

No. 731,614.

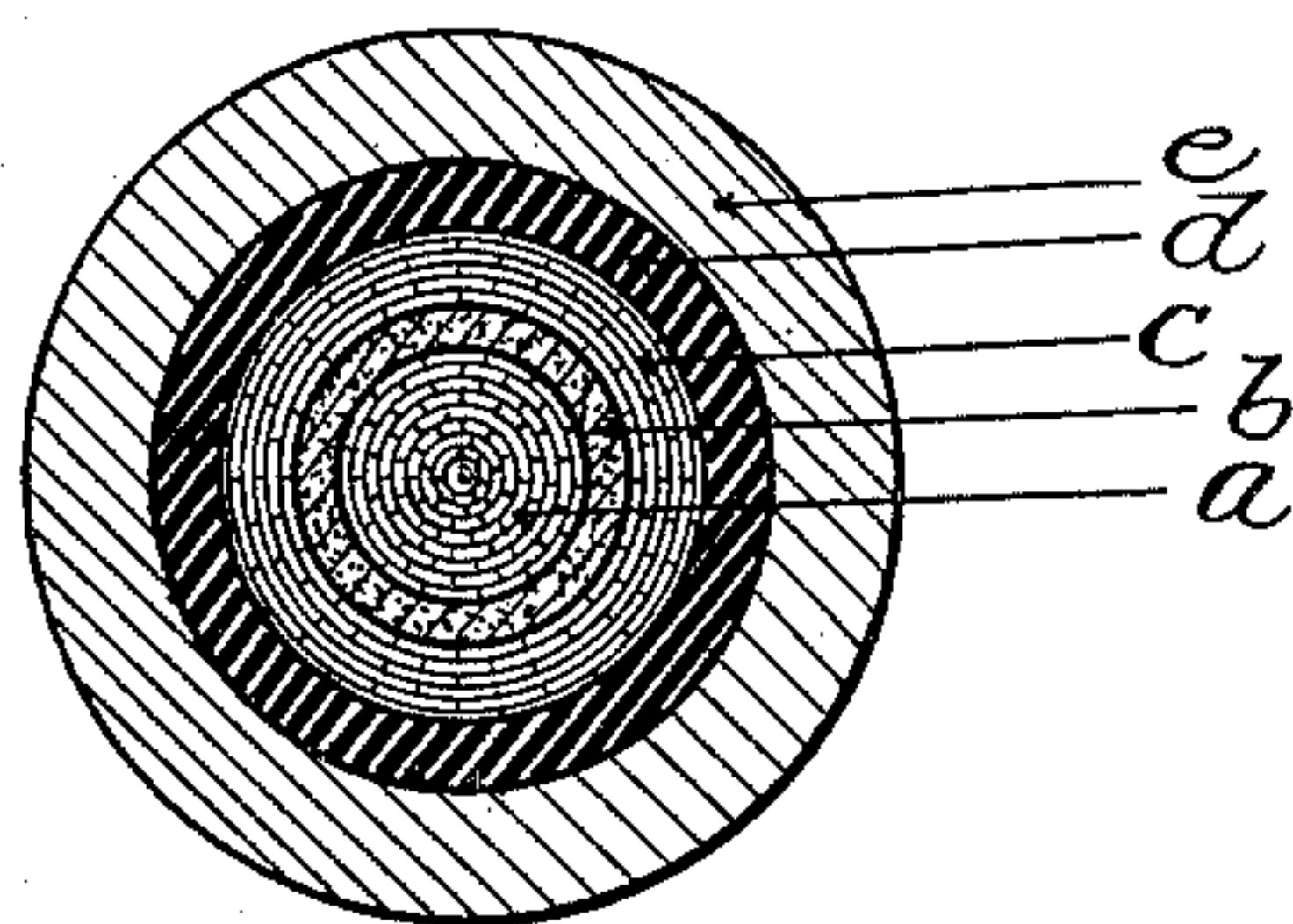
PATENTED JUNE 23, 1903.

R. REACH & G. B. STAPLES.

GOLF BALL.

APPLICATION FILED OCT. 13, 1902.

NO MODEL.



Attest:
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UNITED STATES PATENT OFFICE.

ROBERT REACH AND GEORGE B. STAPLES, OF PHILADELPHIA,
PENNSYLVANIA.

GOLF-BALL.

SPECIFICATION forming part of Letters Patent No. 731,614, dated June 23, 1903.

Application filed October 13, 1902. Serial No. 127,058. (No model.)

To all whom it may concern:

Be it known that we, ROBERT REACH and GEORGE B. STAPLES, citizens of the United States, residing at Philadelphia, Pennsylvania, have invented certain new and useful Improvements in Golf-Balls, of which the following is a specification.

Our invention is an improved ball adapted for use in the playing of golf and for like purposes.

We aim in our improved construction to take away the responsiveness of the center and to bring about the result desired without affecting the resiliency of the ball.

We have found by experience that the responsiveness of the rubber center in golf-balls is the cause of the outside covering cracking when played with, and we provide our improved ball with a non-responsive center constructed as hereinafter particularly described.

In the accompanying drawing we show our improved ball in section.

In making our ball we make a center of strand-rubber, as at *a*, winding it up to a proper size, and then wrap this center with fine worsted yarn *b*. We next lay on a covering of wound rubber, as at *c*. Over this is vulcanized a hard-rubber cover *d*, preferably having small perforations throughout its entire periphery. We may, however, use a plain shell. Over the hard-rubber shell *d* a gutta-percha covering *e* is applied. This gives a ball made of strand-rubber and elastic yarn held under extreme tension with a hard-rubber shell inclosing it, the shell in turn being covered with gutta-percha. We have found that a ball having a non-responsive center and a hard-rubber shell gives the greatest effectiveness and durability. If desired, we may interpose a second layer of yarn between the rubber layer *c* and the hard-rubber cover *d*.

By the expression "non-responsive" is

meant that when the outer surface of the ball comes in contact with the stick the wound-rubber center is prevented from responding to the blow through the fact that the said center is covered with hard rubber. The difficulty with all balls now made with a rubber center, so far as we are aware, is that the blow from the outside communicates itself to the rubber center, and its reaction tends to split the outer covering. This occurs in at least ninety per cent. of the balls used. To prevent this, we take as much of the responsiveness out of the ball as possible by winding it and by hand-stretching the rubber to its utmost tension. This cannot be brought about by a winding-machine. By thus taking all the responsiveness or reaction out of the center of the ball the gutta-percha cover remains intact. The principal feature, therefore, of the invention is a wound center covered with hard rubber and the hard rubber covered with gutta-percha. The word "wound" in this connection is distinctive from strand, for the reason that the rubber is in strand form and the winding is a process of putting the strand in a stipulated shape. The intervening layers of yarn are intended to reduce the responsiveness or the reactionary features of the wound-rubber center to a minimum, as yarn if wound wet shrinks and by so doing compresses the wound-rubber strands.

What we claim is—

A golf-ball comprising a non-responsive center consisting of layers of strand-rubber and yarn, a hard-rubber shell and an outer covering of gutta-percha.

In testimony whereof we affix our signatures in presence of two witnesses.

ROBERT REACH.

GEORGE B. STAPLES.

Witnesses:

HOWARD E. HECKLER,
J. DANIEL EBY.