

May 21, 1929.

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1,713,755

PRESERVING JACKET ASSEMBLY ON PLUGGED INFLATED PLAYING
BALLS AND METHOD OF PREPARING THE SAME
Filed April 19, 1928

Fig. 1.

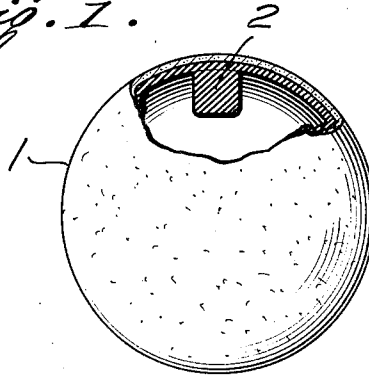


Fig. 2.

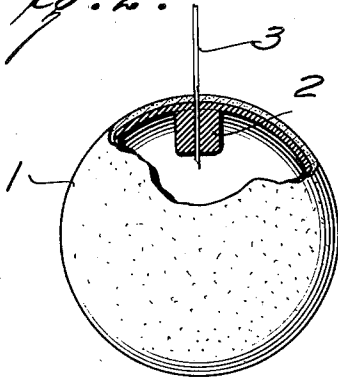


Fig. 3.

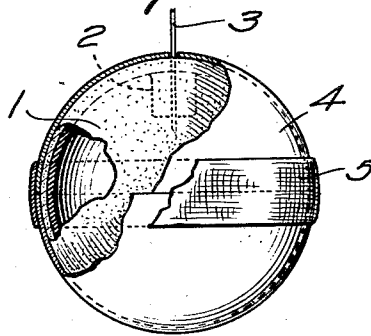
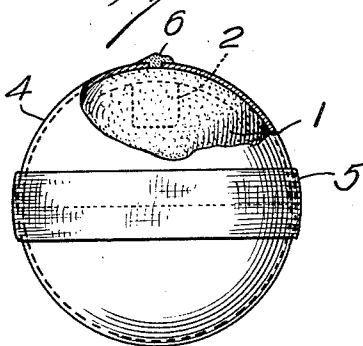


Fig. 4.



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Patented May 21, 1929.

1,713,755

UNITED STATES PATENT OFFICE.

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PRESERVING-JACKET ASSEMBLY ON PLUGGED INFLATED PLAYING BALLS AND METHOD OF PREPARING THE SAME.

Application filed April 19, 1928. Serial No. 271,345.

This invention relates to inflated playing balls of the tennis type in which it is desirable to pack or store the balls in such a manner that the elastic components thereof are at a reduced tension, whereby fatigue is reduced and upon removing the jacket for play, ball rebound will have not been substantially diminished.

The principal object of the invention therefore is to provide novel means for conveniently reducing the fully inflated ball to a size where its elastic components are under reduced tension, and the jacket assembly so produced.

To this end the invention contemplates the provision of an inflated elastic playing ball which is provided with a self-sealing soft rubber plug on the inside thereof, the finished ball being under superatmospheric pressure.

A hollow tubular needle of the hypodermic type is then forced through the ball and its plug to deflate the same. A jacket of substantially inextensible fabric, metal, celluloid or like material either in a single or a plurality of pieces is then applied to the collapsed or deflated ball. It is not necessary that the ball be entirely deflated, it only being desired to reduce the size thereof to the point where its elastic components are under reduced tension. The jacket is of such a size that these conditions will obtain.

Upon securing the inextensible jacket upon the deflated ball, the hollow needle is then inserted through jacket, ball wall and plug and reinflated to the requisite pressure, so that when the jacket is removed, the enlarged ball will meet the requirements set out for rebound in the various games of play.

In the drawings:

Figure 1 is a view partly in section of a completed playing ball of the inflated, elastic tennis type showing the self-closing, soft rubber plug.

Fig. 2 is a similar view of a ball partially or completely deflated by means of a hollow needle passed through the plug.

Fig. 3 is a view of a ball with a jacket secured thereon with a needle passing through jacket and ball ready for re-inflation.

Fig. 4 is a view of a ball after re-inflation with the needle aperture in the jacket sealed.

Referring now with particularity to the forms illustrated, I have shown at 1 an elas-

tic playing ball of the tennis type provided with a soft rubber self-sealing plug 2 on the inside thereof. This type of ball when completed is under superatmospheric pressure.

By puncturing the inflated ball by a hollow needle 3 of the hypodermic type, passing through the plug 2, the ball may be partially or completely deflated as desired.

The final size of the packaged ball may be determined by the size of the jacket to be applied. That is, by encasing the deflated ball within a substantially inextensible jacket such as viscose, celluloid, metal, fabric, or the like, in either a single piece or a plurality of sections, the ball upon re-inflation cannot exceed the size of its jacket.

The jacket is shown diagrammatically at 4 consisting conveniently of two hemispherical shells joined together at their meeting edges by a tape 5 or the like.

One of the shells is provided with an aperture through which the needle 3 passes, this aperture coinciding in location with the plug 2 through which the needle also passes.

Air or other fluid may then be pumped through the needle to the interior of the ball until the requisite pressure has been reached. This pressure will be determined with regard to the degree of compression and size desired in the ball when the jacket is removed for play.

Upon removing the needle 3 after re-inflation, the plug 2 will automatically seal the hole, thus preventing escape of the fluid. As an added precaution, a drop of sealing substance 6 may be applied to the needle aperture in the jacket section.

From the above it will be seen that upon re-inflation, the ball will be restricted to a reduced size by the inextensible jacket so that the elastic components of the ball will be held at a reduced tension. Upon removal of the jacket after storage and for play, the internal fluid will exert itself and the ball will assume a size within the limits prescribed by the rules for such balls.

In some instances it may be desirable to cure the ball initially within the restricting jacket, in which case deflation would not be necessary. Such a procedure could be used where the jacket was of a material unaffected by heat, such as metal.

I claim:

1. A method of packaging an elastic play-

ing ball which comprises deflating an inflated ball, encasing the deflated ball in a jacket smaller than the size of the inflated ball, and then reinflating the ball.

5 2. In a method of packaging an elastic playing ball, the step which consists in inflating a ball within a restraining jacket which is of less size than the ball will be when the jacket is removed.

3. A method of holding a playing ball at a 10 reduced size which consists in deflating an inflated ball to the point where its elastic component is under reduced pressure applying to said deflated ball a strain resisting jacket, and then reinflating said ball to substantially 15 its initial inflated condition.

In testimony whereof, I affix my signature.
FREDERICK W. GIBSON.