Jan. 29, 1935. P. V. POWERS 1,989,527

WATERTIGHT CASE

Original Filed March 2, 1932

Fig. 1.

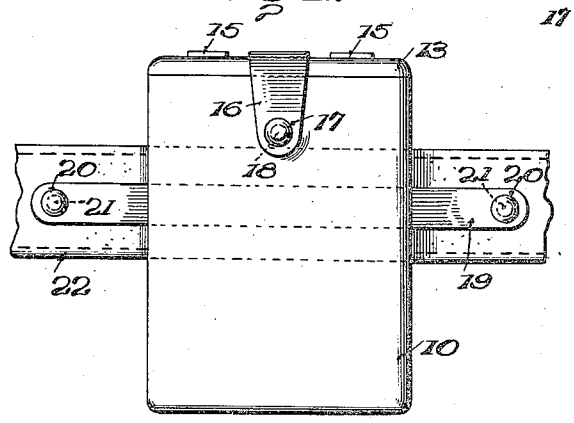


Fig. 3.

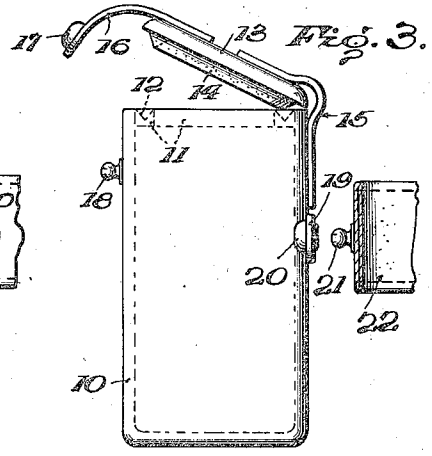


Fig. 2.

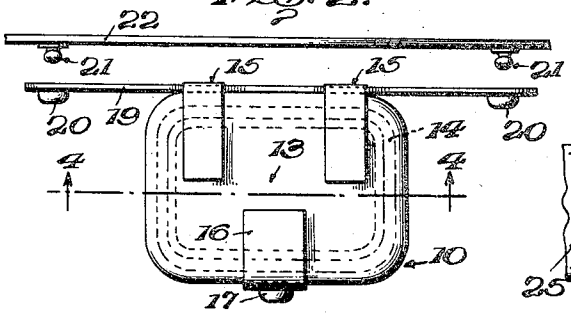


Fig. 6.

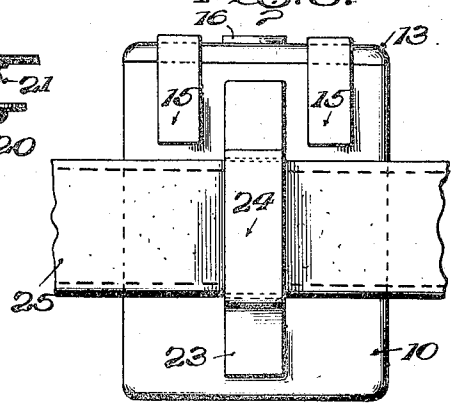


Fig. 4.

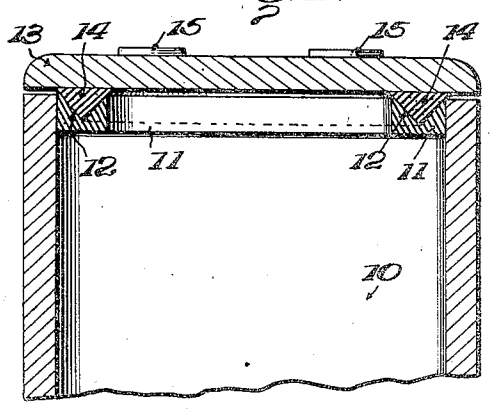
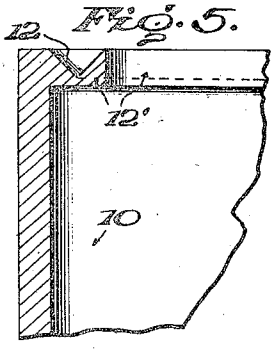


Fig. 5.



INVENTOR
Paul V. Powers
BY
B. P. Gibbons
ATTORNEY

Patented Jan. 29, 1935 1,989,527

UNITED STATES PATENT OFFICE

1,989,527

WATERTIGHT CASE

Paul Vincent Powers, Steubenville, Ohio

Refiled for abandoned application Serial No. 596,363, March 2, 1932. This application March 14, 1934, Serial No. 715,533

4 Claims. (Cl. 206—1)

My invention relates to a water-tight case, adapted to be worn by bathers or the like, while not necessarily restricted to this use.

An important object of the invention is to provide a case of the above mentioned character, which is extremely simple in construction, inexpensive to manufacture, and which is absolutely water-tight.

A further object of the invention is to provide a water-tight connection between the cover and body portion of the case, which will not bind, and will be self-opening, when released.

A further object of the invention is to provide connecting means between the cover and body portion of the case, so constructed that the cover is drawn down into close relation to the body portion, and held in this close relation, when locked in the closed position, a portion of such connecting means being under tension, to open or aid in opening the closed cover, when released.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawing, forming a part of this specification, in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a side elevation of a case embodying my invention, with the lid closed,

Figure 2 is a plan view of the same,

Figure 3 is an edge elevation of the case, with the lid open,

Figure 4 is a longitudinal section taken on line 4—4 of Figure 2,

Figure 5 is a fragmentary vertical section through the body portion of the case, showing a modification, and,

Figure 6 is a rear side elevation of a slightly modified form of the invention.

Attention being called first to Figures 1 to 4, inclusive, the numeral 10 designates a body portion of a case which is shown as rectangular, although it may be in any other suitable shape. This body portion has its bottom closed and top open. The body portion of the case may be formed in any suitable size. When the case is to be carried by a bather, I contemplate forming the same relatively small, and in a suitable size for holding a package of cigarettes, a flat package of matches, and jewelry or money. The case may be formed of any suitable material, such as hard rubber, bakelite, metal or the like.

Arranged within the body portion 10 of the case is a marginal flange 11, preferably formed of hard rubber, and this flange is cemented to the body portion 10, to be rigidly attached thereto, and form an absolutely water-tight joint therewith. This flange has its upper edge flush with the upper edge of the body portion 10, and the upper surface of the flange is provided with a continuous groove 12, which is V-shaped in vertical cross-section, and tapers downwardly. Instead of forming the flange 11 separate from the body portion 10, I may form this flange integral with the body portion 10, as indicated at 12', in Figure 5.

Co-acting with the upper open end of the body portion 10 is a cover 13, preferably formed of hard rubber or the like, although any suitable material may be employed. Secured to the lower surface of the cover 13 is a rectangular depending tongue or flange 14, attached thereto by cement or the like, for effecting an absolutely water-tight joint with the cover. The tongue 14 is V-shaped in cross section and tapers downwardly, and is adapted to enter the V-shaped groove 12. The tongue 14 is formed of relatively soft compressible rubber. The tongue 14 is soft and compressible with respect to the hard rubber flange 11. The tongue 14, when fully expanded, has a depth slightly greater than the depth of the groove 12, whereby, when the cover 13 is brought to the completely closed position in engagement with the top of the body portion 10, the tongue 14 is placed under compression, to enter the groove 12. This compression of the tongue affords an absolutely water-tight joint between the flange and tongue, and due to the taper of the tongue and groove, no binding action can occur, when the cover is released, whereby the cover will automatically open.

The cover 13 is attached to the body portion 10 by flexible straps 15, which are preferably non-extensible. These straps are cemented to the cover 13 and body portion 10. The length of these straps is such that when the free edge of the cover is swung to the completely closed position, the straps will be under tension to draw the hinged edge of the cover to the completely closed position, to contact with the upper edge of the body portion 10. The straps 15 thus being under tension when the cover is in the completely closed position, these straps will, therefore, move, or aid in moving, the cover to the open position when released.

The flexible strap 16, which is preferably non-extensible, is cemented to the cover 13 at its opposite edge, and this strap carries a socket 17, for receiving a stud 18, which is attached to the

body portion 10. This socket and stud constitute a detachable resilient clasp or snap.

The numeral 19 designates a flexible strap which is cemented to the inner side of the body portion 10, and carries socket 20 for receiving studs 21, suitably secured to a belt 22 or other portion of a bathing suit. The sockets and studs 21 constitute resilient detachable clasps or snaps.

In the use of the device, the body portion 10 is suitably secured to the bathing suit through the medium of the strap 19 and associated clasp or snaps. The socket 17 may be separated from the stud 18, whereby the tongue 14 will expand, and this expanding action, combined with the tension of the straps 15 will automatically partly or wholly open the cover 10. The articles, such as a package of cigarettes, matches, jewelry or the like, may now be inserted within the body portion 10. The cover 13 is now shifted to the completely closed position, so that it contacts with the upper edge of the body portion 10. The compressible tongue will now enter the groove 12 and since this tongue is slightly deeper than this groove, the tongue is placed under compression to completely enter the groove, thereby forming a completely water-tight joint.

The cover is held in the closed position by the socket 17 engaging upon the stud 18.

In Figure 6 I have shown a slight modification of the invention. In this form of the invention the attaching strap 19 is omitted. A vertical strap 23 is cemented or otherwise secured to the rear side of the body portion 10 and has a loop 24, to receive a belt 25.

This application is a refiling of my application for Water-tight case, Serial Number 596,363, filed March 2, 1932, allowed January 16, 1933.

It is to be understood that the forms of my invention herewith shown and described is to be taken as the preferred examples of the same, and that various changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention, or the scope of the subjoined claims.

Having fully described my invention, what I claim is:—

1. A water-tight case for bathers or the like, comprising a relatively rigid body portion having an opening and a groove surrounding the opening, said groove being transversely tapered and increasing in width outwardly, said groove having walls which are relatively rigid, a cover for the opening, a tongue carried by the cover and being tapered in cross-section and increasing in width outwardly toward the cover, said tongue being resilient and compressible and adapted to enter the groove and having a depth greater than the depth of the groove, the arrangement being such that the tongue is placed under compression within the groove when the cover is moved to the closed position, and releasable means for holding the cover in closed position so that the tongue is maintained under compression.

2. A water-tight case comprising a rigid body portion having an opening and a groove surrounding the opening, said groove having relatively rigid walls, said groove being wedge shaped in cross-section, a cover for the opening, a tongue carried by the cover and being wedge shaped in cross-section, said tongue being resilient and compressible and adapted to enter the groove and having a depth greater than the depth of the groove, the arrangement being such that the tongue is placed under compression within the groove when the cover is moved to the closed position and the tongue will automatically free itself from the groove when the cover is released and releasable means for holding the cover in closed position so that the tongue is maintained under compression.

3. A water-tight case for use by bathers or the like, comprising a rigid body portion having an opening and a groove surrounding the opening and being substantially V-shaped in cross-section and increasing in width outwardly, said groove having relatively rigid walls, a cover for the opening, a tongue carried by the cover and being substantially V-shaped in cross-section and increasing in width outwardly toward the cover, the said tongue being resilient and compressible and adapted to enter the groove and having a depth greater than the depth of the groove, the arrangement being such that the tongue is placed under compression within the groove when the cover is moved to the closed contacting position with relation to the body portion, a flexible strap secured to one side of the body portion and the upper surface of the cover for permanently connecting the same, and a second flexible strap secured to the upper surface of the cover and having detachable connection with the body portion, the length of the straps being such that they are taut when holding the cover in the closed position.

4. A water-tight case for bathers or the like, comprising a body portion having an opening and a rigid marginal portion surrounding said opening, said rigid marginal portion being provided with a groove which is V-shaped in cross-section and increases in width outwardly, a cover for the opening, a tongue carried by the cover and being V-shaped in cross-section and increasing in width outwardly toward the cover, said tongue being resilient and compressible and adapted to enter the groove and having a depth greater than the depth of the groove, the arrangement being such that the tongue is placed under compression within the groove when the cover is moved to the closed position, and releasable means for holding the cover in the closed position so that the tongue is normally maintained under compression.

PAUL VINCENT POWERS.