

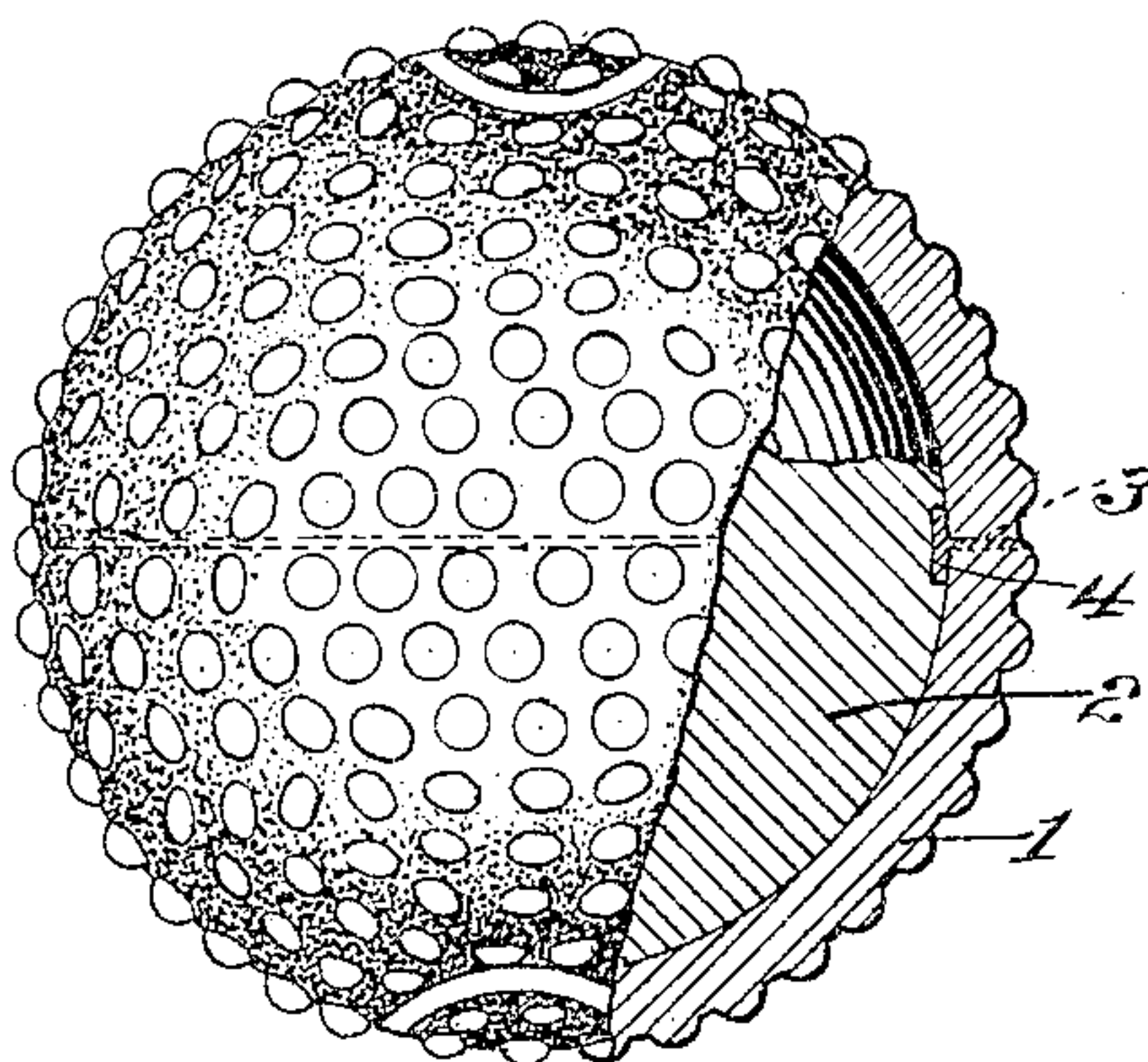
No. 808,683.

PATENTED JAN. 2, 1906.

F. H. RICHARDS.

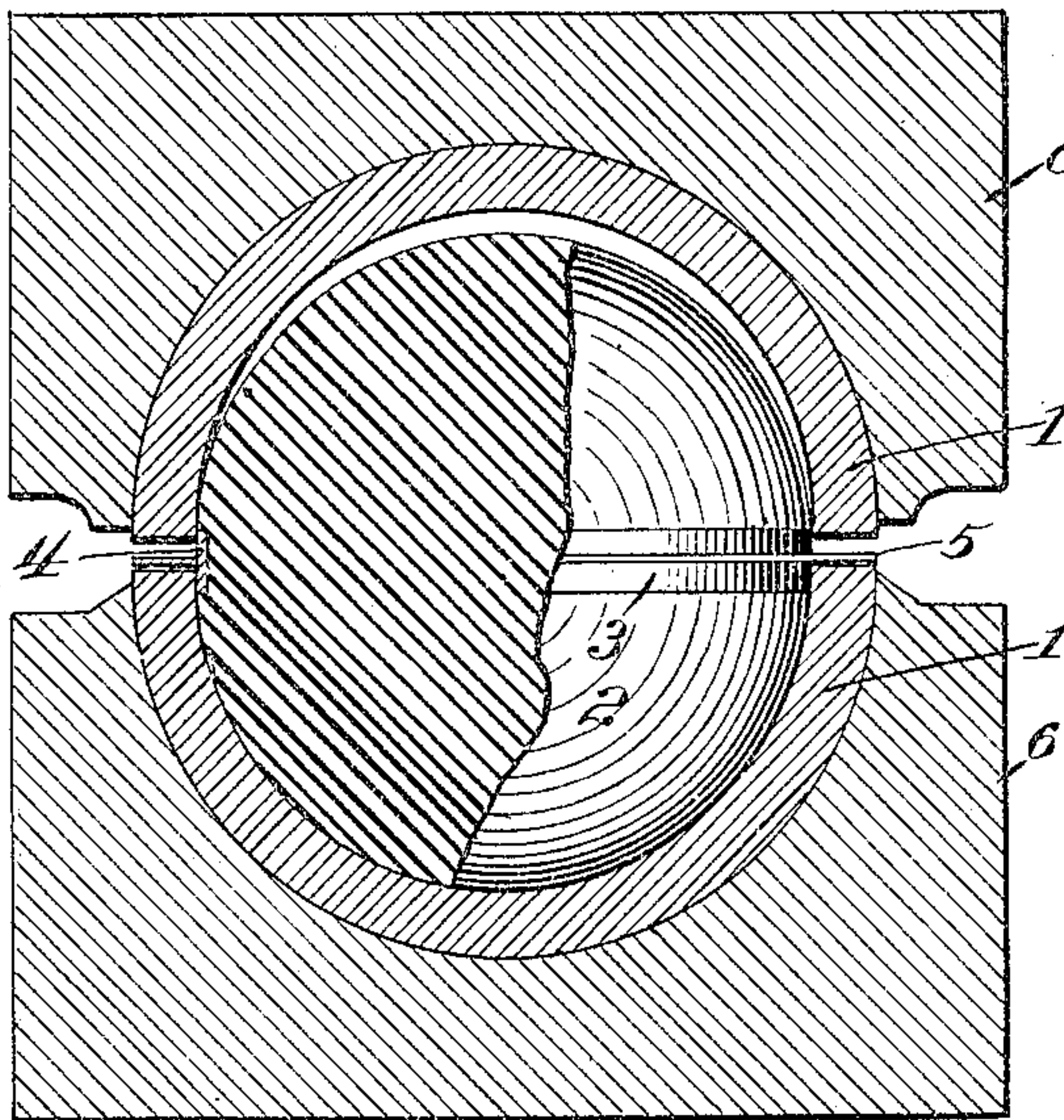
GOLF BALL.

APPLICATION FILED APR. 11, 1902.



*Fig. 1.*

Fig. 2.



*Fig. 3.*

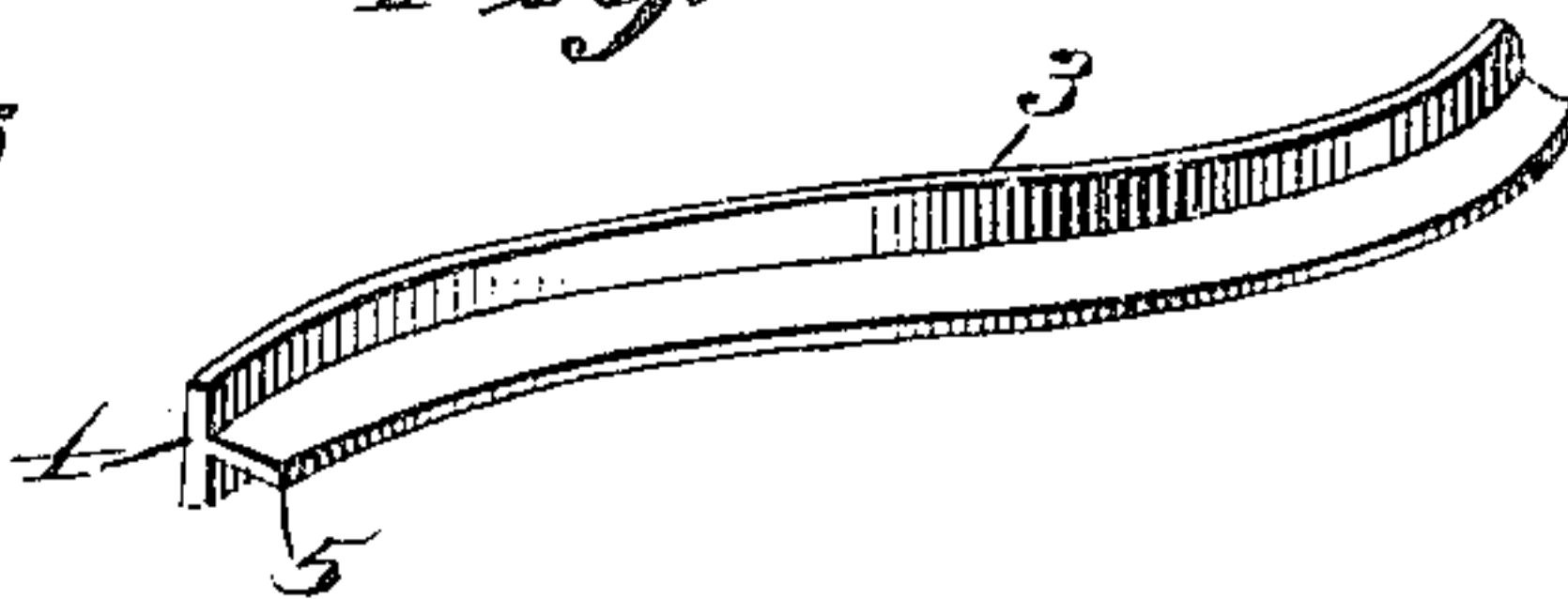
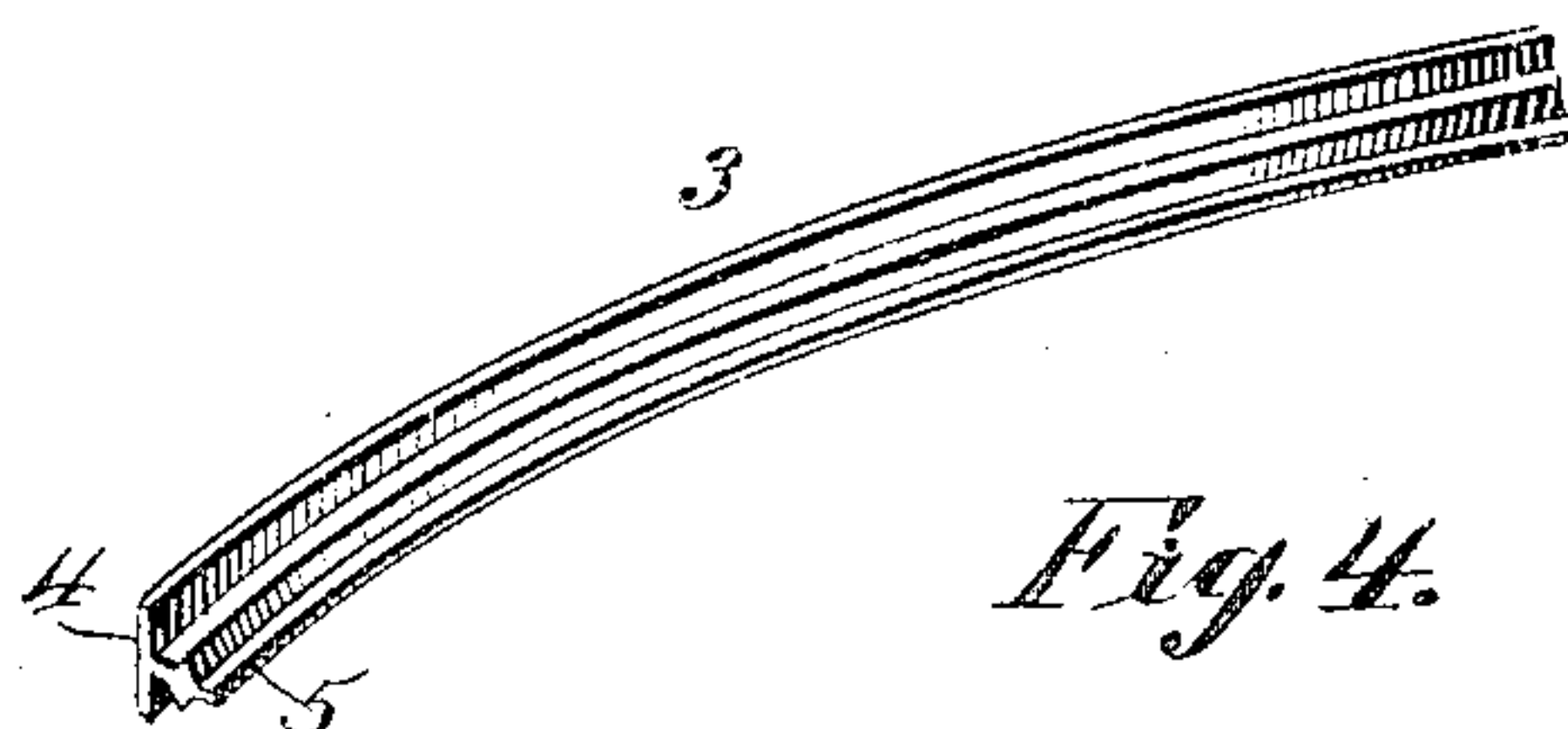


Fig. 4.



*Witnesses:*

F. G. Hachenberg.

Fred Maynard.

*Inventor:*

F. H. Richards.



# UNITED STATES PATENT OFFICE.

FRANCIS H. RICHARDS, OF HARTFORD, CONNECTICUT.

## GOLF-BALL.

No. 808,683.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed April 11, 1902. Serial No. 102,358.

*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 Golf-Balls, of which the following is a specification.

This invention relates to balls for use in certain games, as golf or the like, and more particularly to balls made according to Letters Patent No. 695,866, dated March 18, 1902. A ball according to that patent is constructed of a resilient shell filled with an elastic substance and held under compression by the shell.

The main object of the present invention is now to provide efficient interlocking means between the said shell and its filling; and its peculiar nature consists in the employment of an independent interlocking device at and within the joints of the shell.

Figure 1 of the drawings accompanying the present application and forming part thereof illustrates a complete ball, partially in section, showing the interlocking device. Fig. 2 shows the ball during one of its steps of manufacture. Figs. 3 and 4 illustrate some forms of the interlocking device.

Similar figures of reference indicate corresponding parts throughout the several views.

The outer part or shell 1 consists of a relatively hard but resilient material, such as celluloid or its substitutes, while the core or filling 2 consists of a relatively softer substance, but preferably also resilient and elastic, such as rubber, gutta-percha, or the like.

The core or filling is advantageously made of spherical form by means of dies and the use of suitable powerful presses. It may be made a trifle larger than the size required for the shell; but this is immaterial for the present case. It may also be a simple core, made of only one kind of material, or it may be a compound core consisting of a plurality of parts either of one kind or several kinds of material suitably united together; but all such modifications, so far as they show the substance of the present invention, are understood to be covered by and included within the scope of the same.

The shell 1 is made of hollow spherical segments, preferably two; but more segments could be used and united with the filling by the same locking means, which are now to be described. This locking means consists of a preferably T-shaped strip 3 of a length cor-

responding to the length of the periphery of a central cross-section of the ball. This strip 3 may be made of any suitable material which in a plastic state would weld with the material of the shell 1 and the filling 2 or the material of either one of them, or by a suitable adhesive could be cemented to the shell and filling. It therefore may be made of celluloid, rubber, gutta-percha, fabric, or any other material suitable for the purpose of uniting the constituent parts of the ball.

The strip 3 preferably consists of a flat portion 4, having on one side along its center line and at right angles thereto a rib portion 5. The width of this rib 5 should be equal to the thickness of the shell 1, but may vary according to different requirements. Its cross-section may be simply rectangular, as illustrated in Fig. 3, or it may be tapered or wedge-shaped, or patterned as shown in Fig. 4, in which case the shape of the rib 5 would provide additional securing means for the abutting portions of the shell 1.

The formation of the ball is accomplished by placing the filling 2 within the required number of shell-segments between suitable forming-dies 6 6. The locking-strip 3 is placed around the filling 2. Its rib 5 rests upon one of the edges of the shell 1. The shell 1, the locking-strip 3, and the filling 2 are then rendered plastic, so as to be capable of being united by heat and compression, or adjoining portions of any of the three parts—the filling, the shell, or the strip—may be cemented or otherwise prepared for adherence. When now the two forming-dies 6 6 are brought toward each other by applying great force, the filling 2 will be prevented from squeezing out between the shell edges and the dies by the surrounding locking-strip 3. Greater compression will thereby be given to the filling, and by finally forcing the abutting edges of the shell onto the rib 5 of the locking-strip great strength will be given to the joint. The joint does not alone depend upon the adhesion of the abutting edges of the shell and the rib between the same, but more so upon the adhesion of the outer peripheral side of the locking-strip proper along the inner side of the shell-segments adjoining the edges of the joint.

It will be noticed that the purpose of the locking device is trifold—namely, preventing the squeezing out between the edges of the shell of the filling material in its plastic condition during the formation of the ball, fastening the shell-joints to the filling, and fas-



tening abutting edges of the shell to each other, thereby tending to produce a ball having a filling at a high degree of compression and reinforced joints fully capable and efficient to withstand this compression or any impingement without cracking or parting.

Having described my invention, I claim—

1. A playing-ball comprising a filling, a shell and a locking device having an outwardly-extending portion.

2. A playing-ball comprising a filling, a plurality of shell-segments, and a locking device having an outwardly-extending portion adapted to be placed between the edges of the shell-segments.

3. A playing-ball comprising a filling, a shell, and a locking device having an outwardly-extending rib.

4. A playing-ball comprising a filling, a plurality of shell-segments, and a locking device having an extending rib.

5. In a playing-ball, a locking device consisting of a strip surrounding the core and having an outwardly-extending rib.

6. In a playing-ball, a locking device consisting of a flexible strip surrounding the core and having an outwardly-extending rib.

7. In a playing-ball, a locking device, consisting of a body portion surrounding a core

and having a rib extending outwardly at right angles to the body portion.

8. In a playing-ball, a locking device consisting of a body portion having an outwardly-extending molded and patterned rib.

9. In a playing-ball, a locking device consisting of a body portion surrounding a core and having an outwardly-extending rib adapted to be placed between the abutting edges of the shell of the ball.

10. In a playing-ball, a locking device consisting of a body portion between the core of the ball and the joints of the shell, and a rib extending between the edges of the joints.

11. In a playing-ball, a locking device, consisting of a body portion between the filling of the ball and the joints of the shell, and integrally with the body portion a rib extending between the edges of the joint.

12. In a playing-ball, a locking device having a body portion adapted to fasten the joints of the shell to the filling, and a rib extending between the edges of the joint and adapted to unite the same.

FRANCIS H. RICHARDS.

Witnesses:

RALPH JULIAN SACHERS,  
CHAS. H. DAVIDS.