July 26, 1927. 1,637,219

L. EDELMANN

HYDROMETER BULB

Filed Aug. 11, 1925

Fig. 1.

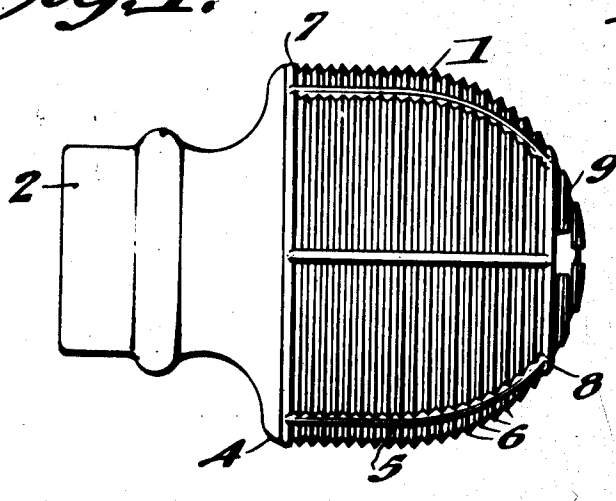


Fig. 2.

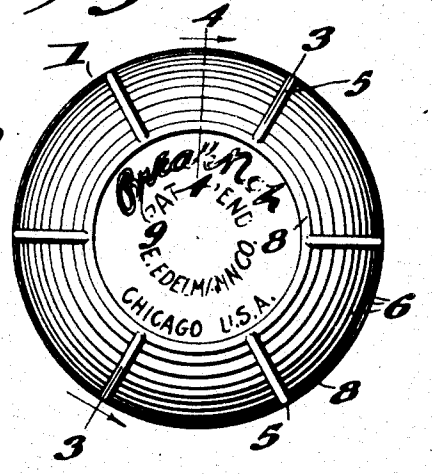


Fig. 3.

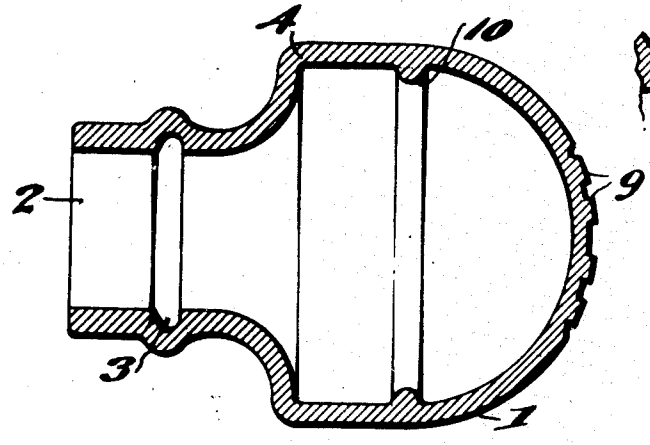
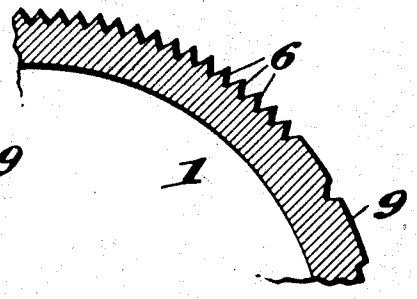


Fig. 4.



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UNITED STATES PATENT OFFICE.

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HYDROMETER BULB.

Application filed August 11, 1925. Serial No. 49,673.

My invention relates to hydrometer bulbs, and particularly to a compressible bulb adapted for use upon syringe hydrometers and in other connections where a suction or forcing bulb is employed.

An object of this invention is to provide a bulb comprising a body of substantially ovoid or oviform shape provided with an attachment sleeve at the larger end, thus insuring a maximum suction and ejecting force as the bulb is compressed and released.

A further object resides in providing the body with a plurality of circumferential and longitudinal ribs which give a better grip within the hand of the user and permit more ready compression of the bulb and insure a quicker expansion.

A still further object is to so construct the body and attaching sleeve that a substantially square shoulder is provided therebetween, thus insuring that the passage through the attachment sleeve will be open at all times and that the form of the body will insure quick expansion to exert a maximum suction force.

With the above and other objects in view, which will be apparent to those skilled in the art, my present invention includes certain novel features of construction and combinations of parts which will be hereinafter set forth in connection with the drawing.

In the drawing:

Figure 1 is a view in side elevation of my improved bulb.

Fig. 2 is an end elevation.

Fig. 3 is a longitudinal sectional view taken on line 3—3 of Fig. 2.

Fig. 4 is an enlarged fragmentary sectional view on line 4—4 of Fig. 2 to better show the form of the circumferential ribs.

The body 1 is of substantially ovoid or oviform shape in its main contour, and an attachment sleeve 2 is provided at the larger end to receive the barrel of a hydrometer or other instrument or implement with which the bulb may be used. The body and sleeve will be preferably cast, molded, or otherwise formed as a unitary structure, and can be made of soft rubber or other suitable material.

In the present instance I have illustrated the attachment sleeve 2 as provided with an internal annular groove 3 to receive the beaded edge at one end of the usual glass hydrometer barrel, but it will be appreciated that my improved bulb is adaptable for use in many other connections where a compressible bulb is required for exerting suction and expelling forces upon liquids, fluids and the like. The shape and form of the attachment sleeve 2 will be governed primarily by the particular requirements of each individual installation, and it is preferable that this sleeve be provided on the larger end of the oviform body to extend substantially coaxially therewith.

The body 1 has a sharp or substantially square shoulder 4 adjacent the attachment sleeve 2, and the wall of the body is made of such thickness that the bulb is readily compressible within the hand by gripping force exerted by the user. This body 1 has a plurality of longitudinally extending ribs 5 on the outer surface thereof and a plurality of circumferential ribs 6 are provided on the periphery. An annular rib 7 is provided around the body adjacent shoulder 4 and a similar rib 8 of less diameter is provided around the smaller end of the body 1, the ribs 5 extending between these annular ribs 7 and 8 and being substantially in line with the axis of the body.

The circumferential ribs 6 are preferably so formed that the center line of each rib is substantially in line with a center on the radius forming the curve of the smaller end of the body, and the ribs 5, 6, 7 and 8 are of substantially uniform height to thus give a uniform outline to the body. Within the annular rib 8 any printed or other matter intended to identify the name and address of the manufacturer, or employed for other purposes, can be displayed, and it is preferable that any lettering be raised upon this portion to substantially the height of the several ribs so that the uniform peripheral curve of the body will be preserved. Such lettering is shown at 9, and it will be appreciated that this raised lettering serves to roughen or insure a better hand grip upon the end of the bulb.

If desired, an internal rib 10 can be provided within the body 1 to facilitate rapid expansion of the bulb, when compressed, and the body portion, shoulder, and sleeve can be made of greater or less thickness than here shown to suit various conditions of use.

From the foregoing it will be seen that

I have provided a compressible bulb comprising a body of substantially oviform shape provided with an attachment sleeve at the larger end and having a substantially square shoulder between the body and sleeve, the body being ribbed substantially over its entire outer surface to insure a better grip within the hand of the user.

While I have herein shown and described only certain specific embodiments, suggesting only certain possible materials, it will be appreciated that changes and variations can be made in the form and construction of my improved bulb, and in the material from which the bulb is formed without departing from the spirit and scope of my invention.

I claim:

1. A bulb comprising a compressible body having attachment means at one end and provided with a plurality of circumferential and longitudinal ribs over its outer surface with the longitudinal ribs crossing and breaking the circumferential ribs.

2. A compressible bulb comprising a body of substantially ovoid form having a plurality of longitudinal and circumferential ribs over its middle surface and one end with the longitudinal ribs crossing and breaking the circumferential ribs and provided with an attachment sleeve at its remaining end.

3. A compressible bulb comprising a body of substantially ovoid form having a plurality of longitudinal and circumferential ribs over its outer surface and smaller end and provided with an attachment sleeve at its larger end, said bulb having a substantially square shoulder between the body and sleeve.

4. A bulb comprising a compressible body having an attachment sleeve extending therefrom, said body being shaped adjacent the attachment sleeve to form a distinct shoulder to be engaged with the fingers and to present the body portion in position to be compressed by pressure of the thumb.

5. A bulb comprising a compressible body portion of substantially ovoid form having attachment means at one end and shaped to form a distinct shoulder adjacent the attachment means to present the main portion of the body in position to be compressed by the use of the thumb when the attachment means is held with the first and second fingers resting against the shoulder.

In testimony whereof I affix my signature.

LEO EDELMANN.