

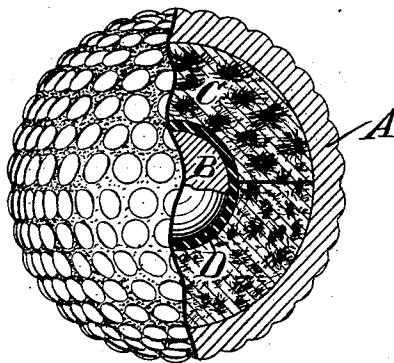
No. 711,530.

Patented Oct. 21, 1902.

F. H. RICHARDS.
PLAYING BALL.

(Application filed July 30, 1902.)

(No Model.)



Witnesses:

Herbert J. Smith
W. M. King

Inventor:

F. H. Richards.

UNITED STATES PATENT OFFICE.

FRANCIS H. RICHARDS, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE KEMPSHALL MANUFACTURING COMPANY, A CORPORATION OF NEW JERSEY.

PLAYING-BALL.

SPECIFICATION forming part of Letters Patent No. 711,530, dated October 21, 1902.

Application filed July 30, 1902. Serial No. 117,611. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS H. RICHARDS, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Playing-Balls, of which the following is a specification.

This invention relates to playing-balls, and especially to those used in golf; and its objects are to enable the ball to fly and put more accurately and also to increase the flight of the ball.

The figure of drawing forming part of this specification shows, partly in section, a golf-ball made in accordance with my improvements.

For the shell A of the ball I preferably use compressed gutta-percha, which preferably holds the filling in a state of high compression. At the center of the ball I use a bullet B, of lead, iron, or other heavy material, said bullet preferably being solid. The shell A and bullet B make, preferably, the greater part of the weight of the ball, the bullet B being preferably heavier than the entire shell A, gutta-percha being a very light material. The filling C of the ball I make in the form of a light structure of any suitable form and material, such as paper or cork, preferably the latter and preferably compressed. This material C is preferably of less specific gravity than the shell A.

Between the filling C and the central bullet B, I prefer to apply a thin layer D, of soft rubber, which is held under compression by the shells A and C and is highly active when the ball is given a blow, the inertia of the bullet B when the ball is struck tending to compress the rubber on the side of the bullet next to the club and to cause it to flow around the bullet and accumulate on the opposite side, thus greatly distorting the rubber, and the reaction of the rubber aids greatly in the flight of the ball, the relative arrangement of the parts being such that it remains longer in contact with the club than is usually the

case, whereby greater momentum is imparted to the ball and the flight thereof is prolonged. It will be understood also that by having the ball weighted at its center it is less liable to erratic flight because of the rotation of the ball, since by having so much weight at the center the power or strength of rotation is diminished. For this reason the ball flies true and puts straight, and hence meets one of the important requirements of the game of golf.

Various modifications may be resorted to within the scope of my improvements.

Having described my invention, I claim—

1. A ball comprising a shell of gutta-percha, a small central bullet of heavy material, said bullet weighing more than said shell, and an intervening structure or layer of material lighter than said shell.

2. A playing-ball comprising concentric spheres of metal, rubber, compressed cork and gutta-percha.

3. A playing-ball comprising a heavy small center piece, a gutta-percha shell, a sphere within said shell of light material, and a layer of soft rubber between said center piece and said sphere.

4. A playing-ball comprising a shell of gutta-percha, a sphere of cork within said shell, a lining of soft rubber within said sphere and a metal bullet within said soft rubber.

5. A ball comprising a shell of gutta-percha, a small central bullet of heavy material, said bullet weighing more than said shell; and an intervening structure or layer of material lighter than said shell; the latter holding said intervening layer under compression.

6. A playing-ball comprising a central sphere of metal, concentric rubber and compressed-cork spheres thereon, and a gutta-percha shell or cover.

FRANCIS H. RICHARDS.

Witnesses:

B. C. STICKNEY,
JOHN O. SEIFERT.