

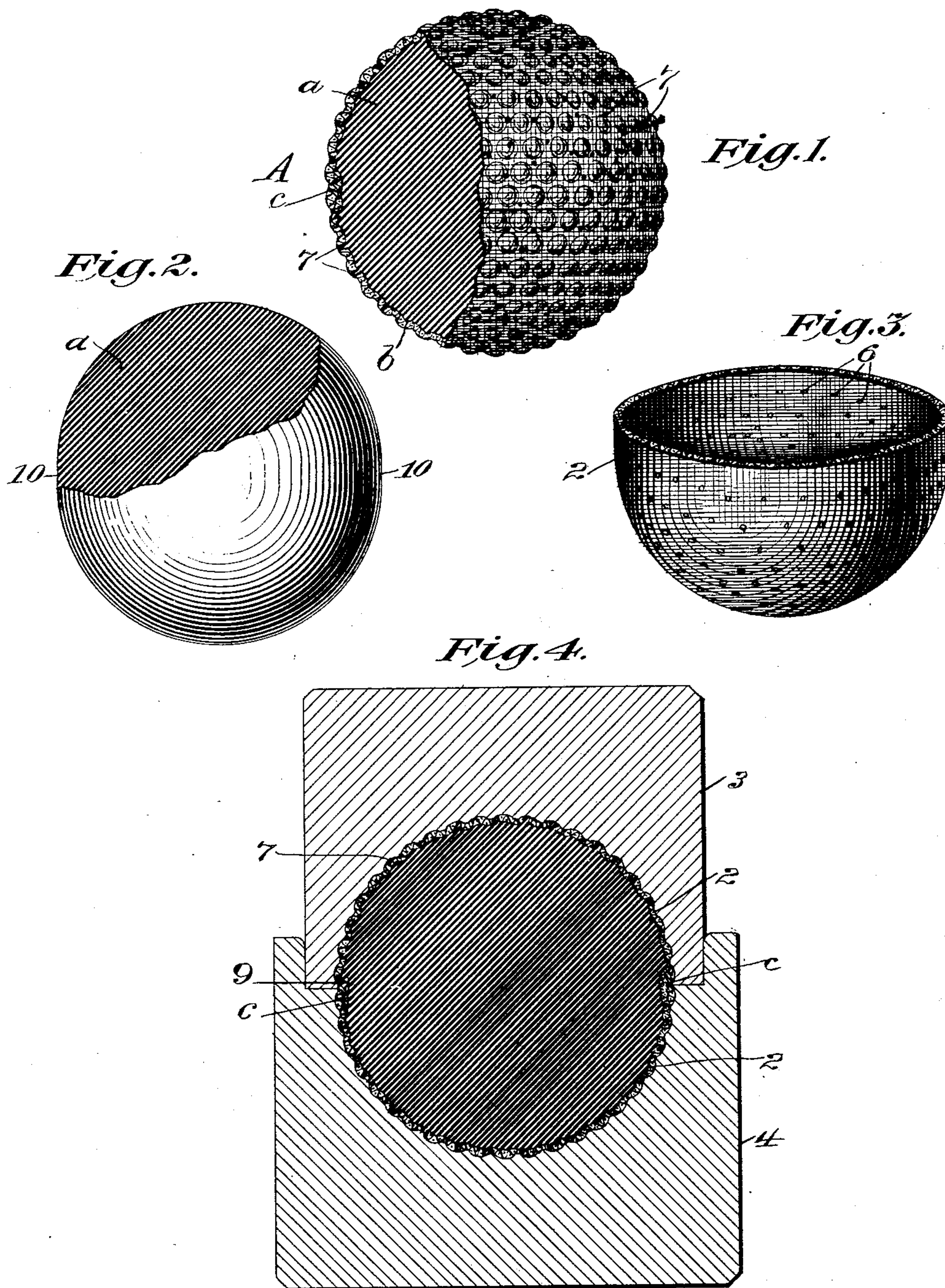
No. 702,799.

Patented June 17, 1902.

E. KEMPSHALL.
PLAYING BALL.

(Application filed Apr. 15, 1902.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

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PLAYING-BALL.

SPECIFICATION forming part of Letters Patent No. 702,799, dated June 17, 1902.

Application filed April 15, 1902. Serial No. 103,008. (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 Playing-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 improve the stability and playing qualities of the ball.

In the drawings forming part this specification, Figure 1 is a part-sectional view of a finished playing-ball embodying my present invention, and Fig. 2 is a similar view of the center of the ball previous to application thereto of the cloth case or cover. Fig. 3 is a perspective view of one of the hemispherical sections of which my improved case or cover for the ball is preferably constituted. Fig. 4 is a sectional view representing one means which may be employed in the process of manufacture of my improved playing-ball.

Before proceeding with a more detailed description it may be stated that I provide a playing-ball, of gutta-percha or similar material, having a case or cover of cloth applied thereto under heat and compression, the fibers of the cloth being embedded in the surface of the ball, while portions of the material of which the ball is constituted are squeezed or forced outwardly through the interstices or meshes of the cloth in such manner as to lock or fasten the cover upon the ball.

Specific reference being had to the accompanying drawings by the designating characters marked thereon, A, Fig. 1, represents a finished ball embodying my present improvements, said ball comprising a body or center *a* of suitable hard resilient material, preferably gutta-percha, and an outer casing or cover *b* of suitable woven material, such as cloth, the said casing or cover *b* being applied to the said body or center *a* in any suitable manner. Preferably I apply the casing to the body or center in the form of hemispherical segments 2 2 and by means of compression between heated dies 3 and 4, as shown in Fig. 4, for instance. When the ball structure is subjected to the action of the dies, the mate-

rial of the body or center *a* is softened or rendered semiplastic by the heat of said dies, the fibers of the cloth casing or cover becoming impressed in the surface of the said body or center, while portions of such material are forced or squeezed outwardly through the interstices of the cloth, thus locking the casing or cover in place. Inasmuch as the ball may be subjected to severe usage in the game, it is desirable that the said casing or cover therefor shall have no tendency whatever to buckle up and that no slipping or displacement thereof take place upon the body or center, and as a means of securely fastening the casing or cover to the body or center I preferably construct each of the hemispherical sections 2 2 of the former with comparatively small holes or openings 6, substantially as shown in Fig. 2, said holes or openings being evenly distributed throughout the whole extent of said hemispheres. As thus constructed, additional means are provided for a positive interlocking engagement between the cover and the body or center, since additional portions 7, Fig. 1, of the material of the latter will be forced into such holes or openings under compression of the dies, as is apparent. The ball may, if desired, be subsequently painted or colored to conceal said portions from view, or the said portions may be allowed to appear, as shown in Fig. 1.

I prefer to unite the edges of the hemispherical segments of the casing or cover telescopically, as indicated at 9, Fig. 4; but it is apparent that such edges may be simply brought together, so as to meet at the approximate equatorial line of the ball. Preferably I employ the construction shown, and in order to render the joint secure I usually apply a suitable cement *c*, Fig. 4, thereto to fasten the edges together. Portions of the material of the body or center are squeezed outwardly through both thicknesses of the cover under the action of the dies.

Variations may be made from the details of construction herein shown and described and still be within the scope of my invention.

Having described my invention, I claim—

1. A playing-ball comprising a cloth-covered sphere of plastic material, said cover con-

sisting of telescoped hemispherical sections cemented together and embedded in the plastic material and having apertures into which the plastic material protrudes.

- 5 2. A playing-ball comprising a cloth-covered solid sphere of gutta-percha, said cover consisting of telescoped hemispherical sec-

tions and being embedded in the gutta-percha and having apertures into which the gutta-percha protrudes.

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Witnesses:

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