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(54) **Watercraft accessory**

(57) A container for storage of items during watersports is described, having a base (10) affixed to the watersports equipment such as a surfboard or diver's gas tank and a body forming a waterproof enclosure detachably secured to the base. The top cover (14) of the body has tabs (44) which are retained under projections

(22) of the base such that the bottom tray (12) and top cover of the body cannot be unsealed without disengaging the body from the base.

The top surface (40) of the cover forms a ramp engageable by the foot of the surf rider and may have grip material attached thereto.

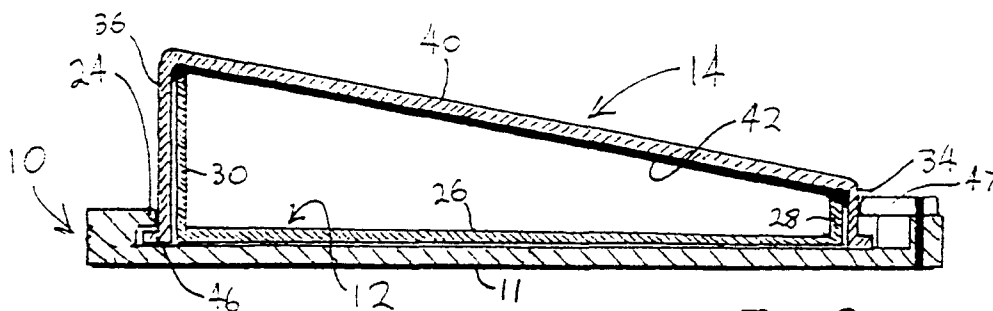


Fig 2

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Description

BACKGROUND OF THE INVENTION

The present invention relates to an arrangement for storage of items during watersports such as surfing, boating and diving.

DESCRIPTION OF THE PRIOR ART

During surfing and other watersports, the participant may be a long way from the shore. Car keys, in particular, often now include electronic components and cannot be taken into the water and thus are usually left on the shore where they are vulnerable to theft. Similarly, a person whose work requires them to be 'on call' cannot take a pager into the surf and thus will often abstain from surfing on the chance that he or she will be contacted. Others will rely on a pre-arranged visual signal, such as a two-coloured towel being inverted, to return to shore.

SUMMARY OF THE INVENTION

The present invention aims to provide a means by which persons can combine their passion for watersports with the demands of the electronic age.

The present invention provides a container for storage of items during watersports having a base adapted for attachment to watersports equipment or a watersports participant, and a body detachably secured to the base forming a waterproof enclosure for storage of the items.

Preferably, the device includes a seal which keeps the enclosure waterproof, the arrangement being such that the seal cannot be released without removing the body from the base.

In one preferred form, the base is adapted to be affixed to an exposed surface of watersports equipment, for example to the deck of a surfboard or other watercraft, or to a diver's air tank. The bottom surface of the base may be shaped to suit the intended application - preferably flat or slightly concave to suit the deck of a watercraft, or significantly concave to match the contour of a cylindrical diving tank. Alternatively, the base could include a formation for attachment of a strap for securing the device around the waist of the diver or other watersports participant.

Additionally, if the device is to be fixed to the deck of a surfcraft such as a surfboard, the body may form a ramp or other formation for engagement by the rider's foot.

BRIEF DESCRIPTION OF THE DRAWINGS

Further preferred embodiments will now be described with reference to the accompanying drawings, in which:

Fig. 1 is a plan view of a device adapted for application to the deck of a surfboard;

Fig. 2 is a longitudinal cross section along line 2-2;

Figs. 3 and 4 are transverse cross sections along line 3-3 and 4-4 respectively;

Fig. 5 is a longitudinal cross section of the container being closed;

Fig. 6 is a schematic perspective of a larger volume container; and

Fig. 7 is a detail longitudinal cross section showing an alternative embodiment.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The device as illustrated consists generally of a base plate 10, a tray 12 and cover 14. The base plate 10 has on its undersurface an adhesive layer 11 for attachment to a water-exposed surface of the watercraft, such as to the deck of a surfboard or other surfcraft. Other means of attachment, such as screws, may be provided where appropriate to the specific application of the device.

The size and shape of the device, and the contour of the bottom of the base plate, may be varied to suit the type of craft to which the device is to be affixed.

The base plate 10 has a raised peripheral portion 16 with a series of regularly spaced inwardly projecting projections 22 along both sides, and an overhanging flange 24 at the rear end of the base. Both the projections 22 and flange 24 are spaced above the floor 25 of the base plate, thus forming undercut slots for receiving formations on the cover, as will be described below.

The body consists of a bottom part (tray 12) and a top part (cover 14), which fit together before securing to the base, as will be described later with reference to Fig. 5.

Referring to Figs. 1 to 5, the tray has a floor 26, a short front wall 28, higher rear wall 30 and side walls 32 sloping in height between the two.

The cover has front 34, rear 36 and side 38 walls and a top 40, and is adapted to closely receive the tray so that the floor of the tray is substantially level with the bottom of the cover. Inside the cover, along the edges between the top 40 and the walls 34, 36, 38, is a seal 42 shown in solid black in Figs. 2-4. When the tray is received fully within the cover, the top edges of the tray contact this seal, sealing the cavity between the tray and cover against the ingress of water. The tray and/or cover inner surface may also include a resiliently compressible material to minimise rattling of the items placed in the cavity.

Projecting transversely from the bottom of the cover

side walls 38 are a series of horizontal tabs 44 sized and spaced to pass downwards between the projections 22 on the base and then be pushed longitudinally (eg. rearwards) so that the tabs 44 are held under the projections 22, as best seen in Fig. 3. A rear flange 46 on the cover is held under the rear overhanging flange 24. A cam 47 on the front of the base may be turned to prevent accidental disengagement.

When the body is thus locked down onto the base, the bottom of the tray is held against the base. The tray cannot move out of engagement with the seal 42 without removal of the body from the base and so the cavity remains waterproof.

Fig. 5 is a longitudinal cross-section of the body being closed to contain an article, such as an electronic car key 48. The short front wall 28 of the tray 12 has a lug 50 which engages with a recess 52 inside the cover front wall 34. With the key 48 in position in the tray, the tray and cover are then pivoted together so that the tray is received in the cover and engages with seal 42, as described earlier with reference to Figs. 2 to 4. The rear wall 30 of the tray may have a tang 56 and the cover a corresponding recess 58, to snap fit the cover and tray together.

The rear wall 30 of the tray may have a tag 54 which may be pulled to help release the tray from the cover once the tang 56 has been pushed to release the snap fit. The tag is flexible so that it does not interfere with attachment of the body to the base.

Figs. 1 to 5 show the device with a sloping top, adapted to be attached to the deck surface of a surfboard at a position corresponding generally to the rear foot position of the rider. The container is adapted to be large enough to hold an electronic car key, for example about 10cm x 5cm in plan view and 2cm at its maximum height. The sloping top surface of the cover forms a ramp which is engageable by the rider's rear foot, and especially the arch of the foot, to provide additional grip and support. The ramp may have grip material, for example foam rubber of the type often applied to surfboards, applied to its surface.

Fig. 6 is a schematic perspective showing an alternative container shape for more general purpose use, attachable to any convenient position on the watercraft or other watersports equipment and generally similar in construction and operation to the device of Figs. 1 to 5

At least part of the body may be transparent, preferably at least the top 40 of the cover, so that the item in the container remains visible to the user, for example for pagers or other communications devices which emit a visible signal for incoming messages. The cover construction may have the top 40 formed as a transparent, flexible panel through which the user can operate pressure-sensitive electronic equipment by depressing the surface.

Fig. 7 is an enlarged detail of a modified undercut slot arrangement for secure engagement between the base 10 and the body. In the embodiment, the underside

of overhanging projections 22 on the base have a downwards facing ramp 60 and a rebated portion 62 of height intermediate the maximum and minimum ramp height, separated from the lowermost end of the ramp 60 by a short vertical wall 64. The height differences involved need only be small, for example 2mm height difference along the ramp 60 and a 1mm jump up to the rebated portion 62.

A first advantage of this arrangement is more secure locking of the body to the base, as the tabs 44 on the cover ride under the ramps, and are trapped in the rebated portion behind the vertical wall 64. Resilient engagement between the cover and tray, including the seal 42, ensures that the tab is held in the rebated portion until the user deliberately disengages the body from the base by pressing down on the cover and sliding it along. A further advantage may be attained by having the tray contact the seal 42 while the bottom of the tray still sits slightly proud, for example 1-2mm, of the bottom of the cover. Thus, the tray contacts the base first, and when the tabs 44 are forced under the ramp 60 and into rebated portion 62 the seal 42 between the tray and the cover is held in compression.

The body also serves as a convenient container for the items when removed from the base. Electronic keys and other equipment may be safely stored in the detached container while on shore and then the container and contents can simply be clipped onto the base on the water sports equipment while surfing, sailing or diving.

In an unillustrated embodiment, the device shown in Figs. 1-5 may further be provided with a horizontal plate with tabs similar to those on the body, the plate being inserted in place of the body when it is not desired to carry the container on the surfboard. The plate will minimise discomfort to the rider's foot which might be caused by the projections 22 of the base, and the top of the plate may also carry grip material. Another plate may also be provided, incorporating a hanging strap so that the board may be hung up for storage.

In a further unillustrated embodiment, the engagement between the body and the base can be circular, such as a bayonet or screw engagement.

While particular embodiments of this invention have been described, it will be evident to those skilled in the art that the present invention may be embodied in other specific forms without departing from the essential characteristics thereof. The present embodiments and examples are therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

Claims

1. A container for storage of items during watersports,

having a base adapted for attachment to watersports equipment or a watersports participant and a body detachably secured to the base forming a waterproof enclosure for storage of the items.

2. A container for storage of items during watersports according to claim 1 wherein the body includes top and bottom parts which fit together to form said waterproof enclosure.

3. A container for storage of items during watersports according to claim 2 wherein engagement of the body with the base prevents said top and bottom parts being separated from sealing engagement with each other.

4. A container for storage of items during watersports according to claim 3 wherein the bottom part and top part are urged together by engagement of the body with the base.

5. A container for storage of items during watersports according to claim 3 wherein the top part includes formations which are retained by corresponding formations on the base such that the bottom part is held between the top part and the base.

6. A container for storage of items during watersports according to claim 5 wherein the formations on the top part comprise tabs which are retained under projections on the base.

7. A container for storage of items during watersports according to claim 1 wherein the base is adapted for fixing to a water-exposed surface of a watercraft.

8. A container for storage of items during watersports according to claim 7 wherein the base is adapted for fixing to a deck of a surfcraft.

9. A container for storage of items during watersports according to claim 8 wherein the body is adapted to be engaged by a foot of the participant during riding of the surfcraft.

10. A container for storage of items during watersports according to claim 9 wherein the body forms a ramp engageable by the foot of the participant.

11. A container for storage of items during watersports according to claim 9 wherein the body is provided on an upper surface thereof with a grip material for the participant's foot.

12. A container for storage of items during watersports according to claim 9 further comprising a plate engageable with the base in lieu of the body for providing a riding surface when the body is removed.

13. A container for storage of items during watersports according to claim 1 wherein the base has a concave lower surface adapted for fixing to a diver's gas tank.

14. A container for storage of items during watersports according to claim 1 wherein the base has a strap for attachment to the participant.

15. A container for storage of items during watersports according to claim 1 wherein at least part of the body is sufficiently transparent to allow viewing of items in the enclosure.

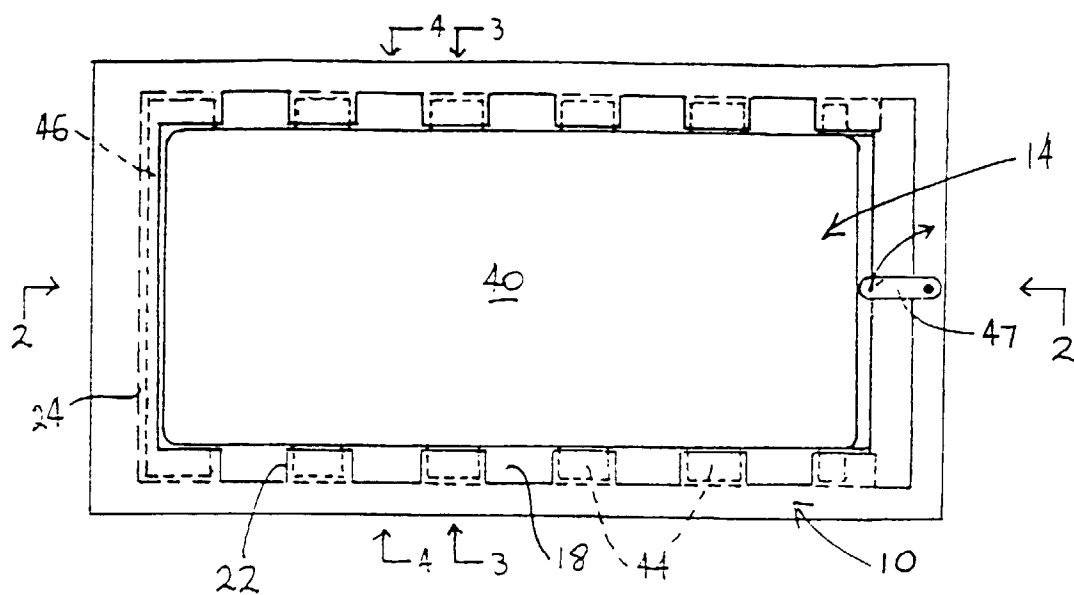


Fig 1

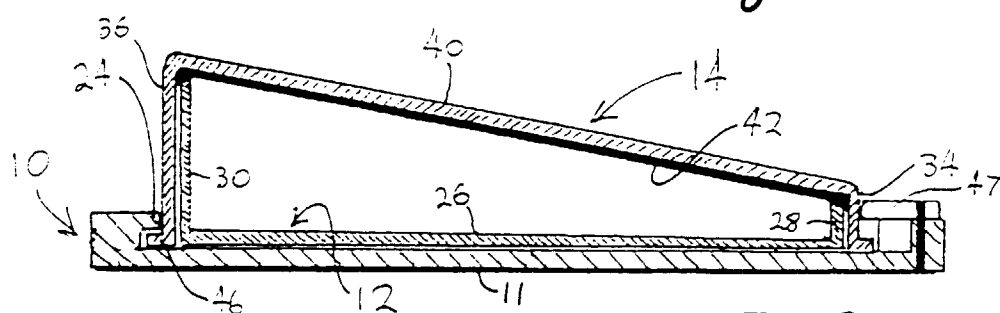


Fig 2

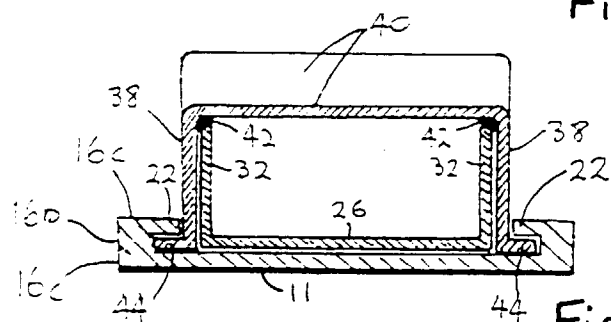


Fig 3

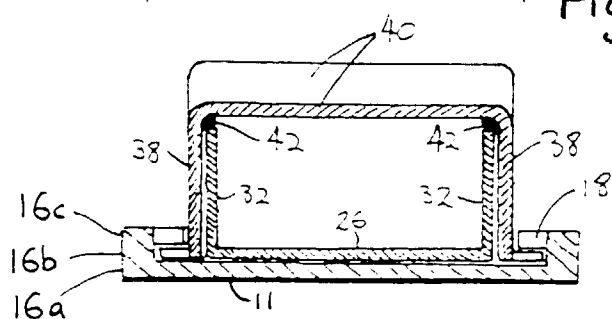
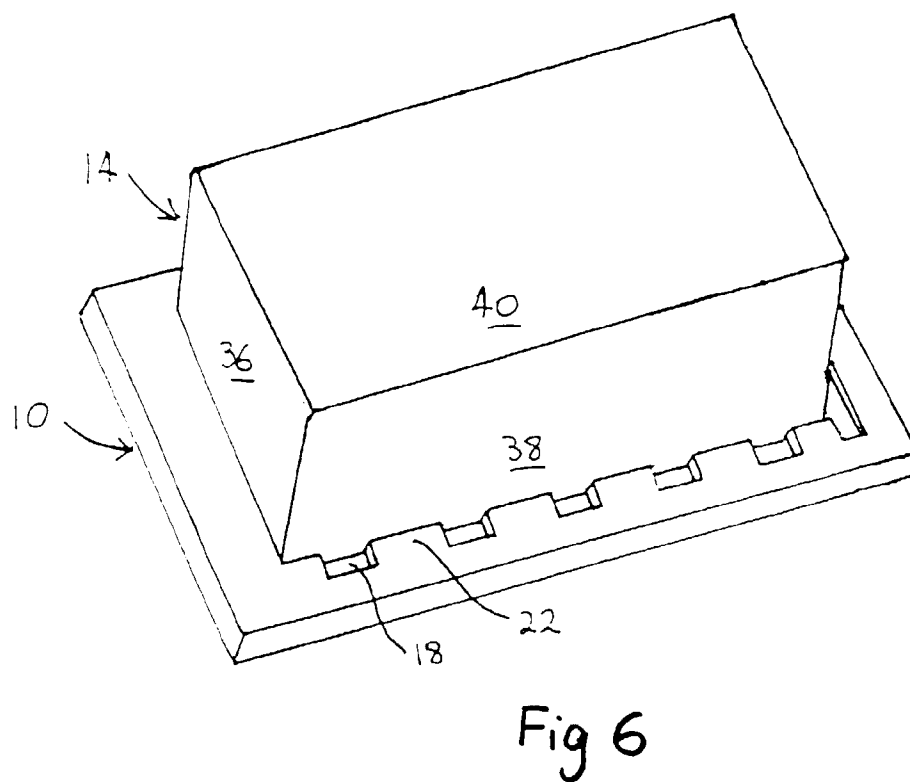
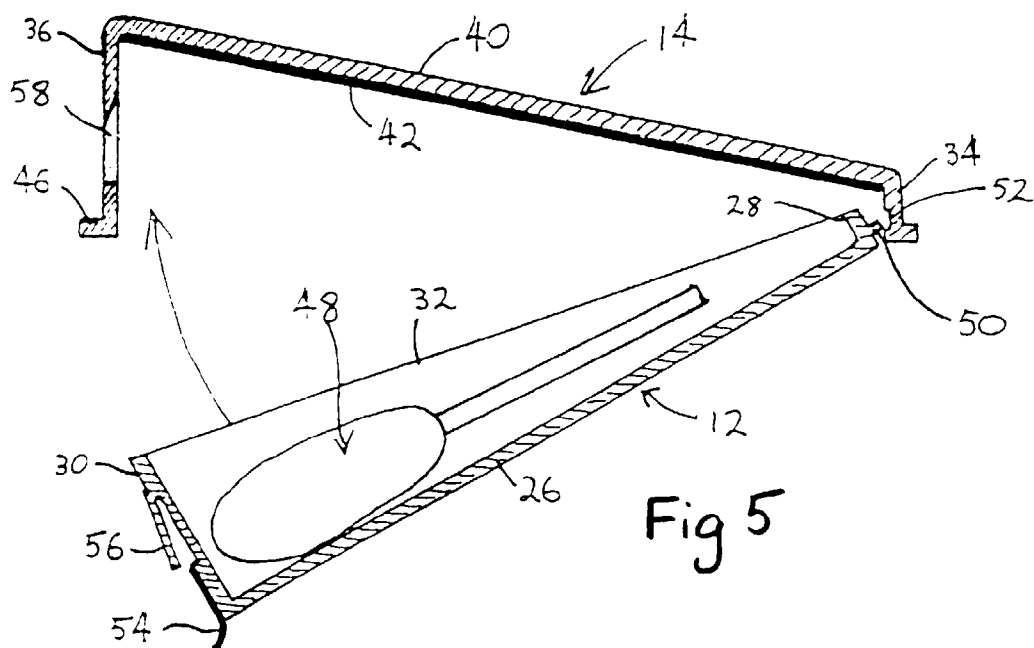


Fig 4



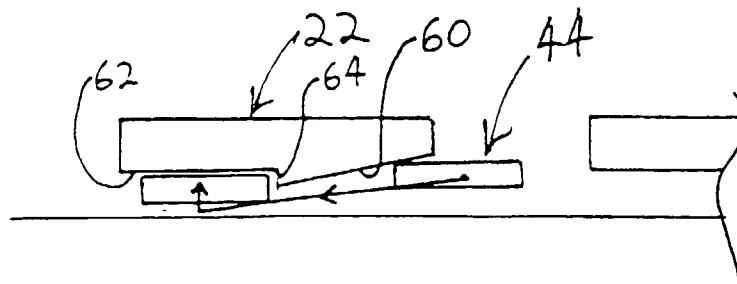


Fig 7



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EUROPEAN SEARCH REPORT

Application Number
EP 98 30 0293

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	US 2 586 740 A (REINHOLD J. SWANSON) 19 February 1952 * column 1, line 50-51 * * column 2, line 19-35 * * column 3, line 17-30; figures 1-5 *	1,2,7,8	A45C11/00 A45C11/22
Y	---	15	
X	WO 96 35348 A (ROSSI FEDERICO) 14 November 1996 * page 8, line 12 - page 13, line 1; figures 1-25 *	1,2,7,14	
X	US 3 791 875 A (KOEHLER C) 12 February 1974 * column 1, line 64 - column 2, line 7; figures 1-4 *	1,2,7,8	
X	US 1 989 527 A (PAUL VINCENT POWERS) 29 January 1935 * column 2, line 3-8; figures 1-5 *	1,2,7,14	
Y	WO 95 16372 A (VERNIMMEN SZILVIA ;VERNIMMEN WALTER (BE)) 22 June 1995 * page 9, line 21 - page 10, line 7; figures 1-7 *	15	TECHNICAL FIELDS SEARCHED (Int.Cl.6) A45C
A	US 3 962 740 A (WHITE JOHN W) 15 June 1976 * column 2, line 41-45 * * column 3, line 23-48; figures 1-6 *	1-15	
A	US 4 744 461 A (LAPHAM RALPH R) 17 May 1988 * the whole document *	1-15	
A	US 4 871 079 A (DOUCETTE KENNETH E ET AL) 3 October 1989 * column 1, line 22-48 * * figure 1 *	1-15	
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 24 April 1998	Examiner Lang, D
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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