

T. R. CLINE.  
INFLATABLE BALL.  
APPLICATION FILED APR. 9, 1912.

1,059,836.

Patented Apr. 22, 1913.

Fig. 1.

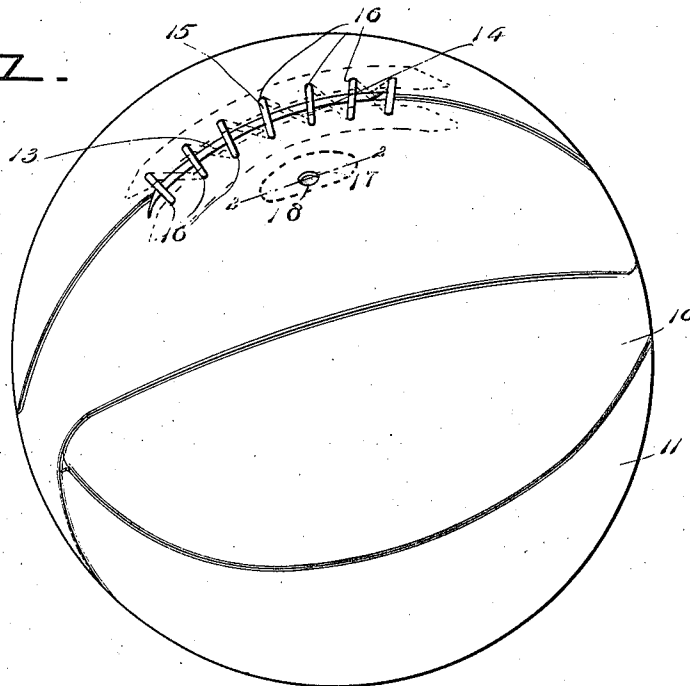


Fig. 2.

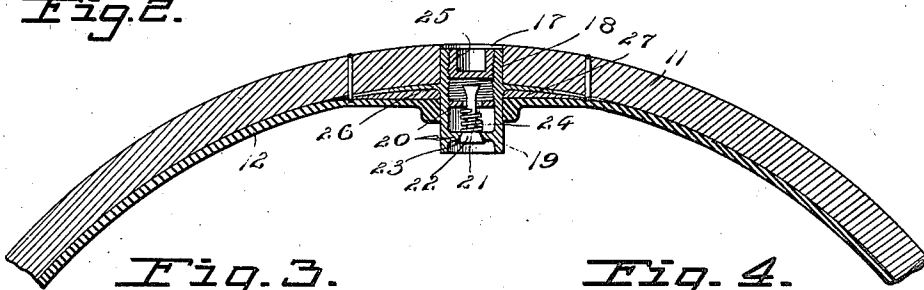


Fig. 3.

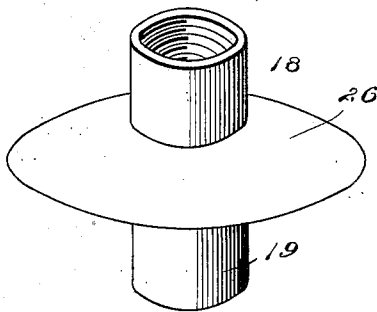
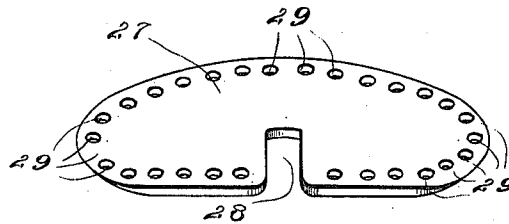


Fig. 4.



Witnesses

C. E. Kemper.

*[Signature]*

Inventor  
Thurman R. Cline.

By *Victor J. Evans*

Attorney

# UNITED STATES PATENT OFFICE.

THURMAN R. CLINE, OF ANDREWS, INDIANA.

## INFLATABLE BALL.

1,059,836.

Specification of Letters Patent.

Patented Apr. 22, 1913.

Application filed April 9, 1912. Serial No. 689,555.

*To all whom it may concern:*

Be it known that I, THURMAN R. CLINE, a citizen of the United States, residing at Andrews, in the county of Huntington and State of Indiana, have invented new and useful Improvements in Inflatable Balls, of which the following is a specification.

An object of the invention is to provide a ball that can be quickly and easily inflated or deflated.

The invention embodies, among other features, a ball such as those adapted for playing foot-ball, basket-ball or the like, and in which the ball can be inflated or deflated without disturbing the lacing that secures the outer casing, the ball being provided with a valve, by means of which the ball is inflated or deflated, the said valve being spaced a distance from the point of lacing of the outer casing.

In the further disclosure of the invention reference is to be had to the accompanying drawings constituting a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which:

Figure 1 is a perspective view of the ball; Fig. 2 is an enlarged fragmentary sectional view taken on the line 2—2 in Fig. 1; Fig. 3 is a perspective view of the valve; and Fig. 4 is a perspective view of the securing plate.

Referring more particularly to the views, I employ a ball 10 comprising an outer casing or cover 11 and a bladder 12 arranged within the casing 11 and conforming to the shape of the casing when the bladder is inflated, the casing 11 being provided with a lacing portion 13 which comprises a slot or opening 14 formed in the casing for the purpose of inserting or removing the bladder 12 from the casing, the mentioned slot being normally closed by a lacing cord 15, the said cord being passed through openings 16 in the casing to bring together the edges of the casing, formed by providing the slot or opening 14 therein.

To one side and a distance from the lacing portion 13 of the casing 11 an aperture 17 is provided in the casing and mounted therein is a valve 18, the said valve preferably comprising a tubular casing 19 provided with guide members 20 for guiding a valve stem 21 slidably mounted in the tubular casing 19 and provided with a valve member 22, adapted to engage a seat 23 formed on

one of the guide members 20, the mentioned valve member 22 being normally held on the seat 23, to close the valve, by a spring 24 mounted within the tubular casing 19, the inner periphery of the tubular casing being threaded at the upper end to removably receive a cap 25 provided to prevent dust or dirt from entering the valve and clogging the same. A valve plate 26 is formed with the tubular casing 19, and when the valve is mounted to extend through the aperture 17 in the casing 11 the valve plate 26 will be arranged between the casing 11 and the bladder 12, the upper end of the valve 18 being adapted to lie slightly below the surface of the casing 11 to prevent the valve from being struck with the hands when the ball 10 is used. To rigidly secure the valve in position, a securing plate 27 is interposed between the valve plate 26 and the bladder 12 the said securing plate being provided with a recess 28 through which the tubular casing 19 extends, a series of holes 29 being provided in the edge of the securing plate 27 for the purpose of sewing or otherwise securing the plate 27 to the casing 11, it being readily seen that when the securing plate 27 is mounted in position as mentioned, the valve 18 will be held in rigid position relatively to the casing 11 and the bladder 12.

The valve 18 is arranged in the position mentioned before the lacing cord 15 is arranged to close the slot or opening 14 and when the valve has been positioned as shown the lacing cord is secured to the casing to close the opening or slot therein, it being understood that the lacing cord does not need to be disturbed in any manner except for the purpose of removing or repairing the bladder 12 arranged within the casing 11. When it is desired to inflate the bladder, the cap 25 is removed from the tubular casing 19 and an ordinary bicycle pump or the like is threadedly connected to the casing, after which the pump is operated to inflate the bladder 12, it being readily understood that when air is forced from the pump, the pressure of the air will inflate the valve member 22 and permit the air to pass into the bladder, the action of the spring 24 being adapted to close the valve to prevent air from passing out of the bladder when the same has been once inflated. If, however, it is desired to voluntarily deflate the bladder, the valve member 22 can be held in open position by simply pressing downwardly on

the valve stem 21 and holding the valve against the action of the spring 24. When the bladder 12 has been properly inflated the cap 25 is mounted in closed position thereon and it will be readily seen that by mounting the valve so that the upper edge of the valve will lie within the plane of the outer surface of the casing 11, it will be impossible for the user to sustain any injury or pain, should the ball 10 strike the body or limbs of the user at the point where the valve is mounted.

My device can be conveniently used in connection with punching bags, foot-balls, basket-balls, push balls and other pneumatic or inflatable articles and it will be readily seen that the ball can be inflated or deflated without disturbing the lacing cord; that the ball can be inflated or deflated without exposing the bladder 12 as is the case when it is necessary to remove the lacing cord from the casing and the ball can be laced before the same is inflated, thus permitting the operator to quickly and easily lace the ball, whereas the usual method is to first inflate the ball and then lace the same, it being readily understood that when this procedure is adopted it is almost impossible to properly and securely lace the ball while at the same time, especially when a lacing needle is used in connection with the lacing cord, the tendency of the lacing needle to puncture the bladder is very great. It will be further seen that my device not only permits of inflating or deflating a ball without disturbing the lacing portion of the casing, but

also retains the bladder in rigid position within the casing and in proper relation thereto, thus preventing the bladder from becoming distorted within the casing and causing the ball, when inflated, to appear uneven or egg-shaped, whereas the natural shape of the ball should be round as is the case in a basket-ball. When my device is used in connection with a foot-ball the pointed ends of the bladder will be held within the casing adjacent the pointed ends of the casing by the valve arranged on the casing and connected to the bladder for inflating or deflating the same, and thus any distortion of the casing is entirely prevented.

Having thus described my invention, I claim:

In a ball, the combination with a casing having a bladder therein, of a tubular member extending into the said bladder and into an opening in the said casing, a valve plate on the said tubular member and arranged between the bladder and the casing, a valve in the tubular member, and a perforated recessed securing plate interposed between the said valve plate and the said bladder, with the said tubular member extending through the recess of the securing plate, the said apertures being provided on the said securing plate for sewing the same to the said casing.

In testimony whereof I affix my signature in presence of two witnesses.

THURMAN R. CLINE.

Witnesses:

JOHN Q. CLINE,  
EDGAR E. KELSEY.