

No. 701,739.

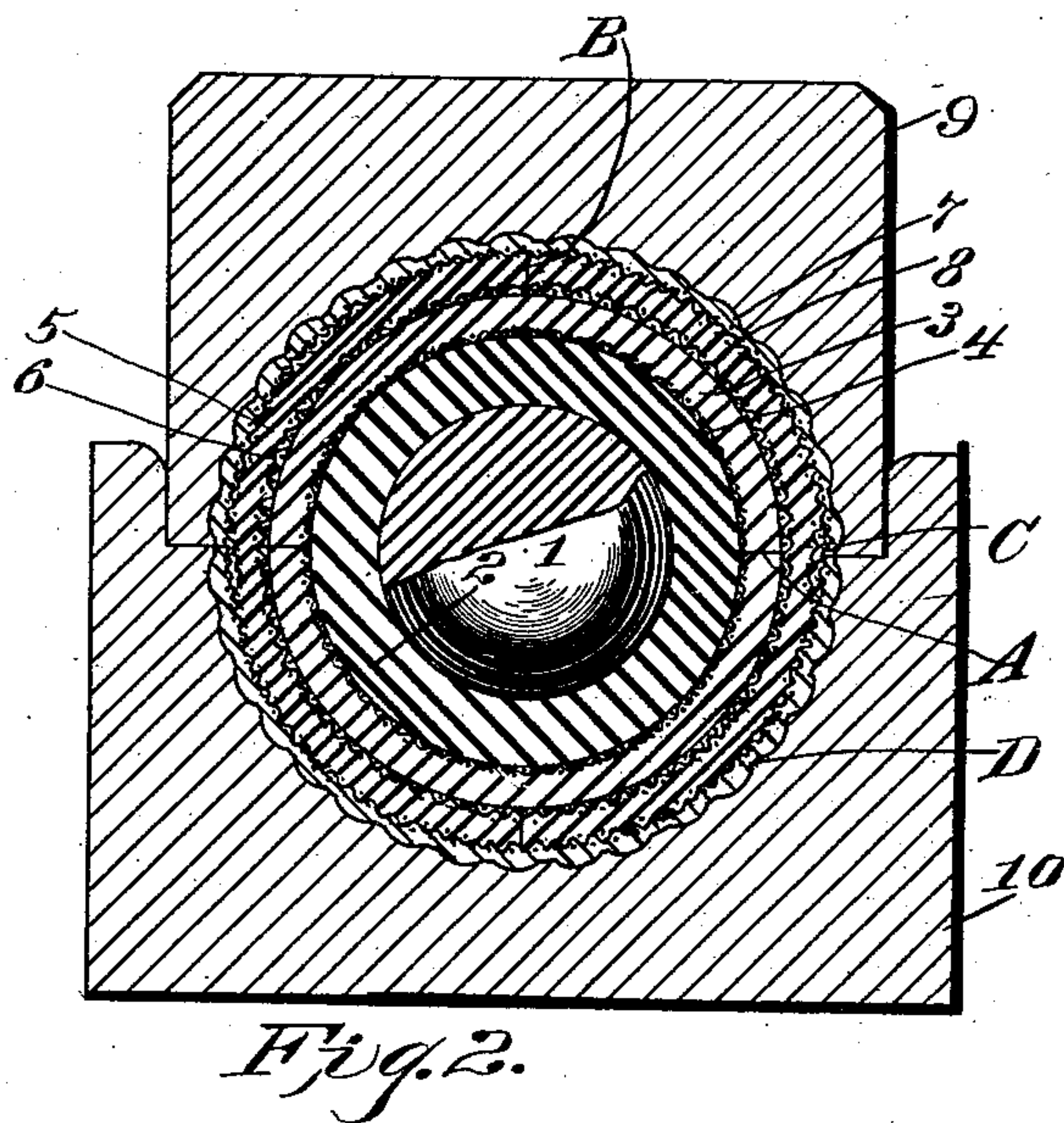
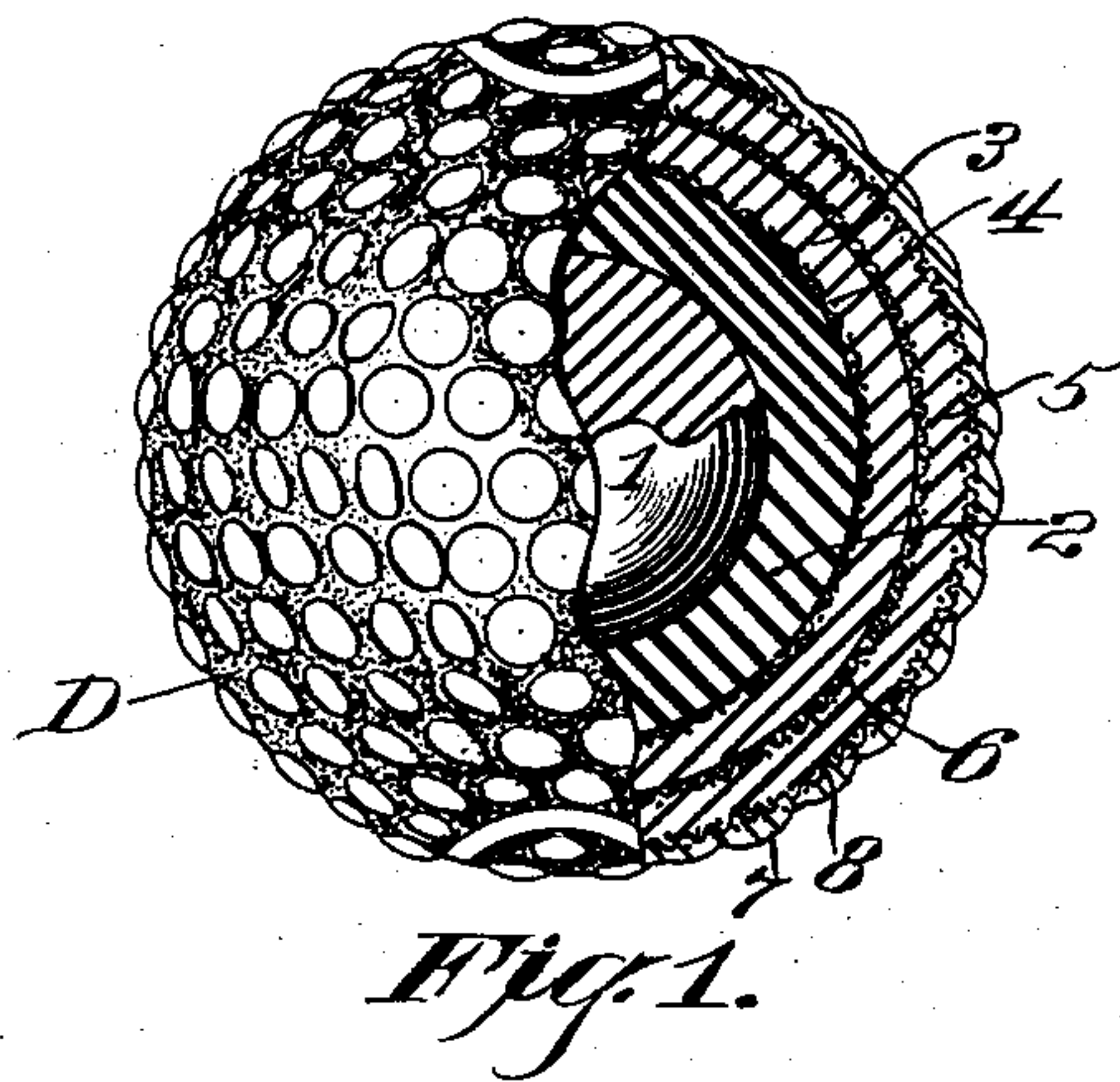
Patented June 3, 1902.

E. KEMPSHALL.

GOLF BALL.

(Application filed Apr. 23, 1902.)

(No Model.)



Witnesses:

G. W. Pratt.

Fred. Maynard.

Inventor:

Eleazer Kempshall.

By his Attorney

J. 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. 701,739, dated June 3, 1902.

Application filed April 23, 1902. Serial No. 104,317. (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 its object is to produce a ball having strength, flying power, and other qualities which render it especially desirable for use in the game of golf.

In the accompanying drawings, Figure 1 is a part-sectional view showing my improved ball, and Fig. 2 is a sectional view of the last stage in the process of manufacture thereof.

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

For the filling I prefer to use a gutta-percha or other hard center piece 1, inclosed in a soft-rubber envelop 2, and upon this filling I apply a spherical layer 3, of gutta-percha, lined with fabric 4, outside of which I place a second layer 5, of gutta-percha, lined with fabric 6. The fabric lining 4 is preferably cemented to the rubber 2. For the casing of the ball I use a thin layer of celluloid 7, lined with fabric 8.

The inner layer of fabric-lined gutta-percha may be applied in the form of hemispherical segments welded at A, and the outer layer of fabric-lined gutta-percha may be similarly applied, the weld being indicated at B and crossing the weld A at right angles, so that the body of one layer strengthens the weld of the other layer. The celluloid and fabric casing may be applied in the form of telescoping or overlapping cups, the lapping of the fabric being indicated at C. The celluloid penetrates the meshes of the fabric, so that the lap forms a substantial joint, while the entire lining 8 of the celluloid casing forms a reinforcement for the weld B of the outer gutta-percha layer. The body of the latter also reinforces the joint C of the casing D.

The final stage in the process of making the ball is indicated in Fig. 2, in which the same is shown as being compressed in heating-dies 9 and 10, whereby the celluloid segments are welded together and compressed upon the inner shell layers and the ball is given its final

form, the pressure of the dies being maintained while the shell cools and hardens. The inner shell layers 3 and 5 may be previously applied in a similar manner.

Owing to the presence of the several layers of fabric both the gutta-percha and celluloid components of the general shell are strengthened, so that the ball possesses phenomenal durability. By the use of celluloid for the surface or cover of the ball great advantage is gained in its flying power and otherwise. The fabric also serves to deaden the ball sufficiently to make it excellent for "putting" without appreciably decreasing the flying power or springiness of the ball when given a hard blow. I regard the dividing of the gutta-percha-shell component into two layers by the fabric lining 6 as a feature of great value.

Having described my invention, I claim—

1. A playing-ball comprising a rubber sphere, a layer of gutta-percha thereon, a layer of fabric-lined gutta-percha upon said first layer, and a casing of fabric-lined celluloid upon said second gutta-percha layer.

2. A playing-ball comprising a rubber sphere, a layer of gutta-percha thereon, a layer of fabric-lined gutta-percha upon said first layer, and a casing of fabric-lined celluloid upon said second gutta-percha layer; said gutta-percha and celluloid layers holding said celluloid sphere under compression.

3. A playing-ball comprising a hard center piece, a rubber sphere thereon, a fabric-lined gutta-percha layer upon said sphere, a second fabric-lined gutta-percha layer upon said first layer, and a fabric-lined celluloid layer upon said second layer.

4. A playing-ball comprising a hard center piece, a rubber sphere thereon, a fabric-lined gutta-percha layer upon said sphere, a second fabric-lined gutta-percha layer upon said first layer, and a fabric-lined celluloid layer upon said second layer, each of said gutta-percha layers consisting of welded hemispherical segments.

5. A playing-ball comprising a hard center piece, a rubber sphere thereon, a fabric-lined gutta-percha layer upon said sphere, a second fabric-lined gutta-percha layer upon said first layer, and a fabric-lined celluloid layer upon said second layer; each of said gutta-percha

layers consisting of welded hemispherical segments, and the welds of said segments crossing each other, so that the body of one layer reinforces the weld of the other.

5 6. A playing-ball comprising a hard center piece, a rubber sphere thereon, a fabric-lined gutta-percha layer upon said sphere, a second fabric-lined gutta-percha layer upon said first layer, and a fabric-lined celluloid layer upon
10 said second layer; each of said gutta-percha layers consisting of welded hemispherical segments, the welds of said segments crossing each other, so that the body of one layer reinforces the weld of the other; and said cel-
15 loid casing consisting of telescoped hemispherical cups welded upon said second gutta-percha layer.

7. A playing-ball comprising a hard center

piece, a rubber sphere thereon, a fabric-lined gutta-percha layer upon said sphere, a second 20 fabric-lined gutta-percha layer upon said first layer, and a fabric-lined celluloid layer upon said second layer; each of said gutta-percha layers consisting of welded hemispherical seg- 25 ments, the welds of said segments crossing each other, so that the body of one layer reinforces the weld of the other; and said celluloid casing consisting of telescoped hemispherical cups welded upon said second gutta-percha layer; the joint or weld of said casing 30 running crosswise of the weld in said second gutta-percha layer.

ELEAZER KEMPSHALL.

Witnesses:

B. C. STICKNEY,
JOHN O. SEIFERT.