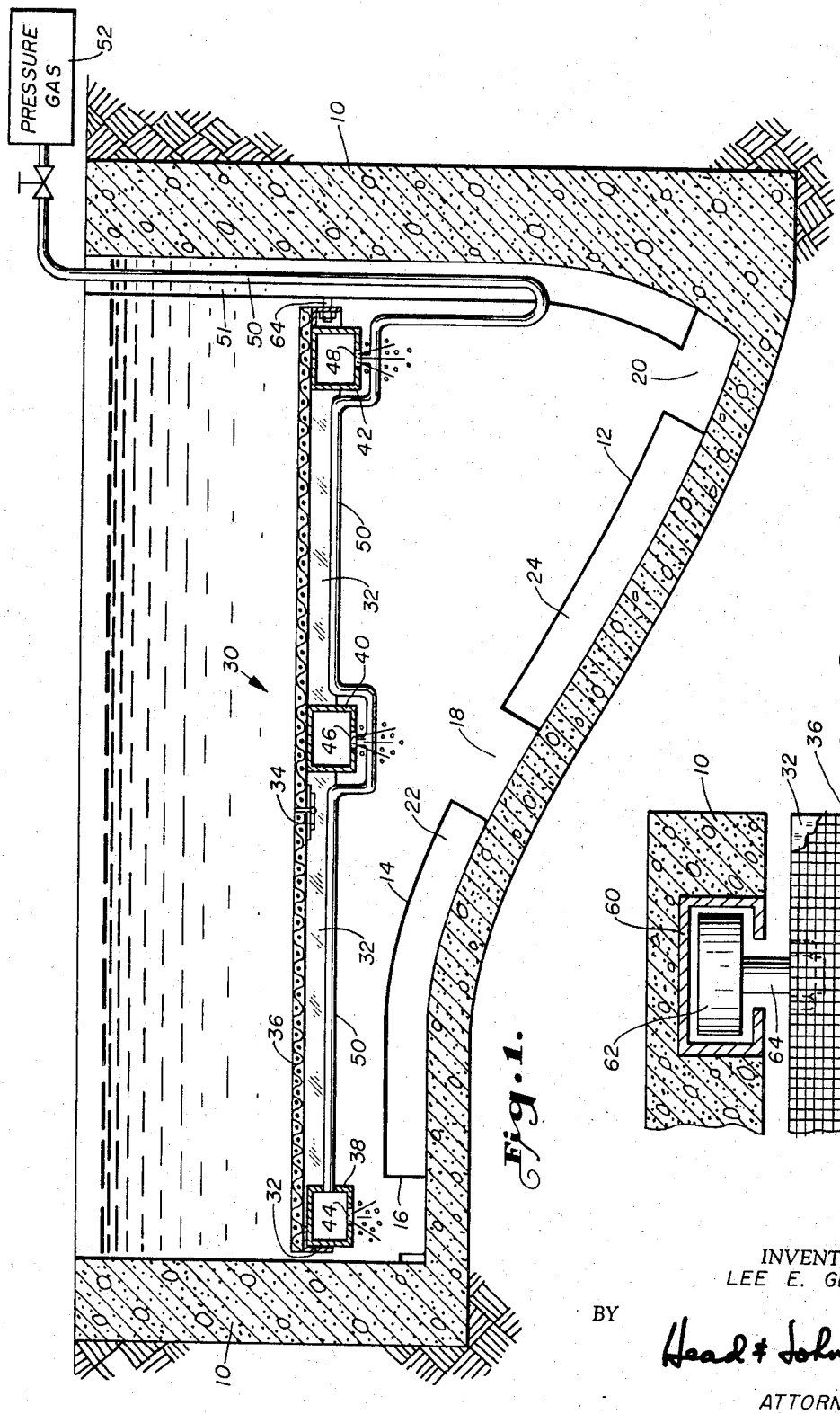


Fig. 1.

Fig. 2.

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SAFETY PLATFORM FOR SWIMMING POOLS

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ABSTRACT OF THE DISCLOSURE

Open bottom ballast or pontoon tanks are positioned below a protective screen or cover. Compressed air injected into the ballast tanks force water therefrom to float the protective cover. Discontinuance of compressed air allows the liquid to reenter the tanks allowing the cover to sink into a recess substantially forming the bottom of the pool.

This invention relates to a safety platform operable in conjunction with a swimming pool to act both as a power operated life saving device and a protective pool cover.

The dangers that swimming pools present both to owners and persons adjacent thereto have long been known. The safety precautions traditionally used include trained life guards for those actually using the pool and the installation of protective fences to isolate the pool from unauthorized persons who either by accident or otherwise could enter the pool and injure themselves. However, in recent years, with the growth of apartments and motels the expense and inconvenience of retaining full time life guards or the construction of fences have made the pools otherwise uneconomical and unsightly.

Several attempts have been made and patented to provide suitable combination protective cover and life saving devices which invariably involve equipment which extends upward off the bottom of the swimming pool and acts as a hazard to those utilizing the pool, both divers and swimmers.

Accordingly, it is an object of this invention to provide a safety platform for swimming pools which overcomes the problems which heretofore exist as above set forth.

A yet further object of this invention is to provide a safety platform for swimming pools which is adapted to be substantially recessed within the bottom of the pool and hence prevent the taking up of several inches of depth thereof and which will be out of the way of swimmers and divers utilizing the pool.

It is another object of this invention to provide a platform construction using pontoons which have openings therein at the bottom whereby a compressed gas is adapted to force water out of said pontoons when the platform is in a submerged condition and permit water to enter the pontoons when it is desired to balance the platform either at a desired level or permit it to sink to the bottom of the pool.

These and other objects of the invention will become more apparent upon further reading of the description and claims when taken in conjunction with the following illustrations of which:

FIGURE 1 is a longitudinal cross-sectional view of the swimming pool and safety platform of this invention.

FIGURE 2 is a partial sectional view describing the guide roller means used with the safety platform of this invention.

Referring now to the drawings, the numeral **10** represents the outline of the swimming pool, which in this instance is shown as a formed concrete construction having side and end walls with a deep end bottom **12** and

a shallow end bottom **14**. The bottom includes a plurality of transverse, relatively parallel, recesses **16**, **18** and **20**. In addition thereto running transversely to said recesses is a longitudinal recess **22** and **24** to receive the pressure gas tubing formed as a part of the safety platform of this invention.

The safety platform is generally designated by the numeral **30** and comprises a support angle frame **32** which is hingeably supported transversely as designated by the numeral **34** to permit the safety platform to conform to the variable depths of typical swimming pools. In some designs more than one of said hinges are provided. Atop the frame support member is a continuous area of flattened screen material **36** which can be plastic or expanded steel and which is attached thereto as by clamping or welding to the support frame. Beneath the expanded steel screen are a plurality of pontoons or ballast tanks **38**, **40** and **42** which are substantially closed except for a plurality of openings **44**, **46** and **48**, respectively, at the bottom thereof. Only one opening in each tank is shown here. The pontoon members are adapted to be received respectively in matching recesses **16**, **18** and **20** at the bottom of the pool. A flexible hose member **50** interconnects with each of the pontoons **38**, **40** and **42** to supply pressured gas such as compressed air from a controllable source of supply **52** at the surface. Connection is made with each of the pontoons by suitable connections.

At one end of the safety platform, preferably at the deeper end, the platform is supported by appropriate vertical guides **60** which are embedded within the swimming pool construction and best described with reference to FIGURE 2. The guide basically is one or more channel members **60** running vertically adjacent the side wall thereof and conforming to the configuration of the pool whereby a guide roller **62** which is attached through a shaft **64** to the support frame **32** of the safety platform.

In operation, when the platform is on the bottom of the pool and when it is desired to cover the pool, the pressure gas supply source **52** is connected to the tubing **50** for interjection of air into ballast tanks **42**, **40** and **38**, respectively, driving the water therein outward through openings **44**, **46** and **48** of each of the pontoons. Thus, making the pontoons lighter than water and permitting same to rise to the top of the pool.

As the platform rises, the flexible tubing **50**, which is within appropriate vertical recess **51** of the swimming pool construction, travels therewith while the platform itself is supported by guide rollers **62** within their channel recesses **60**. Alternatively the platform may be used as a safety device in the event someone has injured themselves or cannot swim. When the platform is lowered each of the pontoons and air supply lines will be appropriately recessed in the bottom thereof so as to provide a minimal obstruction above the bottom of the pool.

As modification of this apparatus, it is understandable that the parts and equipment utilized herewith may be formed of various materials including synthetic resins, polyolefin materials or the like. In some instances the openings within the pontoons may be modified depending upon the placement of the pontoon, that is, whether in the deep or shallow end, and to provide proper control of compressed gases to each of the ballast tanks. That is, in some instances, the openings may be of varying sizes from the pontoon located at the deep end varying accordingly to the pontoons located in the shallow portion.

These and other modifications which may become apparent to the man skilled in the art and which are substantial equivalents of this invention are to be considered a part thereof as is defined by the scope of the appended claims.

What is claimed:

1. A safety platform for a swimming pool comprising in combination therewith:

a frame member of substantially the horizontal shape of said pool,

a screen-like cover attached to the top of said frame,

at least one ballast tank attached to the bottom of said frame, said tank including at least one opening at the bottom thereof in direct fluid communication with the water in said pool,

means to connect with said tank to supply high pressure gas from a controllable source of supply to said tank whereby said water therein is expelled through said opening and whereby said platform will rise to the top of said pool level, and

recess means at the bottom of said pool to receive said platform whereby the top of said screen is substantially flush with the top of the bottom of said pool.

2. A safety platform according to claim 1 wherein said frame is hingeably articulated from a first position substantially to allow said frame to conform to the contour of the said bottom of said pool to a second position of said frame substantially horizontal when raised off of said bottom.

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