

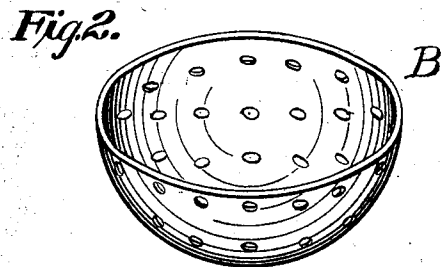
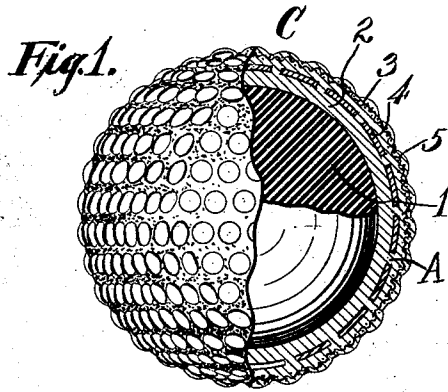
No. 705,249.

Patented July 22, 1902.

**E. KEMPSHALL.  
PLAYING BALL.**

(Application filed June 14, 1902.)

(No Model.)



*Witnesses*  
*Herbert J. Smith*  
*Geo. C. Maynard.*

*Inventor:*  
*Eleazer Kempshall*  
*By his Attorney J. A. Richards.*

# UNITED STATES PATENT OFFICE.

ELEAZER KEMPSHALL, OF BOSTON, MASSACHUSETTS.

## PLAYING-BALL.

SPECIFICATION forming part of Letters Patent No. 705,249, dated July 22, 1902.

Application filed June 14, 1902. Serial No. 111,775. (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, especially those intended for the game of golf; and its object is to improve the construction, with a view to rendering the shell more stable and increasing the flying power of the ball.

In the drawings forming part of this specification, Figure 1 is a part-sectional view of a ball made in accordance with my present improvements, and Fig. 2 shows a hemispherical perforated blank of metal or other hard springy material.

In the preferred manner of practicing my invention I inclose a filling, preferably of soft rubber, although gutta-percha may be used, and in the form of a solid sphere 1, in a shell which consists of inner and outer layers 2 and 3 of plastic material (preferably celluloid) and an intervening perforated layer 4 of more stable material, preferably metal, the celluloid filling the perforations, as at A. At Fig. 2 is shown a hemispherical segment B, a pair of which may be employed to form the layer 4 of the shell. The outer layer 3 of celluloid preferably incases a layer of woven fabric 5. The shell, including the parts 2, 3, 4, and 5 and designated in a general way by C, preferably holds the filling 1 under a high degree of compression.

By means of the hard insertion 4 the gutta-percha shell is greatly reinforced, so that liability of the shell becoming misshapen when given a heavy blow is minimized, while said layer 4, owing to the perforations, is somewhat flexible, thereby yielding when the ball is struck and by reason of its resilience aiding materially in the flight thereof. It will also be seen that the compound shell by reason of being mounted upon a yielding sphere or filling is supported and reinforced throughout, thereby producing a nearly indestructible ball, all of the parts whereof conduce to its flying power, while the compound shell is sufficiently stiff to render the ball dead under a light blow.

Portions of my invention may be used without others—as, for instance, the fabric in the outer celluloid layer may be omitted or gutta-percha may be substituted for the celluloid, and it will further be understood that so long as a hard perforated layer is embedded within a gutta-percha shell and near the periphery thereof it is not essential always that said sphere be provided with a center piece, as 1, nor that it be always in the form of a shell.

Having described my invention, I claim—

1. A playing-ball comprising a sphere of plastic material in which is embedded a perforated shell of metal; said shell being close to the periphery of said sphere, and also inclosing a portion of said sphere.

2. A playing-ball comprising a celluloid shell in which is embedded a perforated shell of metal; said shell being between the outer and inner sides of said celluloid shell, and the latter being provided with a filling.

3. A playing-ball comprising a celluloid shell in which is embedded a perforated shell of metal; said metal shell being between the outer and inner sides of said celluloid shell, and the latter being provided with a filling, and holding said filling under compression.

4. A playing-ball comprising a celluloid shell between whose outer and inner surfaces is embedded a shell of metal; said metal shell being close to the periphery of said celluloid shell, and the latter being also provided with fabric.

5. A playing-ball comprising a celluloid sphere in which is embedded a sphere of perforated metal; said metal sphere being close to the periphery of said celluloid sphere, and the latter being filled with a sphere of soft rubber which is held under compression by said celluloid shell.

6. A playing-ball comprising a shell of celluloid in which is embedded a shell of perforated metal; said metal shell being between an inner and an outer surface of said celluloid shell, and the latter being provided with a filling, and being also reinforced by a layer of fabric.

ELEAZER KEMPSHALL.

Witnesses:

B. C. STICKNEY,  
F. W. BARNACLO.