June 15, 1926. 1,589,074

W. W. HARRIS

WATERPROOF RECEPTACLE

Filed August 1, 1924

Fig. 1.

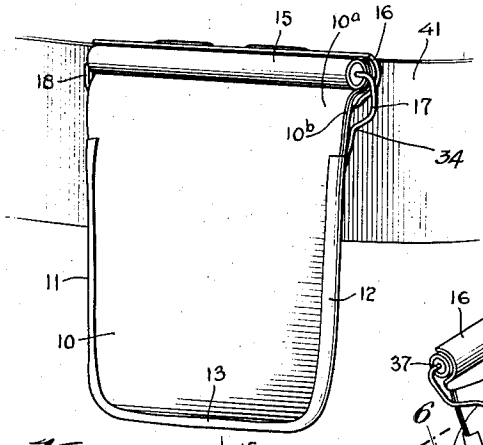


Fig. 2.

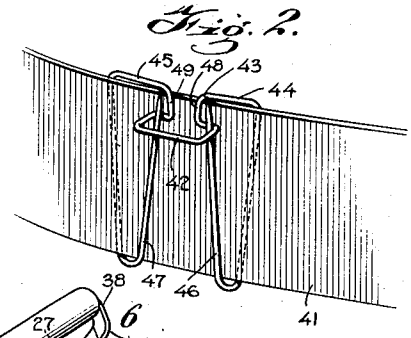


Fig. 3.

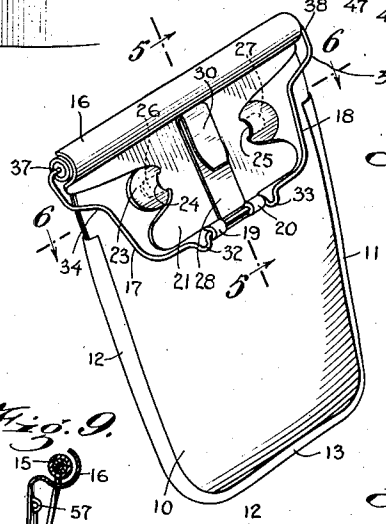


Fig. 8.

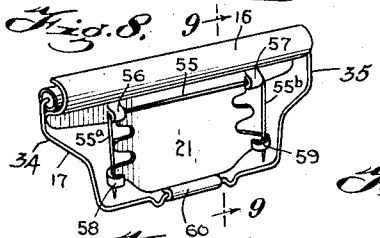


Fig. 4.

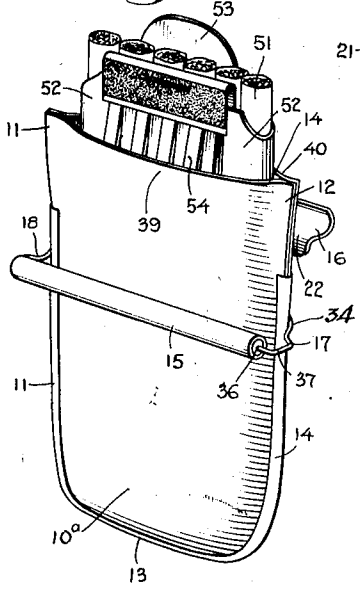


Fig. 9.

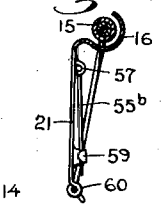


Fig. 6.

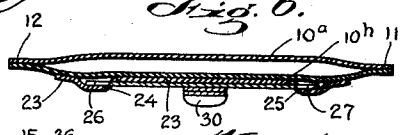


Fig. 7.

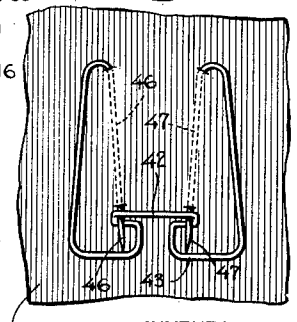
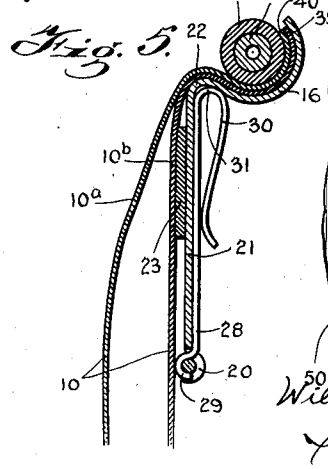


Fig. 5.



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UNITED STATES PATENT OFFICE.

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WATERPROOF RECEPTACLE.

Application filed August 1, 1924. Serial No. 729,438.

This invention relates to waterproof receptacles.

An object of this invention is to provide a receptacle for use when swimming, bathing and at other aquatic sports to protect cigarettes, matches, cigars, vanity cases and other things of value from water or moisture and also to safeguard the same from being lost.

Pursuant to a preferred form of the invention, the receptacle is formed of rubber or like impervious material, and shaped as a pouch having all of its sides closed excepting one side, means located adjacent such open side for supporting the pouch and compression means, preferably comprising a roller, mounted on a pivotally movable spring wire yoke for closing the open end of the pouch.

Upon opening the pouch, the body portion of the pouch is suitably suspended from a base, preferably serving also to support the pivotal compression means, a portion of said base forming a seat for clamping the sides of the open end or mouth of the pouch when under compression. Such base being provided with means for suitable attachment to a belt, shirt or other appropriate garment.

Further features and objects of the invention will be more fully understood from the following detail description and the accompanying drawings, in which—

Fig. 1 is a front perspective view of a waterproof receptacle embodying my invention, applied to a belt;

Fig. 2 is a detail front perspective view of a hook applied to a belt for suspending my waterproof receptacle;

Fig. 3 is a rear perspective view of the waterproof receptacle shown in Fig. 1;

Fig. 4 is a side perspective view of my waterproof receptacle, showing a casing for cigarettes with a paper of matches projecting through the open mouth;

Fig. 5 is a sectional elevation on line 5—5 of Fig. 3;

Fig. 6 is a sectional elevation on line 6—6 of Fig. 3;

Fig. 7 is a front elevation of my suspension pin applied to a garment or the like;

Fig. 8 is a detail rear elevation of a modification of supporting plate and closure cam; and

Fig. 9 is a sectional elevation on line 9—9 of Fig. 8.

Referring to Figs. 1 to 7, inclusive, the waterproof receptacle comprises a pouch of any desired shape and of any suitable material which is either inherently waterproof or rendered waterproof. In the drawings, I have indicated a pouch 10 of rubber of a more or less elongated shape, and formed of oppositely disposed strips 10^a, 10^b of rubber, cemented at the opposite edges 11, 12 and about the bottom 13. The resulting cemented seam may be re-inforced by a re-inforcing strip 14 shown extending as a single overlapping strip about the opposite sides 11, 12 and the bottom 13.

The mouth 14, see Fig. 4, is open to afford access within the pouch.

The closure for the mouth 14 is preferably of the self-positioning type and having a single closing movement. To effect such results, it is advantageous to employ a roller 15 serving as the movable closure element and co-operating with the seat 16. The roller 15 is mounted on the pivot arms 17, 18, preferably in the form of a single wire, see Figs. 1, 3 and 8, and suitably bent to the desired shape and pivoted in the oppositely disposed, open eyes 19, 20, formed in the plate or base 21, as appears in Figs. 3, 5, and 8. The cam seat 16, see Figs. 3, 4 and 5, is preferably formed integrally with the plate 21 and having an upper, bent portion 22, the apex of which is at a greater radial distance from the axis of the pivot eyes 19, 20 than the position of rest of the cam roller 15 in its seat 16.

Preferably, the pouch 10 is held to or suspended from the plate 21, see Figs. 3 and 5, as by the provision of the strip 23 of rubber or the like secured to the rear strip 10^b of the pouch 10 and provided with oppositely disposed openings 24, 25 for receiving the projections 26, 27 extending in opposite directions from the plate 21, thereby affording ready mounting and removability of the pouch 10 relative to the plate 21 when desired. Such arrangement is also advantageous for mounting pouches of various lengths and capacities on the plate 21.

The cam wire 17, 18, is locked in the pivot eyes 19, 20, by means of a locking strip 28, see Figs. 3 and 5, having a lower, open eye portion 29 forming a virtually closed eye in combination with either or both of the open eyes 19, 20. The locking strip 28 is snapped in position by the provision of its upper, outwardly curved, resilient portion

30 within the concave depression 31 formed on the opposite face of the convex apex portion 22.

The cam arms 17, 18 are preferably bent at the opposite locations, 32, 33 to add increased resiliency to the cam arms respectively and also to locate the pivotal portion of the cam arms 17, 18 relative to the pivot eyes 19, 20; the oppositely disposed, outwardly bent portions 34, 35 of the cam arms 17, 18 add further resiliency. Such provision of means enables a relatively stiff wire to be utilized as the cam arms 17, 18 and to thus insure continued resiliency and secure clamping notwithstanding repeated opening and closing of the waterproof pouch.

The roller 15 is advantageously mounted upon a length of tubing 36 of metal or the like, the openings at the opposite ends of which receive the bent, terminal portions 37, 38, see Figs. 3 and 4, of the cam arms 17, 18.

By providing the material forming the sides 39, 40, see Fig. 5, of the mouth 14 of the pouch 10 of a length not greater than the inner peripheral length of the cam seat 16, upon closure of the cam roller 15, the portions 39, 40 forming the sides of the mouth 14 are held in close face to face engagement, thereby precluding the entry or retention of water at or about the mouth, and attaining at all times the absence of any water or moisture notwithstanding the use of the receptacle on the body of the person when diving, swimming or when encountering rain or under other aqueous condition.

My waterproof pouch is adapted for suspension from a belt 41, see Figs. 1 and 2, and for such purpose, the bent, open terminal portion 30 of the locking strip 28, see Figs. 3 and 5, serves also as a resilient locking member to snap in the eye portion 42 of the pin 43. The pin 43 may be formed to encircle the belt 41 to permit sliding of the pin 43 and the pouch 10 bodily about the belt 41.

Preferably, the pin 43 comprises also the oppositely extending body portions 44, 45 connected to the oppositely disposed pin ends 46, 47, respectively received within the eye portion 42, when in closed position. The portions 48, 49 of the pin 43, respectively disposed intermediate the body portions 44, 45 and the eye portion 42, are bent outwardly relative to the body portions 44, 45, to permit the pin ends 46, 47 to be passed therethrough to afford opening and closing of the pin 43 relative to the eye 42.

Such pin 43, see Fig. 7, is adapted also for securement to the material 50 of a garment or the like by reverse positioning of the respective portions of the pin 43 as compared with the positions of the same relative to a belt 41, see Fig. 2. In the use of the pin 43 for attachment to a garment 50, the pin ends 46, 47, pierce through the material 50 at two locations respectively and are received within the eye portion 42 when in closed position. The eye portion 42 in such use serves also to receive the resilient portion 30 of the locking strip 28, see Fig. 5, for suspending the plate 21 and pouch 10 from the pin 43.

When it is desired to open the pouch, the cam arms 17, 18 are manually grasped with two fingers, or a finger of each hand, to force the roller 15 out of its cam seat 16, which movement is readily effected by the smooth passage of the roller 15 over the apex portion 22 of the plate 21.

The plate 21 may be formed of aluminum or other metal or stiff material, cut and bent by stamping operations. The locking and suspending strip 28 may be similarly formed. The cam hinge 17, 18 is preferably formed of wire and bent to the desired shape. Such construction obviates the need of any machining of the parts.

The assembly of the parts of my invention, as indicated in Figs. 1, 3, 4, 5 and 6, is speedily attained by placing the central or pivotal portion of the cam wire 17, 18 through the openings of the pivot eyes 19, 20, then passing the eye 29 of the locking strip 28 over the pivotal portion of the wire 17, 18, and snapping the upper end 30 of the locking strip 28 within the concave cavity 31.

The inner metal tube 36 and the cam roller 15 may be positioned either before or after the positioning of the cam wire 17, 18, and similarly in respect to suspending the pouch 10 from the projections 26, 27 of the supporting plate 21.

The modification shown in Figs. 8 and 9 is similar in many respects to the form of the invention shown in the preceding figures and like parts are designated by like reference numbers. However, the suspension of the plate 21 and the pouch 10 is effected by a U-shaped pin 55 pivoted in the spaced eyes 56, 57, formed on or carried by the plate 21; the pin points 55^a, 55^b when in locked position are retained in the locking eyes 58, 59, carried by or formed on the plate 21. The cam wire 17, 18 is also shown pivoted in a single, elongated eye 60.

The relation of the cam roller 15 to the mouth 14 of the pouch 10 when fully opened is illustrated in Fig. 4, from which it will be perceived that the mouth portions 39, 40 of the pouch strips 10^a, 10^b are free to be opened out to afford a full opening of the mouth 14 of the pouch.

When the pouch is closed, the cam roller 15 is pushed upwardly as by grasping the cam wires 17, 18, whereby the mouth portions 39, 40 of the material of the pouch are engaged under compression by the roller 15. At this stage the mouth portions 39, 40

lie flat and are automatically positioned free from wrinkles or folds, and accordingly, the passage of the roller 15 over the mouth portions 39, 40 and over the apex portion 22, is smooth and without any tendency towards disarranging the parts; the final seating of the roller 15 within its seat 16 compresses the mouth portions 39, 40 against one another and against the face of the seat 16. When in final position the roller 15 is locked against accidental displacement by the provision of the apex portion 22. The cam wire 17, 18 serves as a strong spring in effecting compacting or the collapsing of the mouth portions 39, 40, in the transit of the cam roller 15 over the apex portion 22 to its seat 16 and in retaining the roller 15 in its seated position.

The invention is particularly useful for bathers, for safeguarding cigarettes, matches and the like from being wet or damped, but is applicable also for the security of money, jewels and other valuables and the like.

In Fig. 4, I have illustrated the advantages of the invention for enclosing cigarettes, 51, as by means of a cigarette casing 52, of aluminum or other metal, cardboard or the like, having an open top and provided with a finger piece 53. Such casing 52 provides stiffness in protection of the cigarettes against being crushed or bent. A "paper" of matches 54 may be retained by the casing 52.

In lieu of making the pouch of rubber or like flexible material, the body portion of the pouch may be of shaped metal, to the upper edge portions of which are cemented rubber or like mouth portions corresponding to the mouth portions 39, 40.

The pouch when closed possesses sufficient buoyancy to float when dropped in the water, due to the necessarily entrapped air within the pouch. When worn on a belt or on clothing of a bather or swimmer, the pouch tends to float and the enclosed air serves as a cushion in protection of the articles enclosed in the pouch.

The construction of the spring controlled closure affords compensation for any inequalities of the material of the pouch or of the plate.

Pouches of different lengths and corresponding capacities may be interchangeably employed with a suspending plate and cam closure means of a given or standard size.

The provision of the roller for the cam closure means minimizes the wear of the parts, particularly of the material of the mouth portions of the pouch.

Whereas I have described my invention by reference to specific forms thereof, it will be understood that many changes and modifications may be made without departing from the spirit of the invention.

I claim.

1. The combination of a pouch of impervious material and having an open mouth the material of the sides of which is yieldable, a substantially vertically extending plate, a substantially horizontally extending seat rigidly connected to the upper portion of said plate, said seat having a portion serving as a cam, said seat being disposed to receive said yieldable mouth sides and movable means pivoted to said plate below said seat and coacting with said seat for effecting engagement under compression between said mouth sides to thereby close the mouth of the pouch.

2. The combination of a pouch of impervious material and having an open mouth the material of the sides of which is yieldable, a substantially vertically extending plate, a substantially horizontally extending seat rigidly connected to the upper portion of said plate, said seat having a curved portion serving as a cam, said seat being disposed to receive said yieldable mouth sides and movable means pivoted to said plate below said seat and coacting with said curved portion of said seat for effecting engagement under compression between said mouth sides to thereby close the mouth of the pouch.

3. The combination of a pouch of impervious material and having an open mouth the material of the sides of which is yieldable, a substantially vertically extending plate, a substantially horizontally extending seat rigidly connected to the upper portion of said plate, said seat having a concave portion serving as a cam, said seat being disposed to receive said yieldable mouth sides and movable means pivoted to said plate below said seat and coacting with said concave portion of said seat for effecting engagement under compression between said mouth sides to thereby close the mouth of the pouch.

4. The combination of a pouch of impervious material and having an open mouth the material of the sides of which is yieldable, a substantially vertically extending plate, a substantially horizontally extending seat rigidly connected to the upper portion of said plate, said seat having a portion serving as a cam, said seat being disposed to receive said yieldable mouth sides and resilient movable means pivoted to said plate below said seat and coacting with said seat for effecting engagement under compression between said mouth sides to thereby close the mouth of the pouch.

5. The combination of a pouch of impervious material and having an open mouth the material of the sides of which is yieldable, a substantially vertically extending plate, a substantially horizontally extending seat rigidly connected to the upper portion of said plate, said seat having a portion serving as a cam, said seat being disposed to

receive said yieldable mouth sides, movable means pivoted to said plate below said seat and coacting with said seat for effecting engagement under compression between said mouth sides to thereby close the mouth of the pouch and means for supporting said pouch on said plate.

6. The combination of a pouch of impervious material and having an open mouth the material of the sides of which is yieldable, means for enclosing the material of the mouth sides under compression, said means comprising a pivoted member and means for removably locking said pivoted member in pivotal position.

7. The combination of a pouch of impervious material and having an open mouth the material of the sides of which is yieldable, a plate, means for suspending said pouch from said plate, a seat carried by said plate for receiving said yieldable mouth sides, a roller co-operating with said seat for closing said mouth sides under compression, pivotal means for mounting said roller, means for removably pivoting said pivotal means to said plate, said locking means being removably secured to said plate on the end face of said seat and means for suspending said locking member to thereby suspend said plate and said pouch.

8. The combination of a plate, a pouch of impervious material and having an open mouth, the material of the sides of said mouth being yieldable, a seat carried by said plate, a roller, arm means for pivotally carrying said roller to afford pivotal movement of said roller to removably engage said yieldable sides of the open mouth of said pouch under compression against said seat and a member for removably and pivotally positioning said arm means on said plate.

9. The combination of a plate, a pouch of impervious material and having an open mouth, the material of the sides of said mouth being yieldable, a seat carried by said plate, a roller, arm means for pivotally carrying said roller to afford pivotal movement of said roller to removably engage said yieldable sides of the open mouth of said pouch under compression against said seat and a member for removably and pivotally positioning said arm means on said plate, said member having an open terminal portion serving as a catch for supporting said plate.

10. The combination of a plate, a pouch of impervious material and having an open mouth, the material of the sides of said mouth being yieldable, a seat carried by said plate, a roller, arm means for pivotally carrying said roller to removably engage said yieldable sides of the open mouth of said pouch under compression against said seat, open eye means carried by said plate for receiving a portion of said arm means and a member coacting with said open eye means for removably and pivotally positioning said arm means on said plate.

11. The combination of a plate, a pouch of impervious material and having an open mouth, the material of the sides of said mouth being yieldable, a seat carried by said plate, a roller, arm means for pivotally carrying said roller to removably engage said yieldable sides of the open mouth of said pouch under compression against said seat, open eye means carried by said plate for receiving a portion of said arm means and a member coacting with said open eye means and engaging said seat for removably and pivotally positioning said arm means on said plate.

12. The combination of a plate, a pouch of impervious material and having an open mouth, the material of the sides of said mouth being yieldable, a seat carried by said plate, a roller, arm means for pivotally carrying said roller to removably engage said yieldable sides of the open mouth of said pouch under compression against said seat, open eye means carried by said plate for receiving a portion of said arm means and a member coacting with said open eye means and engaging said seat for removably and pivotally positioning said arm means on said plate, said member having an open terminal portion serving as a catch for supporting said plate.

In testimony whereof I have signed this specification this 12th day of July, 1924.

WILLIAM W. HARRIS.