J. C. TRAYNOR.

CLOSURE FOR WATER BOTTLES, &c.

APPLICATION FILED MAR. 19, 1919.

1,331,294. Patented Feb. 17, 1920.

Fig. 1.

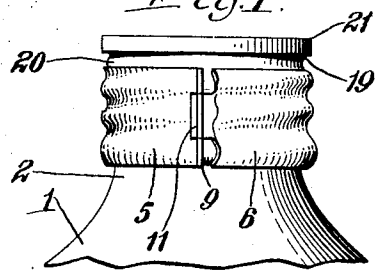


Fig. 2

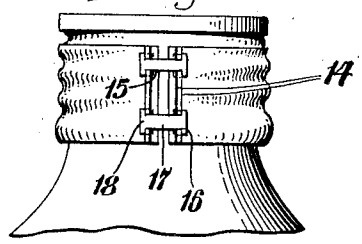


Fig. 3.

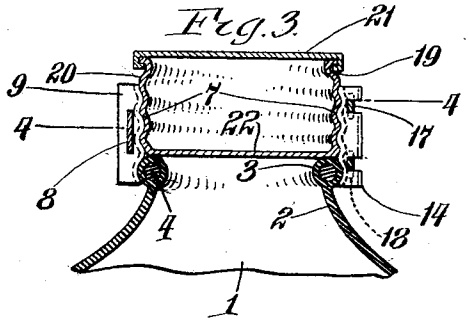


Fig. 4.

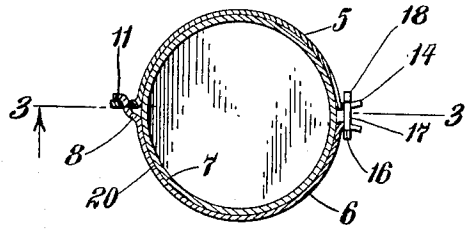


Fig. 5

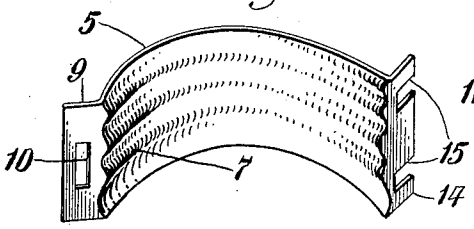


Fig. 7.

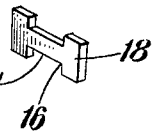


Fig. 8.

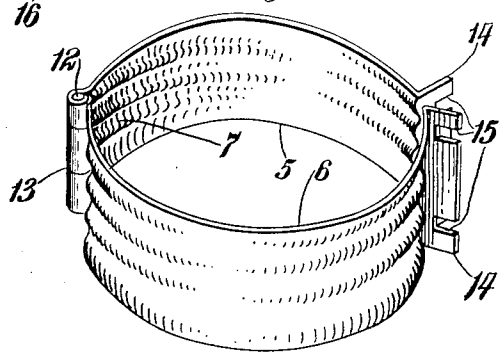
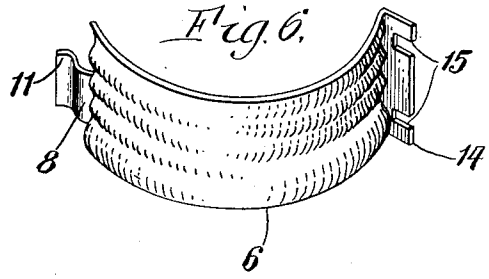


Fig. 6.



Inventor
John C. Traynor
by Geyer & Popp
Attorneys

UNITED STATES PATENT OFFICE.

JOHN C. TRAYNOR, OF BUFFALO, NEW YORK.

CLOSURE FOR WATER-BOTTLES, &c.

1,331,294. Specification of Letters Patent. Patented Feb. 17, 1920.

Application filed March 19, 1919. Serial No. 283,539.

To all whom it may concern:

Be it known that I, JOHN C. TRAYNOR, a citizen of the United States, residing in Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Closures for Water-Bottles, &c., of which the following is a specification.

This invention relates to a receptacle which is more particularly designed for use as an ice bag or water bottle, the hollow body of which is usually constructed of soft rubber or other elastic material, and is provided with a circular opening through which the material such as hot or cold water, or ice may be introduced into or removed from the receptacle, and having a closure whereby said circular opening may be tightly closed when the bag or bottle is in use.

Heretofore receptacles of this character have usually been provided with closures which were so constructed that, when the body of the receptacle became worn out, it became necessary to discard the closure together with the body because of the permanent connection between the same.

It is the object of this invention to provide a receptacle of this character which is provided with a closure which can be easily removed from one body when the same becomes worn, and then applied to a new body, and to so construct this closure and body that the same can be produced at comparatively low cost.

In the accompanying drawings:

Figures 1 and 2 are fragmentary side elevations of the improved receptacle taken from opposite sides thereof. Fig. 3 is a vertical section of the receptacle taken on line 3—3, Fig. 4. Fig. 4 is a horizontal section thereof, taken on line 4—4, Fig. 3. Figs. 5, 6, 7 and 8 are perspective views of the parts making up the socket assembly.

Similar characters of reference refer to like parts throughout the several views.

1 represents the hollow body of my improved receptacle, which may be employed as a water bottle, ice bag, or for other purposes. This body is constructed of elastic material such as molded rubber, or a combination of rubber and fabric or similar material. In its upper side this hollow body is provided with an elastic circular neck 2, which preferably does not project obtrusively any considerable distance out from the main portion of the body 1. In the outer, resilient portion, or rim 3 of this cylindrical neck 2, is embedded, preferably, an annular thrust ring 4 constructed of steel or other hard, non-yielding material, said outer resilient portion 3 being suitably enlarged, as shown in Fig. 3, so as to entirely receive the thrust ring and to provide the same on all sides with a resilient coating of rubber. Adapted to detachably but firmly grip the peripheral face of the outer resilient portion 3 adjacent to the thrust ring 4, is an internally threaded socket or sleeve which is made up of two socket sections 5 and 6 that are preferably made up of sheet metal stampings and are provided with coöperating, internal threads 7. The companion ends of these socket sections are provided on one side with an interlocking pivotal or swinging connection, which as shown in Figs. 1–7, is preferably accomplished by providing the socket section 6 with a laterally projecting hook 8 which engages with a laterally projecting eye 9 on the corresponding end of the socket section 5. When the hook 8 is passed through the opening 10 of the eye and the two socket sections are pressed together, a very satisfactory and inexpensive pivotal connection is obtained, the sections being prevented from springing apart, as best seen in Fig. 4, by reason of the curved bill 11 of the hook engaging with the outer end of the eye 8. A modification of the pivotal connection between the socket sections is depicted in Fig. 8, where the adjacent ends of the sections are provided with interlocking hinge eyes 13 which are pivotally connected by a pintle 12.

On the opposite side of the socket each socket section is provided with a longitudinal coupling lip 14 which is inclined relative to a radial line so that these lips of both sections flare or diverge outwardly. Each of these lips is provided in its outer edge with one or more locking notches 15, preferably two. The companion locking notches in adjacent parts of the socket sections are adapted to receive coupling links 16, preferably of dumb bell shape, the central part of each link being narrowed to form a neck 17 and the ends being enlarged to form heads 18. Thus, if the two socket sections are pressed tightly together around the neck of the water bottle and the links 16 then applied so that the necks engage with the notches 15 in the lips and the heads 18 thereof engage with the outer sides of the same, the spring of the socket sections, together

with the resiliency of the rubber outer portion 3 of the bottle body will cause said sections to spring apart and hold the coupling links in place, said links being further prevented from moving laterally out of the notches in the lips 14 by reason of the flare of the latter.

Adapted to screw down into the socket and against the upper surface of the outer resilient portion 3, is a male plug 19 preferably constructed of light, pressed steel and comprising a tubular body having an external screw thread, a bottom 22 extending across the lever or inner end of said body, and a top 21 connected at its edge with the upper end of the tubular body by a seam joint, as shown in Fig. 3. It will be noted that the plug 19 seats upon the rubber of the body of the water bottle itself, so that no special gasket is required and yet a hermetic, resilient joint is secured.

When the hollow rubber body 1 becomes worn out, as occurs with great frequency at hospitals, invalids' homes, etc., it is merely necessary to press together the socket sections 5 and 6 and remove the coupling links 16. The socket sections are then opened up, the rubber body removed, and the sections placed around the upper part of a new rubber body, pressed together and the two links placed in their notches. The hollow externally threaded plug 19 then screws into or out of the socket in the same manner as the ordinary plug of a water bottle to permit the bottle to be filled or emptied. The entire closure is extremely simple in construction and low in manufacturing cost, it is durable and not liable to get out of order and it is very compact and has no parts projecting an undue extent therefrom, thereby permitting the same to be used conveniently and also stowed away readily when not in use.

I claim as my invention:

1. A receptacle comprising a hollow elastic body having a circular neck, an internally threaded socket which is split diametrically into sections forming a socket and adapted to be detachably secured together to grip the outside of said neck, and an externally threaded stopper adapted to screw into said socket and to bear against the upper part of said neck.

2. A receptacle comprising a hollow elastic body having a circular neck, an internally threaded socket divided diametrically and forming coöperating socket sections which are placed around said cylindrical neck and detachably connected whereby the whole socket is detachably clamped to said neck, and an externally threaded plug adapted to screw down into said socket and to bear against the upper surface of said neck.

3. A receptacle comprising a hollow elastic body having a circular neck, internally threaded coöperating socket sections engaging the outside of said neck and detachably connected with each other on diametrically opposite sides of said neck, and an externally threaded plug adapted to screw into said socket sections.

4. A receptacle comprising a hollow elastic body having a circular neck, an internally threaded socket divided diametrically to form two sections, one of the corresponding ends of said sections being pivotally connected on one side of said neck and the opposite corresponding ends being provided with laterally extending lips which are provided with notches, coupling links having reduced necks engaging with said notches and enlarged heads engaging with the outer sides of said lips, and an externally threaded screw plug adapted to screw into said socket sections.

5. A receptacle comprising a hollow elastic body having a circular neck, internally threaded coöperating socket sections, pivotally connected together on one side and provided with laterally extending and diverging lips on another side, which lips are provided with notches, coupling links having reduced necks engaging with said notches and enlarged heads engaging with the outer sides of said lips, and an externally threaded screw plug adapted to screw into said socket sections.

6. A receptacle comprising a hollow elastic body having a circular neck, flexible, internally threaded and coöperating socket sections placed around said neck and pressed yieldingly together against the elastic material of said neck, coupling links adapted to hold said sections together by reason of the flexibility of said sections and the elasticity of the material of said neck, and an externally threaded plug engaging said socket.

7. A receptacle comprising a hollow body having a circular neck, a socket including two semi-circular ring sections which embrace said neck and are provided with internal screw threads, means for coupling one pair of corresponding ends of said sections consisting of an eye on one section and a hook on the other section engaging said eye, means for detachably connecting the other corresponding ends of said sections, and a screw plug engaging said socket and neck.

JOHN C. TRAYNOR.