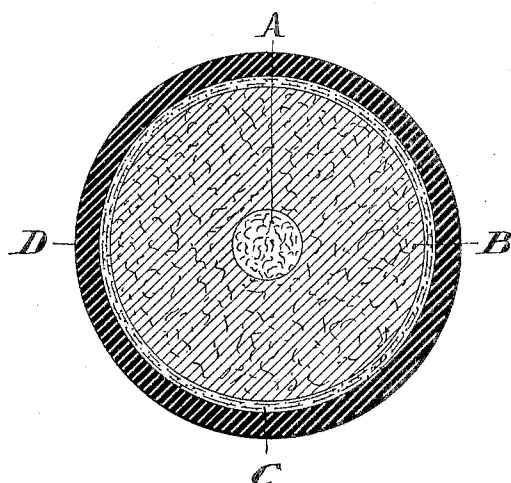


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PATENTED AUG. 22, 1905.

R. G. WINGFIELD.
PLAYING BALL.

APPLICATION FILED NOV. 11, 1903.



WITNESSES:

Arthur E. Page
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UNITED STATES PATENT OFFICE.

ROBERT G. WINGFIELD, OF NORTH WALES, PENNSYLVANIA.

PLAYING-BALL.

No. 737,654.

Specification of Letters Patent.

Patented Aug. 22, 1905.

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To all whom it may concern:

Be it known that I, ROBERT G. WINGFIELD, a citizen of the United States, residing at North Wales, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Playing-Balls, of which the following is a specification, reference being had to the accompanying drawing, which represents a cross-section cut through the center of a ball embodying my invention.

This invention relates especially to those playing-balls used in the games of base-ball and cricket; and its objects are to increase the strength and durability of the balls, to render them waterproof, and by the use of a seamless cover to avoid the liability to rip or tear at the seam, which is a defect of the common ball now in general use.

A further object is to lessen the cost of manufacture by the use of cheap materials.

In the accompanying drawing the center or core A is preferably composed of hair tightly compressed into a spherical form and constituting a relatively small proportion of the volume of the finished ball. The core, however, may be formed of any substance suitable for the purpose. On this center or core I wind layer upon layer of cotton, linen, or woolen thread which has been coated with rubber, celluloid, or other vulcanizing-cement, in the preferred form of my invention using cotton thread and rubber-cement. This stratum of thread B constitutes the major part of the ball and is wound under high tension to produce the proper degree of hardness and elasticity, and upon the thread is wound a thin layer C, of muslin or other fabric, in a strip about one inch wide and distributed uniformly, so that every part of the ball is covered with an equal thickness. The muslin is coated with vulcanizing-cement similar to that used on the thread, and the ball receives a

cover D, consisting of a homogeneous mixture of raw cotton, ground leather, and vulcanizing-cement, which is worked upon the ball as a plastic mass of uniform thickness, free from all seams or breaks. The completed ball is then lightly coated with the cement and placed in a spherical mold of the proper diameter and heated, so as to vulcanize the cement throughout the entire ball. The elements composing the cover are mixed in approximately equal parts, though the proportion of ground leather varies in accordance with the degree of hardness desired, and if this proportion is small I apply it by sifting or dusting upon the ball after a thin layer of the mixture of raw cotton and cement has been applied and before the cover has been built to the desired thickness.

The surface of the ball, if desired, may be indented by the use of suitable molds to correspond with the seams on balls having sewed covers.

My improved ball, owing to the cement used throughout its structure, has every part in rigid relation to every other part, is highly elastic, and the cover, in addition to possessing great strength and toughness, is absolutely waterproof. Moreover, it can be made of a weight and diameter generally recognized as standard, and the materials of which it is composed are cheap and readily procurable.

Having described my invention, I claim—

A playing-ball comprising a core, windings of thread thereon coated with vulcanizing-cement, a layer of narrow strips of fabric coated with vulcanizing-cement and a vulcanized seamless cover consisting of a mixture of raw cotton, ground leather and vulcanizing-cement.

ROBERT G. WINGFIELD.

Witnesses:

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