

No. 699,093.

Patented Apr. 29, 1902.

E. KEMPSHALL.
GOLF BALL.

(Application filed Apr. 2, 1902.)

(No Model.)

Fig. 1.

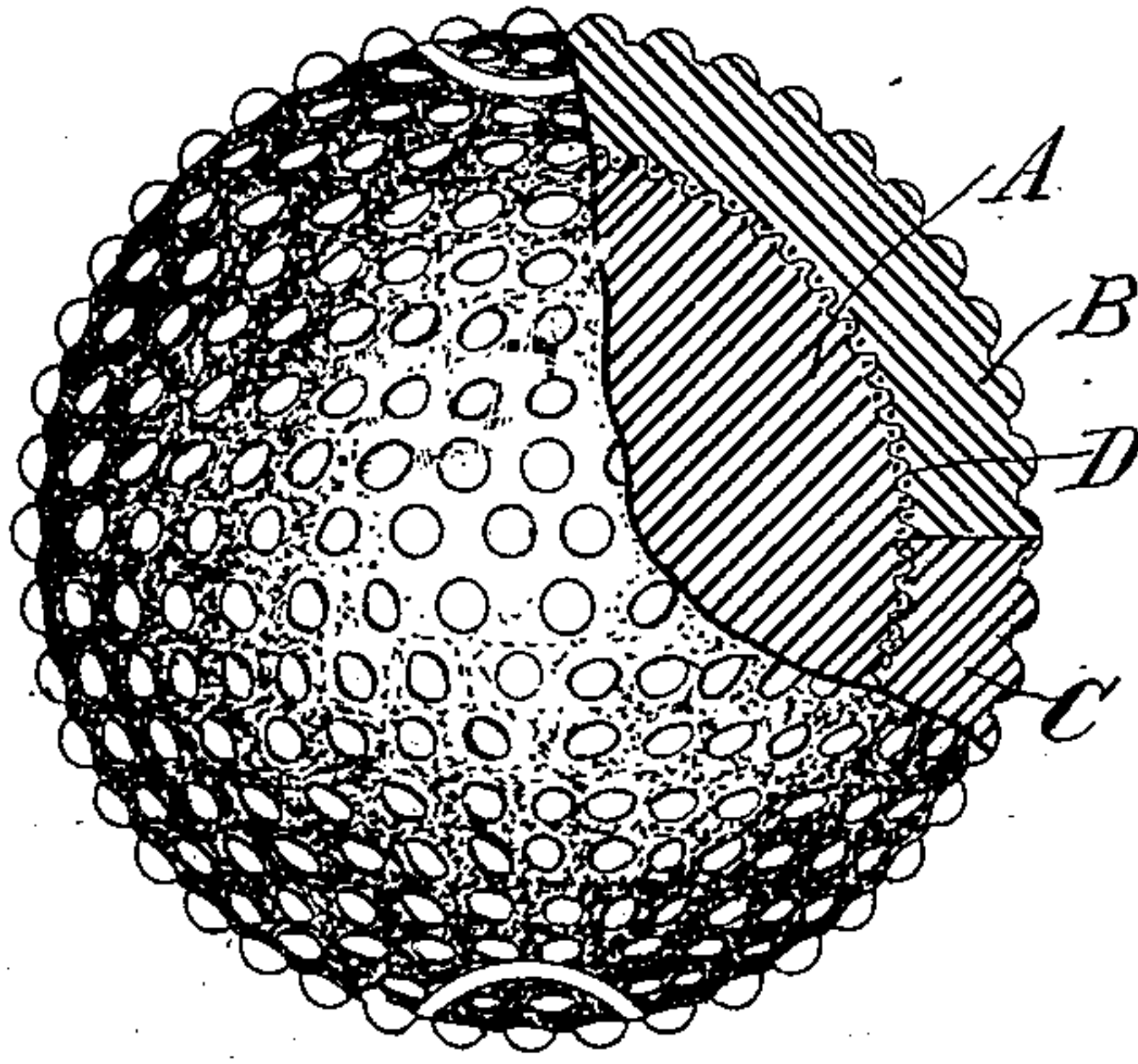
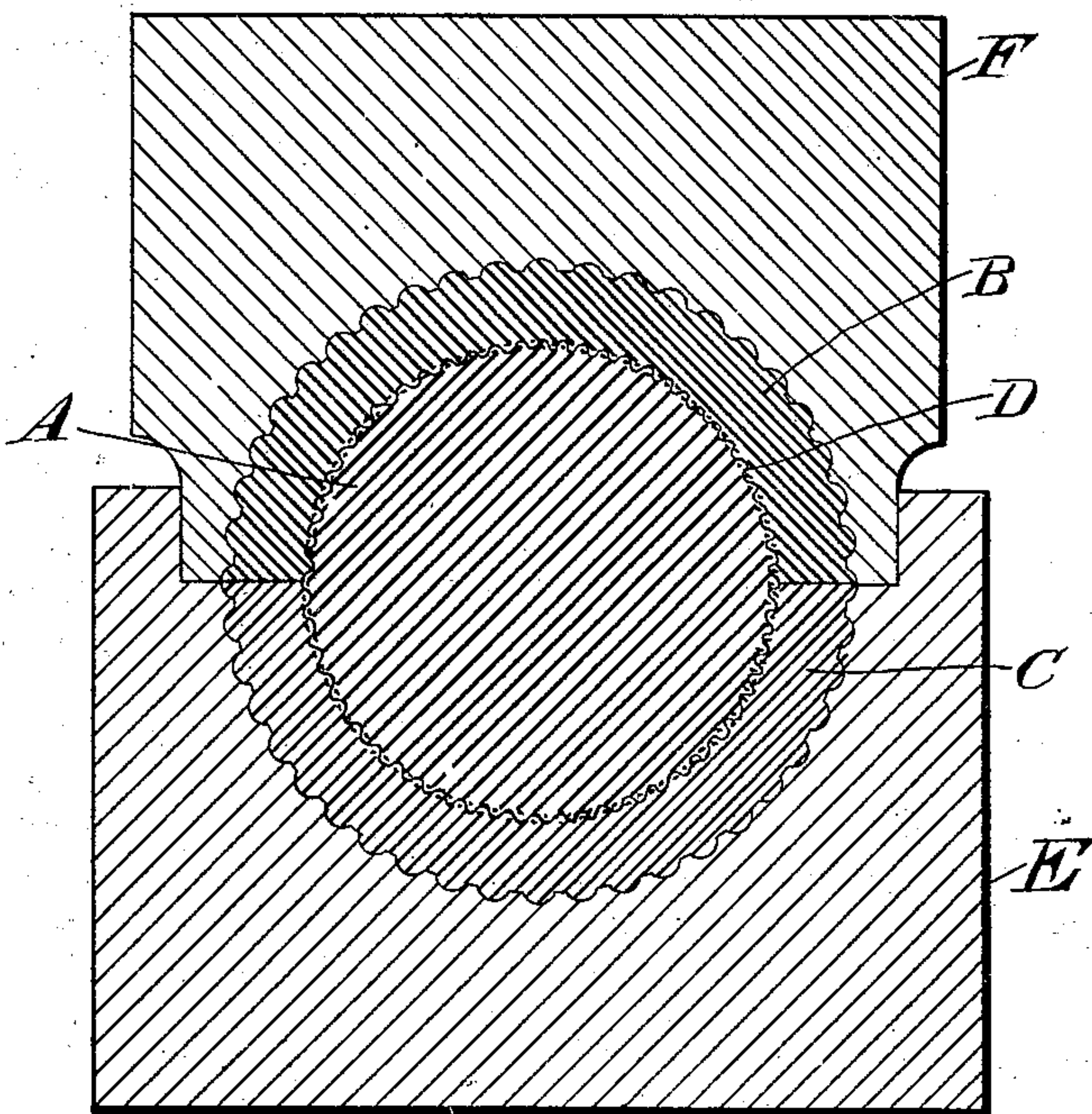


Fig. 2.



Witnesses:

Herbert J. Smith
G. E. Maynard

Inventor:

Eleazer Kempshall.
By his Attorney,
F. H. Richards.

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. 699,093, dated April 29, 1902.

Application filed April 2, 1902. Serial No. 101,066. (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 balls for use in golf and other games; and its objects are to improve the quality and efficiency of the balls and also to provide for producing balls of uniform and reliable quality at very low cost.

Referring to the drawings, forming part of this specification, Figure 1 is a view, partly in section, of a ball made according to my present improvements and partly broken away. Fig. 2 illustrates the preferred method of manufacturing the balls.

Similar letters of reference designate like parts in the figures.

I produce a center piece (designated by A) of the required size and shape of highly-compacted gutta-percha, although other hard material may be used. This center piece or filling is preferably somewhat too bulky for the capacity of the finished shell, which I make of well seasoned and compacted gutta-percha of high quality, and I preferably form the same of two hemispherical segments (designated in Fig. 2 by B and C, respectively) and lined with fabric D. The center piece A is placed between said segments, and these assembled parts are placed between heating-dies E and F, whereby the shells are forced together and welded.

The compression of the ball is maintained while the shell cools and hardens, so that the latter may hold the ball under permanent compression or grip. It is not essential in all cases that the core be condensed in bulk, so long as when the ball is finished the core is powerfully gripped by the shell, thereby enabling shell and core to act conjointly, and hence vastly improving the playing qualities of the ball.

By the compressing and heating operation the gutta-percha, particularly that of the shell, is further compacted or solidified and put into better condition to resist damage,

and the core is preferably put under considerable compression, and thereby rendered exceedingly sensitive in responding to a blow from an implement. Owing to its compression said core is more resisting, and when struck it sooner reaches the limit of compression, so that less force is wasted in changing and rechanging the shape of the ball and more momentum is acquired by the ball from the implement.

Owing to the separate preparation by heating and compression of the core and the shell, the liability to permanent distortion of the ball, which is a common fault of solid gutta-percha balls, is avoided. The compressed core gives an even resistance at all portions of the shell, so that a reliable and uniform action of the ball is secured. Thus at low cost I produce a solid gutta-percha ball of improved quality.

By the provision of the fabric lining D for the shell undue heating of the core A at the welding operation is avoided and the softened segments are prevented from breaking down. In the completed ball the fabric is a buffer between the shell and the core, so that a light blow cannot unduly affect the latter, so that the ball acts well in "putting." Moreover, the fabric improves the stability of the ball as a whole.

Having described my invention, I claim—

1. A playing-ball comprising a substantial gutta-percha shell lined with fabric and a one-part solid core made of plastic material and powerfully gripped by said shell.

2. A playing-ball comprising a substantial gutta-percha shell lined with fabric and a core of gutta-percha filling said shell.

3. A playing-ball comprising a substantial gutta-percha shell lined with fabric and a one-part solid core of gutta-percha held under permanent compression by said shell.

4. A playing-ball consisting wholly of spheres of gutta-percha and fabric.

5. A playing-ball comprising a fabric-lined gutta-percha shell consisting of welded segments, and a solid sphere consisting entirely of gutta-percha filling said shell and held under compression thereby.

6. A playing-ball consisting of a highly-

compacted shell built up from gutta-percha segments and lined with fabric, said segments being welded edge to edge, and a filling consisting of gutta-percha powerfully gripped by said shell.

5 7. A playing-ball comprising a shell built up of highly solidified or compacted thick fabric-lined hemispherical sections of well-seasoned gutta-percha, and a one-part core of
10 highly-compacted gutta-percha held under compression by said shell.

8. A playing-ball comprising a highly-compacted substantial fabric-lined gutta-percha shell and a core of highly-compacted gutta-percha powerfully gripped by said shell; the diameter of said sphere being about one-half
15 that of the complete ball.

ELEAZER KEMPSHALL.

Witnesses:

B. C. STICKNEY,
JOHN O. SEIFERT.