

April 9, 1929.

R. H. COOVERT

1,708,260

PLAY BALL

Filed June 25, 1927

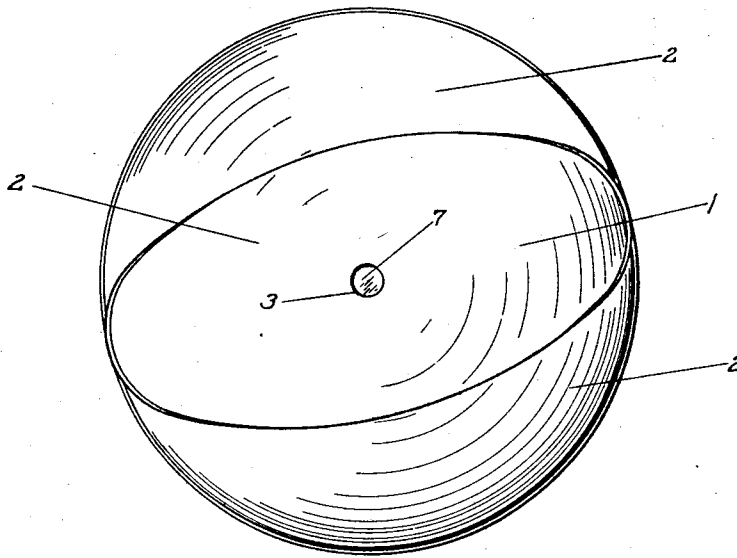


Fig 1

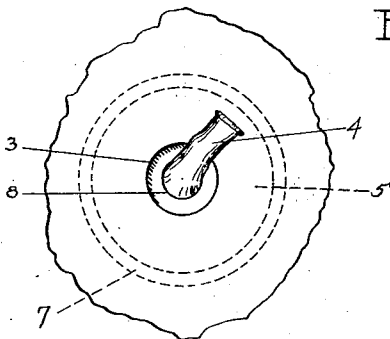


Fig 2

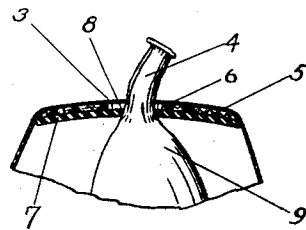


Fig 3

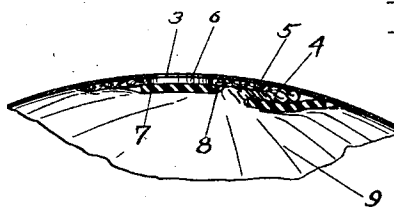


Fig 4

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UNITED STATES PATENT OFFICE.

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PLAYBALL.

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My invention has for its object to provide a novel pneumatic play-ball that is exceedingly durable and will withstand the rough usage of ball playing and is so constructed as to prevent rupture and puncture. My invention particularly has for its object to provide a means whereby the ball, after being inflated, may be sealed in a manner that eliminates all protruding parts and prevents the entrance of any object or material into the interior of the casing and thus prevents puncture or abrasion of the bladder, and keeps the ball in an inflated condition for a long period of time. The invention provides a casing formed of a plurality of spherical sector strips of a decorated rubberized cloth, which are sewed together in the form of a sphere, and wherein is located a gum or rubber bladder that is expanded by insertion of air therein. The invention also provides a closure means that seals the opening in the casing through which the bladder is filled with air and hence the ball may be used for water sports. The invention also provides a means for preventing fraying of the cloth about the opening and for maintaining the shape of the opening, notwithstanding frequent refilling and rough usage of the play-ball. The invention may be contained in pneumatic devices of different forms and used for different purposes, and, to illustrate a practical application of my invention, I have selected a play-ball embodying the invention as an example of such constructions and shall describe it hereinafter. The particular play-ball selected is shown in the accompanying drawing.

Fig. 1 of the drawing is a side view of the play-ball selected. Fig. 2 shows an eyelet or opening in the casing of the play-ball through which the neck of the bladder extends when the ball is deflated. Fig. 3 is a view of a cross section through the eyelet. Fig. 4 is a view of a cross section of the part of the ball illustrated in Fig. 1 and shows the twisted neck inserted within the casing for maintaining the bladder in its sealed condition.

The play-ball 1 is formed of a plurality of sectors that may be formed of sheet fabrics, coated with a rubber compound, and cut to substantially the form of spherical sectors 2. The sectors 2 are sewed together at their edges so that when they are

assembled by sewing and then distended by the inflation of the bladder, they will produce a substantially spherical form.

A round opening 3 is formed in one of the sectors through which the bladder 9 may be inserted in the casing, leaving the neck 4 so as to protrude through the opening 3. A ring or washer 5 made of thin leather, preferably, or of any flexible sheet material, having an opening of substantially the same in size as the opening 3 of the casing, is securely fastened by any suitable adhesive in such a position that the opening 6 in the washer registers with the opening 3 in the casing. Preferably the disc 5 of flexible material is cemented to the sector and the two are punched to form the opening 3. The washer 5 operates to re-inforce the sector of the casing around the opening 3 and prevent undue distention of the opening upon inflation of the bladder 9, and also prevent fraying of the cloth from which the casing is formed. Thus a relatively large opening may be provided for insertion of the bladder 9 within the casing and for manipulation of the neck 4 in filling and closing the bladder 9.

In order to seal the interior of the casing and secure the closure of the bladder, a second washer 7, composed of sheet rubber having approximately the same thickness as the washer 5 and having an opening considerably smaller than that of the leather washer 5, is located between the casing and the bladder so that the neck 4 may protrude through the opening 8 of the rubber washer 7 and the opening 3 of the washer 5 and the casing. The diameter of the rubber washer 7 is preferably such that the width of the annulus or rim is substantially as large or larger than the diameter of the opening 3 in the casing so that the rubber washer 7 may be so placed as to cover the opening 3 in the casing. After the ball has been inflated, the neck may be sealed by twisting it and then inserting through the opening 3 and between the rubber washer 7 and the leather washer 5. These two materials adhere to the rubber of the neck and prevent untwisting of the neck. The rubber washer 7 is movable relative to the casing and consequently may be moved to a position whereby it will close the opening 3 thus securing the neck 4 in its bladder sealing position and causing the ball to re-

main in an inflated condition for a long period of time. The washer 7 prevents contact of the gum bladder 9 with objects exterior to the casing and prevents entrance of water or sand between the bladder 9, which is somewhat fragile, particularly when under tension, and the casing. It also permits the use of a relatively large opening for insertion of the bladder and yet prevents distortion of the bladder through the opening. It also prevents puncture of the bladder by an object entering the opening. Furthermore, the rubber of the washer 7 prevents untwisting of the neck by reason of its contact with the rubber of the neck and the pressure produced by the inflation of the bladder.

I claim:

1. In a play-ball, having a casing and a bladder, a flexible non-elastic sheet material secured to the inside surface of the casing, the flexible sheet material and the casing having an opening therethrough, a second flexible sheet material located and bodily movable within the casing and having an opening smaller than the opening through the casing for receiving the neck of the bladder, the said flexible sheet materials adapted to clamp the neck of the bladder and prevent a movement and opening thereof when

the bladder is filled, the second named flexible sheet material having a width sufficiently great to cover the opening in the casing when the neck of the bladder and the portion of the second named sheet material having the opening is shifted to one side of the edge of the opening through the first named flexible sheet material and the casing.

2. In a play-ball having a casing and a bladder, a disc of leather secured to the inside surface of the casing, the leather disc and the casing having an opening therethrough, a disc of rubber located and bodily movable within the casing and having an opening smaller than the opening through the leather and the casing for receiving the neck of the bladder, the said discs adapted to clamp the neck of the bladder and prevent movement and opening thereof when the bladder is filled, the rubber disc having a diameter sufficiently great to cover the opening through the leather disc and the casing when the portion of the rubber disc in which its opening is located is moved to one side of the edge of the opening through the leather disc.

In witness whereof I have hereunto signed my name to this specification.

RICHARD H. COOVERT.