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[54] **BOAT BOARDING DEVICE**
3 Claims, 16 Drawing Figs.

[52] U.S. Cl. 9/400

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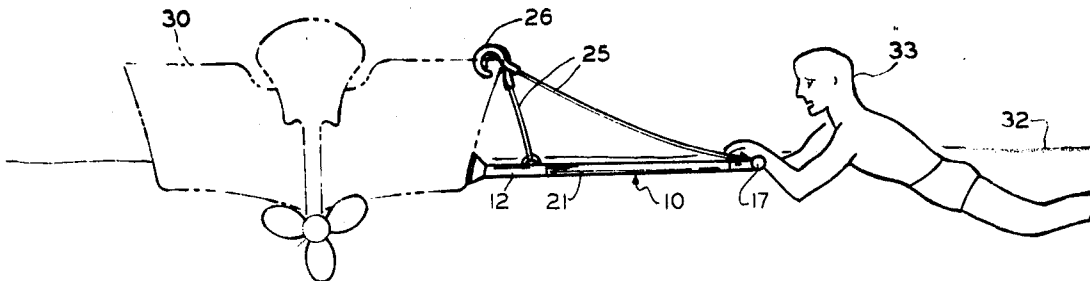
[50] Field of Search 9/1, 400, 3,
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128, 187, 206, 196; 248/210, 211, 238; 248/235,
240, 240.3, 240.5; 5/82, 89; 182/53, 55, 150

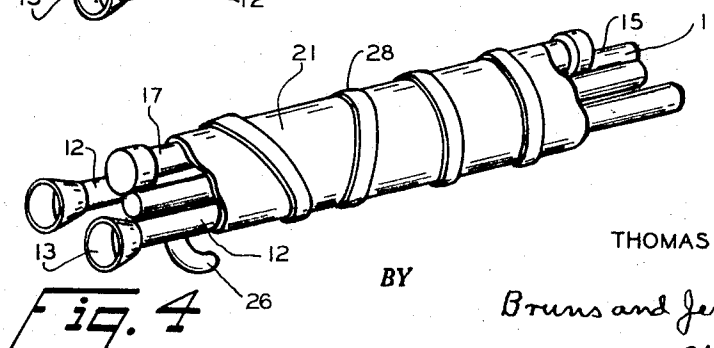
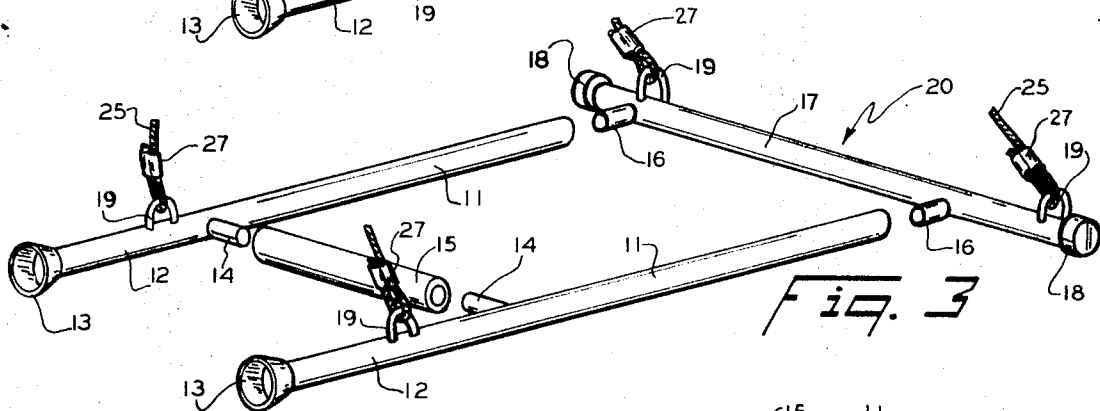
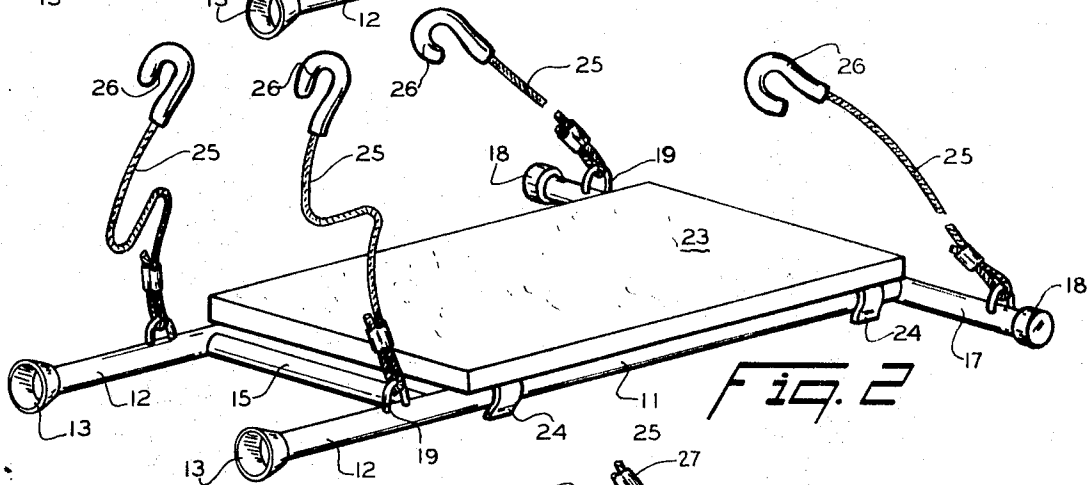
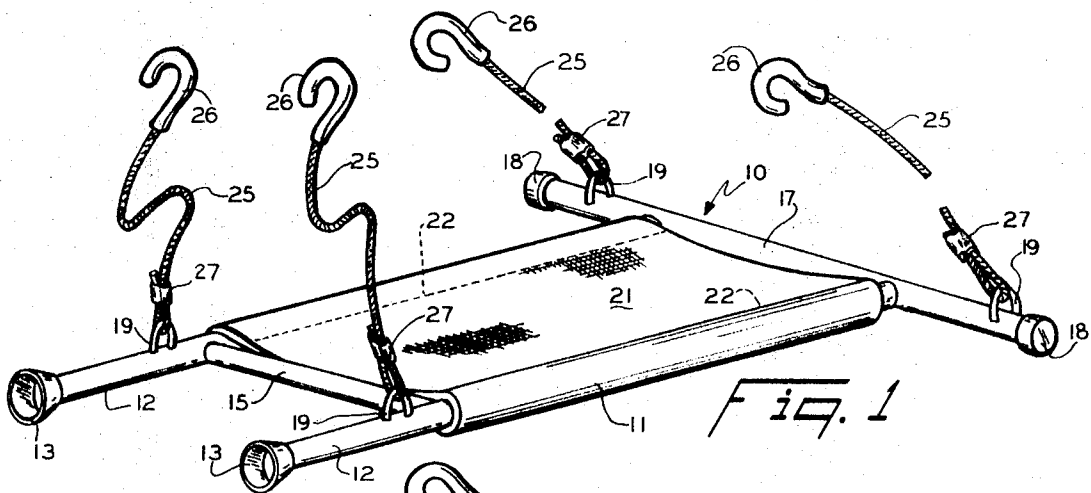
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ABSTRACT: A boat boarding platform for swimmers having longitudinally projecting inboard legs adapted to rest against the boat side near the bottom. The platform is suspended from hooks secured over the boat gunwale by flexible straps secured to the hooks at one end and to a supporting frame for the platform at the other. One pair of straps supports the inboard end of the frame at each side and another pair of straps is adjusted to support the outboard end of the frame at each side at a level under water below that of the legs so that a swimmer can slide upon to the platform, then rise and step over the gunwale.

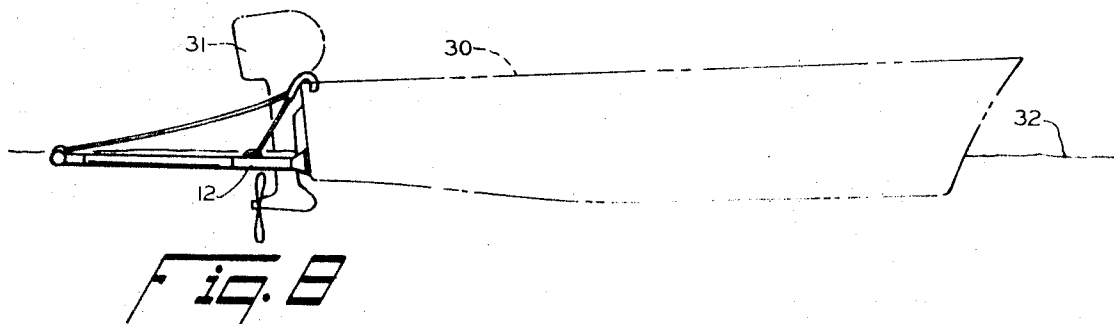
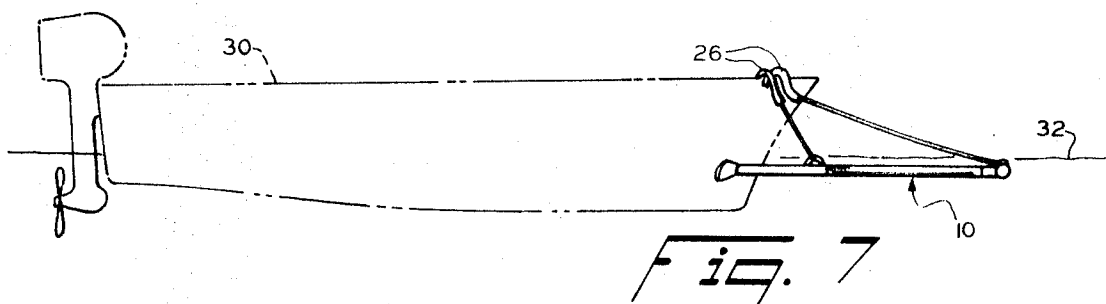
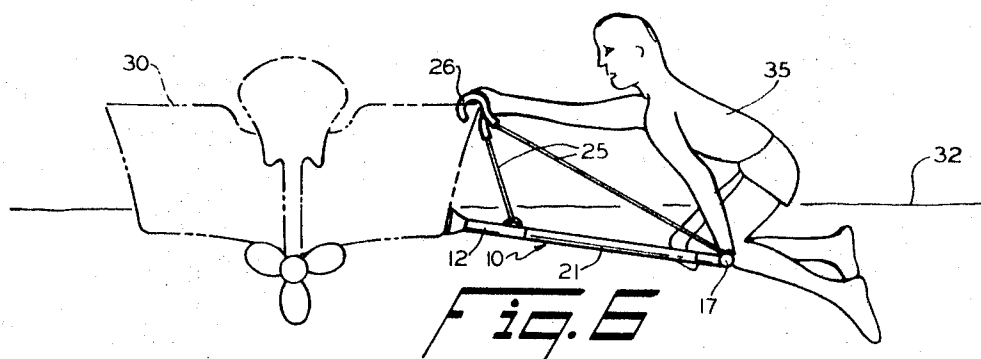
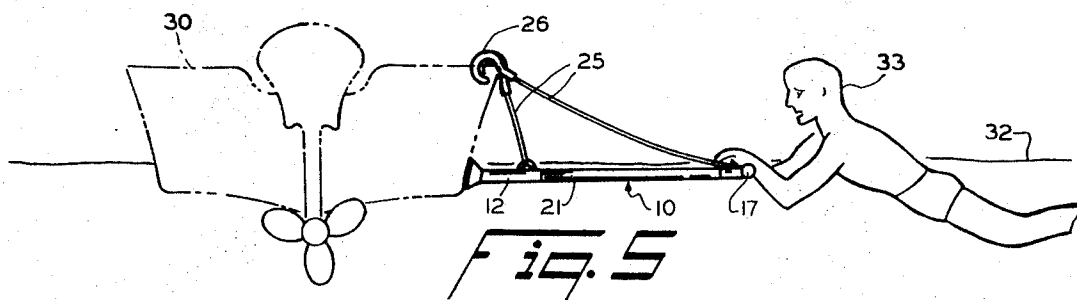




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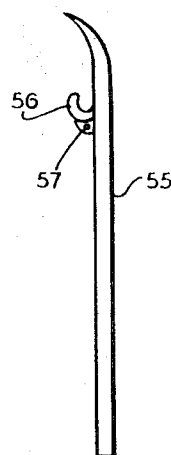
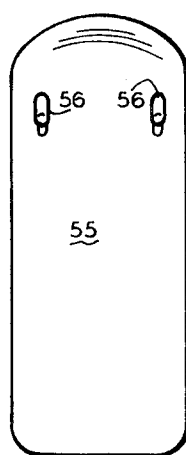
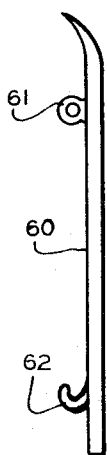
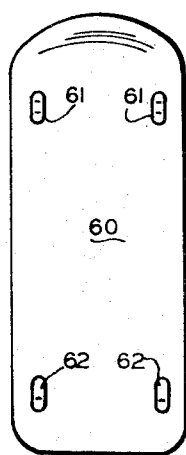
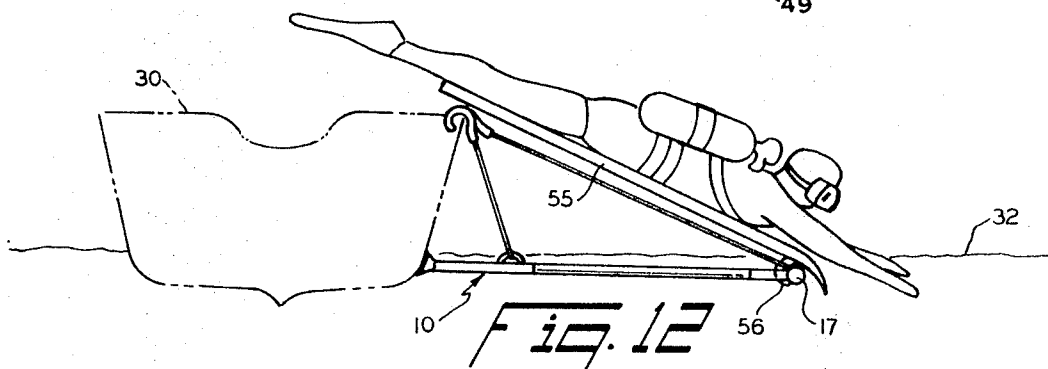
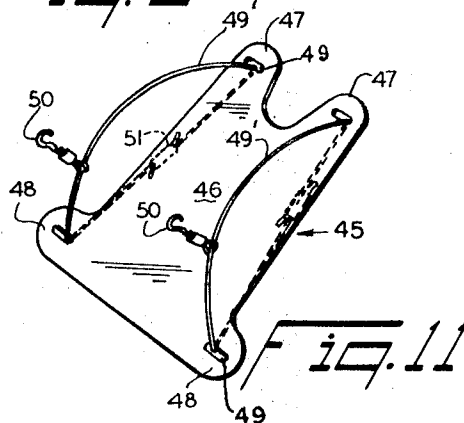
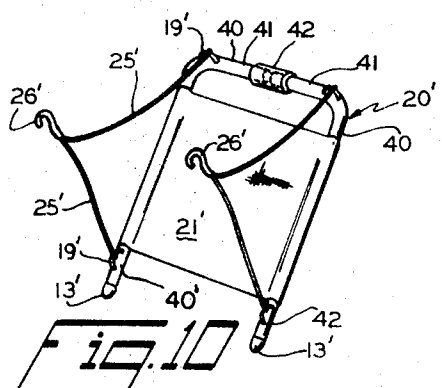
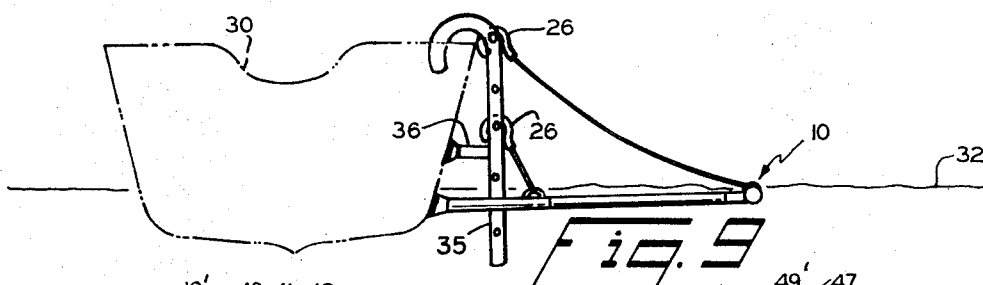


Fig. 13 Fig. 14 Fig. 15 Fig. 16

BOAT BOARDING DEVICE

BACKGROUND OF THE INVENTION

This invention relates to a boarding platform for swimmers which can be submerged alongside, detachably suspended from a small boat.

Boarding devices for boats in deep water away from land usually take the form of ladders which, in the case of small boats are very difficult to climb. In the case of scuba divers, they must take off heavy equipment and pass it into the boat before climbing the ladder and, in the case of children or exhausted swimmers, they must be lifted from within the boat which is a very difficult operation.

Most small boats slope inward toward the bottom which may cause the lower rungs of a boarding ladder under water to be offset inboard from the upper rungs above water. When used with small boats the top rung is too low to give the swimmer a chance to use his arms to pull himself upward.

SUMMARY OF THE INVENTION

The present invention contemplates a submerged platform suspended from the gunwale of a small boat out of which the swimmer can pull himself and then kneel and then stand upon for stepping over the gunwale without removing equipment. Children may use the platform for play in the water. Exhausted swimmers may rest on the platform. Scuba divers or skiers may rest supported by the platform while removing or donning equipment. In rescue work, the injured person may be towed to the platform to be supported thereby preparatory to his being lifted therefrom into the boat. For larger boats, the platform may be used in conjunction with a ladder.

The platform may be of flexible sheet material such as canvas or plastic fabric supported on a framework of lightweight metal or the platform may be of rigid material such as plywood or molded plastic. The platform is supported by straps from hooks easily secured over the gunwale or transom of the boat and the device is provided with inboard legs to straddle a ladder or an outboard motor when used at the stern. No parts are permanently connected to the boat. The straps are adjustable for boats of different size.

The device may be easily converted into a slide for sport or for scuba divers and may be used in conjunction with paddle boards or aquaplanes or other raftlike craft. So as to be easily seen by the swimmer, the outboard end of the platform is made buoyant, the swimmer easily submerging this end while he slides on to the platform.

The preferred form of platform is made so as to be easily disassembled for transporting or for compact storing.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of device according to the invention;

FIG. 2 is a perspective view of a modified form of the device;

FIG. 3 is an exploded view of the frame of the device of FIG. 1 or 2;

FIG. 4 is a perspective view of the device of FIG. 1 disassembled and secured for stowing away;

FIG. 5 is a side elevational view of the device of FIG. 1 suspended in the water from the side of a boat shown in broken lines, and a swimmer being shown grasping the device;

FIG. 6 is a view similar to FIG. 5 showing the swimmer rising on the platform;

FIGS. 7 and 8 show the device of FIG. 1 mounted at the bow and stern, respectively, of a boat shown in broken lines;

FIG. 9 shows the device of FIG. 1 used in conjunction with a boarding ladder on a boat shown in broken lines;

FIGS. 10 and 11 are perspective views of other modified forms of the device;

FIG. 12 is a view similar to FIG. 1 showing the device used in conjunction with an aquaplane and showing a diver using the combination for entering the water;

FIGS. 13 and 14 are plan and side elevational views, respectively, of an aquaplane suitable for use with the device; and

FIGS. 15 and 16 are plan and side elevational views of a modified form of aquaplane shown in FIG. 12.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIGS. 1, 3, and 4, a boat boarding platform assembly 10 has two elongated tubular frame elements 11 terminating at their inboard ends in legs 12 provided with rubber tips 13 adapted to rest against a boat. At the outboard end of leg 12, each element 11 has a stud 14 adapted to be received in the end of a tubular spacer 15, as best seen in FIG. 3.

The outboard ends of elements 11 are open and adapted to receive the spaced studs 16 projecting from an outboard spacer tube 17, as shown. The outboard spacer has its ends capped or plugged at 18 so as to be buoyant, and the ends of the outboard spacer and the outboard ends of legs 12 are provided with loops or eyes 19.

Elements 11 and spacers 15 and 17, when assembled comprise a frame 20 for supporting a platform of sheet material. In FIG. 1 the platform 21 is shown as a sheet of canvas or flexible plastic material stitched at 22 for providing sleeves at each side into which the outboard ends of elements 11 can be slipped, as shown. Alternatively, the platform 23 can be rigid, as shown in FIG. 2, having a rectangle of plywood provided on its under surface with spring clamps 24 for engagement with the elements 11.

To each eye 19 is secured one end of a flexible member 25 such as a rope or strap terminating at its other end at a hook 26 for securing the member to the gunwale or other portion of a boat. Each flexible member is preferably provided with a buckle 27 or other adjustable fastening device, so that the length of members 25 can be adjusted for different sized boats, and the hooks 26 are covered with a soft plastic so they do not mar the boat.

The platform assembly shown in FIG. 1 is the preferred form as it may be quickly disassembled and the frame posts and flexible members may be rolled up in the fabric platform 21, as shown in FIG. 4. A strap 28 may be used to tie the parts together, or one of the flexible members 25 may be used for this purpose.

In FIGS. 5 and 6 the assembly 10 is shown secured to the side of a boat indicated at 30, the hooks 26 being hooked over the gunwale of the boat. In FIG. 7 the assembly is shown secured to the bow of a boat and, in FIG. 8, secured to the stern, the hooks being secured over the transom. The legs are spaced to straddle the outboard motor, indicated at 31, and the water surface level is indicated at 32. When the device is secured to the stern of the boat, the hooks may be secured to existing fastening means installed for water skiing and, by making legs 12 sufficiently long, the device may be hauled up over the motor while travelling, ready to be lowered again when stopped.

It will be noted that the ropes 25 secured to the legs 12 are adjusted shorter than those secured to the outboard spacer 17. In FIG. 5 the spacer 17 is floating on the surface so that the swimmer indicated at 33 can easily see and grasp the outboard end of the platform. When the swimmer pulls himself on to the platform by sliding his chest thereon, his weight pushes the outboard end of the platform down to a level lower than the inboard legs. When the swimmer rises to his knees, as shown in FIG. 6, the lower outboard end facilitates such movement. Thereafter the swimmer may rise to his feet and step over the gunwale into the boat.

The platform assembly 10 may also be used in conjunction with a boarding ladder. As seen in FIG. 9, the ladder 35 has its upper end hooked over the gunwale of the boat 30 and has legs 36 for holding the ladder away from the side of the boat. The legs 12 of the platform assembly 10 straddle the ladder and the hooks 26 may be hooked to the rungs of the ladder. It will be apparent that this combination of platform and ladder is better adapted for use in larger boats where the side of the boat is higher and its top a considerable distance above water.

It will also be apparent that the platform device may take other forms than the collapsible device shown in FIG. 1. In

FIG. 10 a fabric platform 21' is supported on a frame 20' comprising two bent pipe elements 40 having their inboard outer ends 41 connected by a coupling 42. Their comparatively longer side portions 40' terminating in legs tipped with rubber caps at 13'. Only two hooks 26' are provided, one at each side, each hook having two lengths of rope 25' secured thereto. One rope 25' from each hook extends to an eye 19' on the leg portion of pipe 40' and the other rope 25' extends to an eye 19' located at the bend in the pipe element at its outboard end.

In FIG. 11 another modified form 45 of the device is shown having a molded platform 46 of rigid plastic material. The flat and relatively thin platform has spaced, inboard longitudinally projecting portions forming legs 47 adapted to rest against the side of the boat and has transversely projecting portions 48 at its outboard end designed to widen the entrance to the platform. Slots 49 in the projecting portions 47 and 48 provide openings so that a single length of rope 49' at each side can run from under the platform through one slot and a loop on a hook 50, and then through the other slot so as to be connected by a buckle or fastener 51 under the boat to the other end of the rope. It will be apparent that this modified form of platform may readily be converted to a pack board by adjusting the length of the ropes 49'.

The platform assembly 10 may also be used in conjunction with an aquaplane or surfboard 55 shown in FIGS. 15 and 16. The board 55 has a pair of forwardly opening hooks 56 at its forward end which may be hooked around the outboard spacer 17 of a platform assembly 10 when the board is inverted as shown in FIG. 12. This forms a slide which may be used as a chute by playing children or for a means for a burdened scuba diver to effortlessly enter the water, as shown. Each hook 56 has a hole 57 therethrough for attaching a tow rope when the board is used as an aquaplane.

A modified form of board 60 is shown in FIGS. 13 and 14 for use with the device 10. The board 60 has a pair of eyes or rings 61 at its forward end for attaching a rope thereto for aquaplaning. A pair of forwardly opening hooks 62 are provided at the rearward end of the board. When the board 60 is inverted and placed over the device 10 its outer end is supported by the outboard support 17 and its hooks 62 engage the gunwale of the boat for the same uses as described above for the board 55.

I claim:

1. A boat boarding device for swimmers consisting of two spaced, longitudinally extending, nonbuoyant, rigid elements terminating in inboard legs adapted to rest against the side of a boat; nonbuoyant means secured to the elements for spacing them laterally; a platform of sheet material secured to the elements outboard of the inboard legs, the sheet material being of such limited buoyancy that the elements and the inboard end of the platform and spacing means are nonbuoyant when secured together; and flexible members having hooks at one end for quick attachment over the gunwale of the boat, one member at each side of the device being adapted to support the inboard legs under water against the boat adjacent to its bottom, and one member at each side being adapted to support the outboard portion of the platform under water at a level below the inboard legs, whereby a swimmer may grasp the outboard spacer and pull himself on to the platform and then rise and step over the gunwale.

2. The device defined in claim 2 wherein the element spacing means includes a buoyant outboard spacer whereby the outboard end of the platform is readily visible and graspable by the swimmer.

3. A boat boarding device for swimmers, comprising: a pair of spaced longitudinally extending tubular elements terminating in inboard legs adapted to rest against the side of a boat, each element having a stud projecting transversely therefrom outboard of its leg, an inboard tubular spacer into which the studs are adapted to project, a tubular outboard spacer having its ends sealed and having studs projecting therefrom adapted to project within the outboard ends of the elements, a platform of sheet material removably secured to the elements outboard of the legs, hooks adapted to be removably secured over the gunwale of the boat and two pairs of flexible members secured at one end to the hooks and secured at the other end to the spaced elements, securing eyes for the members being located on the device at the ends of the outboard spacer and at the outboard end of the legs, the members being adjustable in length for suspending the legs submerged against the boat near its bottom and suspending the outboard end of the platform submerged at a lower level than the legs, whereby a swimmer can slide on to the platform, then rise and step over the gunwale.

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