No. 698,402. Patented Apr. 22, 1902.

E. KEMPSHALL.

GOLF BALL.

(Application filed Mar. 31, 1902.)

(No Model.)

Fig. 1.

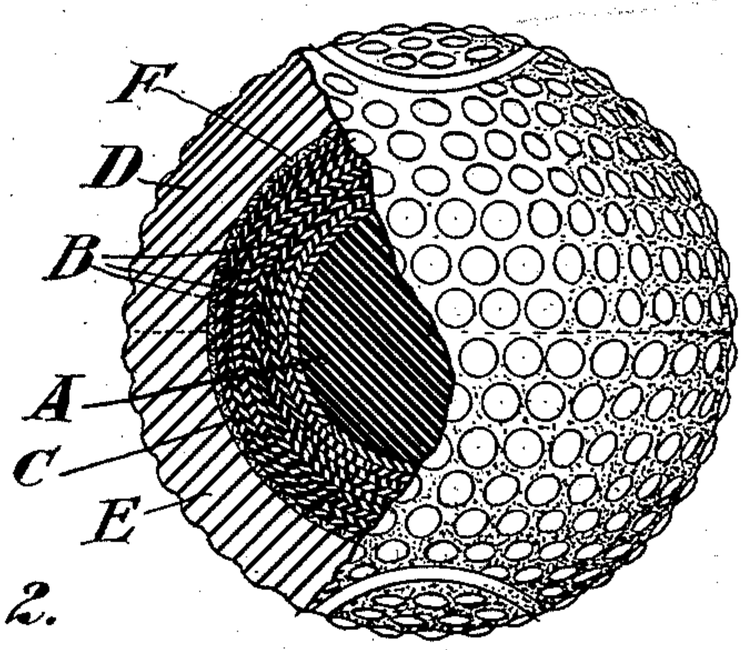


Fig. 2.

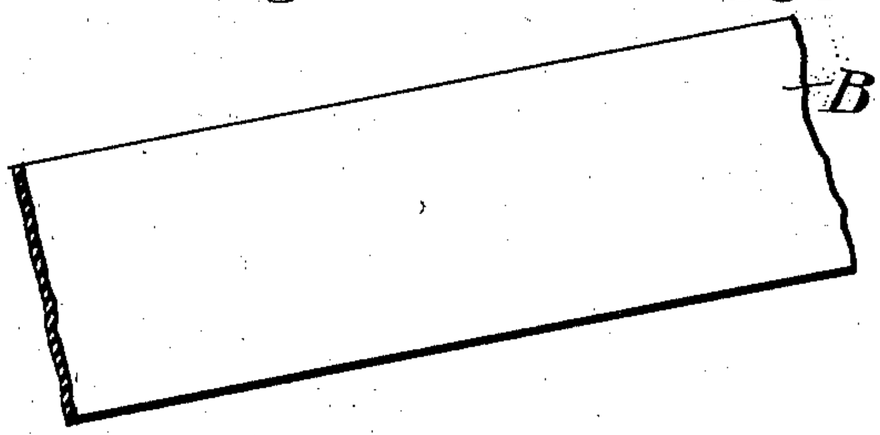
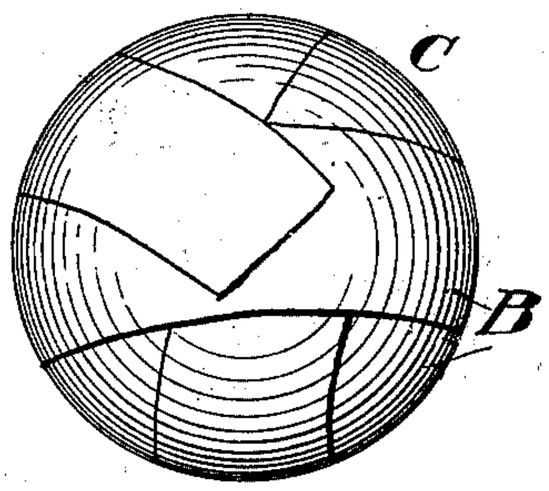


Fig. 3.



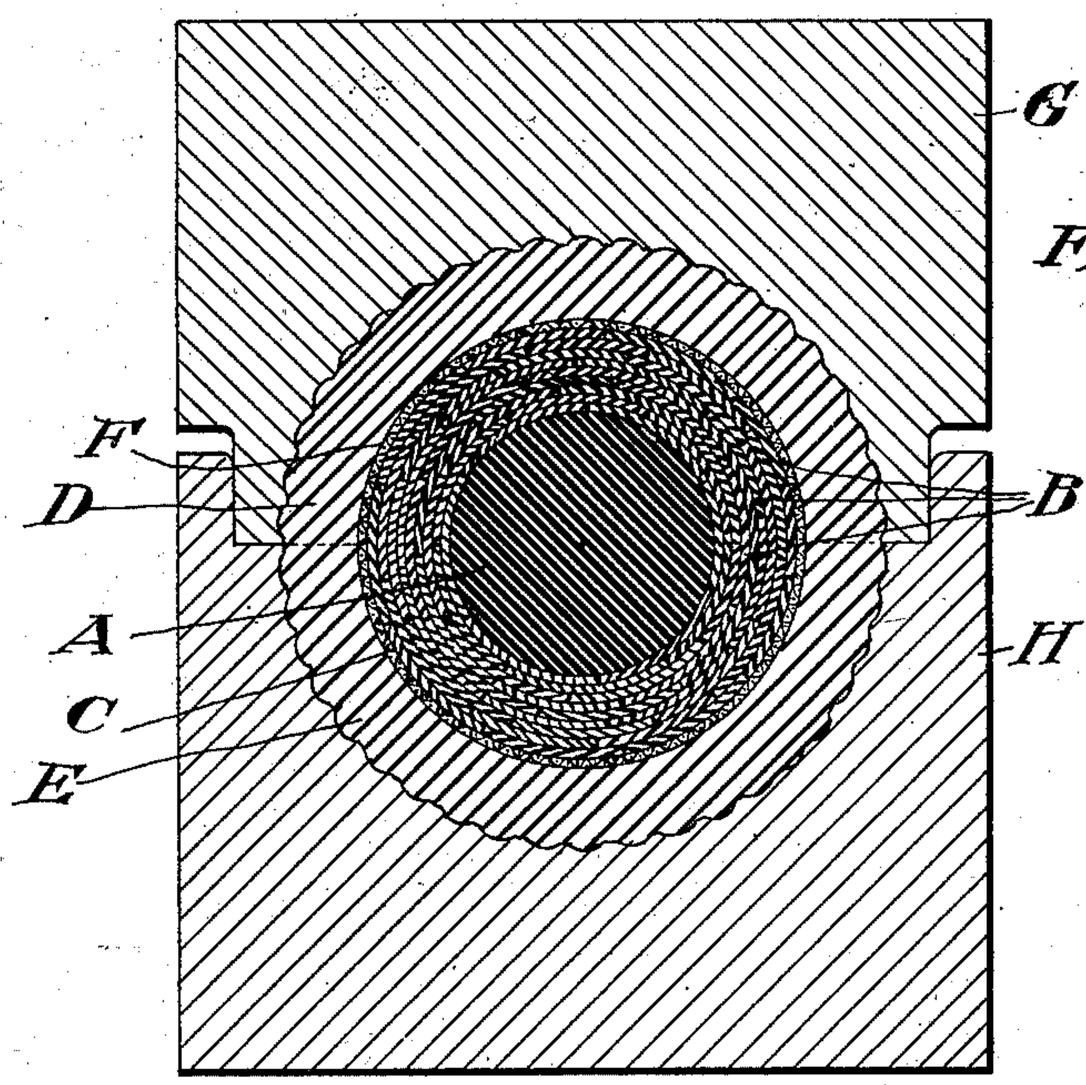


Fig. 4.

Witnesses:
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UNITED STATES PATENT OFFICE.

ELEAZER KEMPSHALL, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE KEMPSHALL MANUFACTURING COMPANY, A CORPORATION OF NEW JERSEY.

GOLF-BALL.

SPECIFICATION forming part of Letters Patent No. 698,402, dated April 22, 1902.

Application filed March 31, 1902. Serial No. 100,721. (No model.)

To all whom it may concern:

Be it known that I, ELEAZER KEMPSHALL, a citizen of the United States, residing in Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Golf-Balls, of which the following is a specification.

This invention relates to playing-balls, and especially to those used in the game of golf; and its object is to produce at low cost a superior ball.

Heretofore a golf-ball has been produced by winding thin rubber threads under tension to form a core, which has been inclosed in a shell of gutta-percha; but when the shell is cut through by an implement and some of the rubber threads are cut they quickly unravel, with the result that the wound portion of the ball flies to pieces or becomes so badly deranged as to be useless. My invention minimizes or overcomes this difficulty, while preserving all of the advantages of the wound-rubber-thread ball.

In the accompanying drawings, Figure 1 is a view, partly in section, of a ball made in accordance with my improvements. Fig. 2 shows a fragment of a rubber strip used in making the ball. Fig. 3 is a view of my improved core, and Fig. 4 illustrates the final stage in the manufacture of the ball.

In the several views similar parts are designated by similar characters of reference.

I preferably employ a springy center piece A, which may be rubber or gutta-percha, preferably the latter, and which is preferably somewhat less than one-half the diameter of the completed ball. Upon this center piece I wind a rubber band or bands B, layer over layer, under great tension, so as to form a core C, and upon this core I weld hemispherical segments D and E of plastic material, such as celluloid or gutta-percha, preferably the latter, said segments being preferably lined with fabric F and the welding being effected by heating and compressing between dies G and H, although the shell may be otherwise formed. The fabric may be omitted, if desired, although I prefer to use it because it reduces the liveliness of the ball when given a light blow in "putting." The wide bands B being under tension fit down snugly facewise upon the ball. Moreover when the shell is cut through by an implement the likelihood of one of the wide bands being entirely severed is minimized or eliminated, and hence there is practically no liability of the core flying to pieces, as is often the case with a tensioned-rubber-thread core. It will also be understood that owing to its great width each length of the band has a tenacious hold, so that even if severed it is not likely to unravel, and thus the ball will in practice have a much longer life than one made of rubber threads. Preferably the shell is compressed upon the core, so as to reduce the latter in bulk to a considerable extent, as at Fig. 4, and because of this condensation the efficiency of the ball as a whole is enhanced. A core made after the manner of my invention packs much closer than a core made of rubber threads, and hence is found in practice to be much more desirable, especially when held under compression by a plastic shell.

By employing the fabric lining F the ball is rendered less lively when given a light blow, while the shell is strengthened and there is less liability of an implement cutting through to the rubber core.

Various shells and center pieces may be used, and other variations may be resorted to within the scope of my improvements.

Having described my invention, I claim—

1. A playing-ball comprising a core which consists mainly of wide, solid rubber bands wound facewise under tension, and a shell of plastic material upon said core, said shell being lined with fabric.

2. A playing-ball comprising a core which consists mainly of wide, solid rubber bands wound facewise under tension, and a gutta-percha shell upon said core, said shell being lined with fabric.

3. In a playing-ball, the combination of a center piece; wide solid rubber bands wound facewise thereon to form the main part of a core, and a gutta-percha shell holding said core under compression.

4. In a playing-ball, the combination of a

center piece; wide solid rubber bands wound facewise thereon to form the main part of a core, and a gutta-percha shell compressed upon said core and provided with a fabric lining.

5. A playing-ball comprising a core and a shell; the said core being formed mainly of wide, solid, thin rubber bands wound facewise under high tension, and said shell being formed of plastic material lined with fabric and confining said core in reduced bulk.

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Witnesses:
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