

No. 712,611.

Patented Nov. 4, 1902.

A. R. SPEAR.

GOLF BALL.

(Application filed Sept. 8, 1902.)

(No Model.)

Fig. 1.

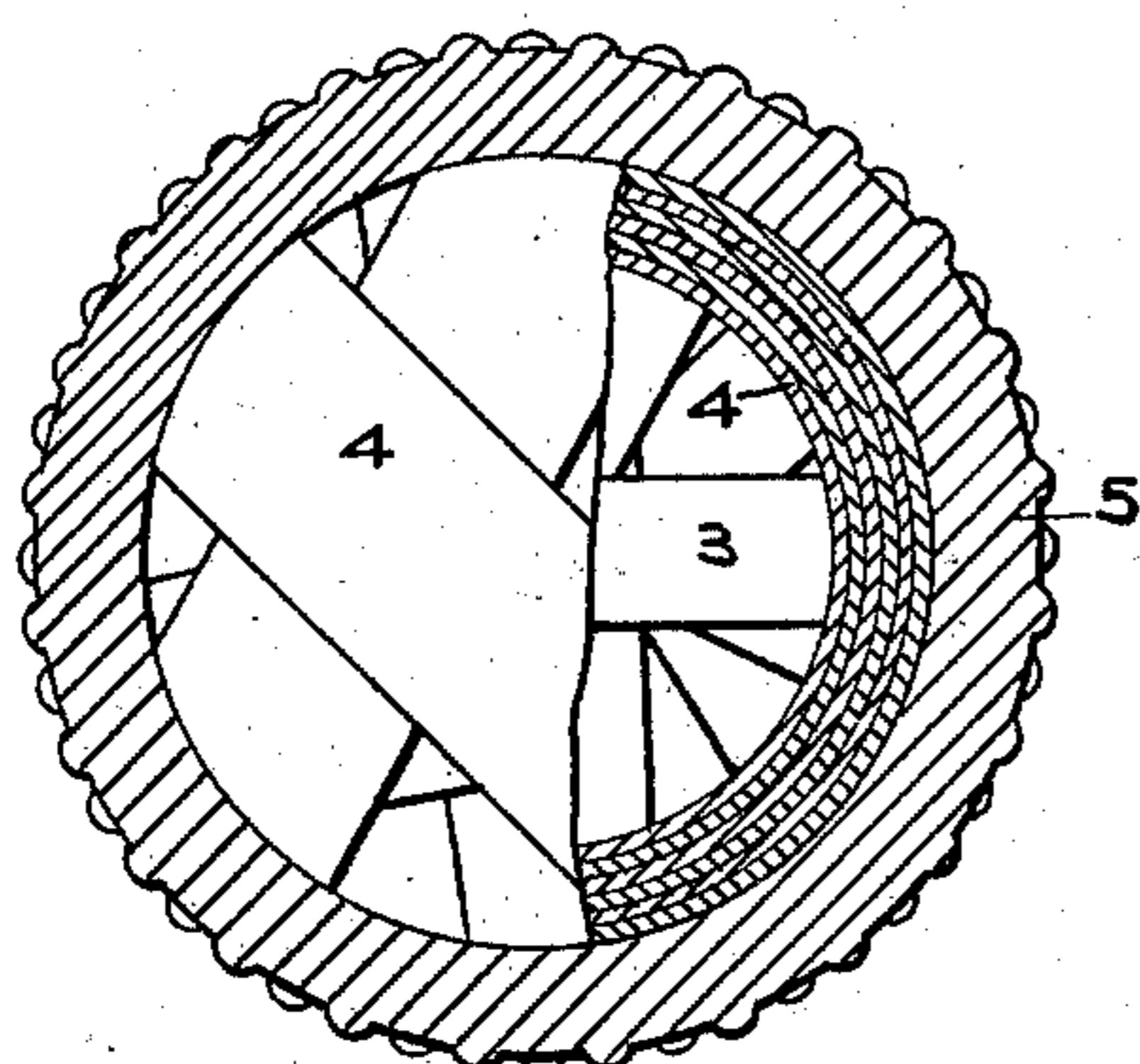


Fig. 2.

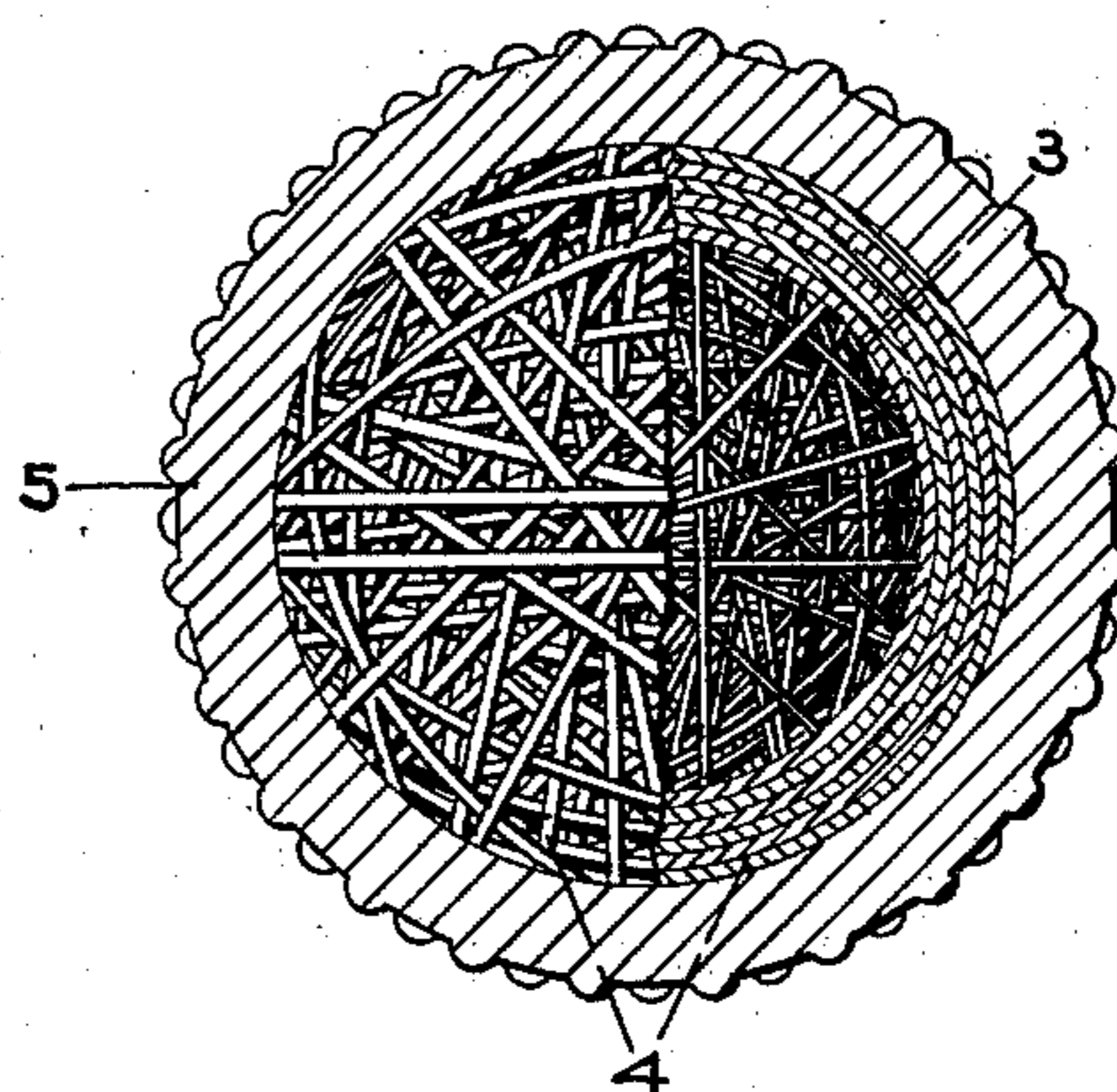
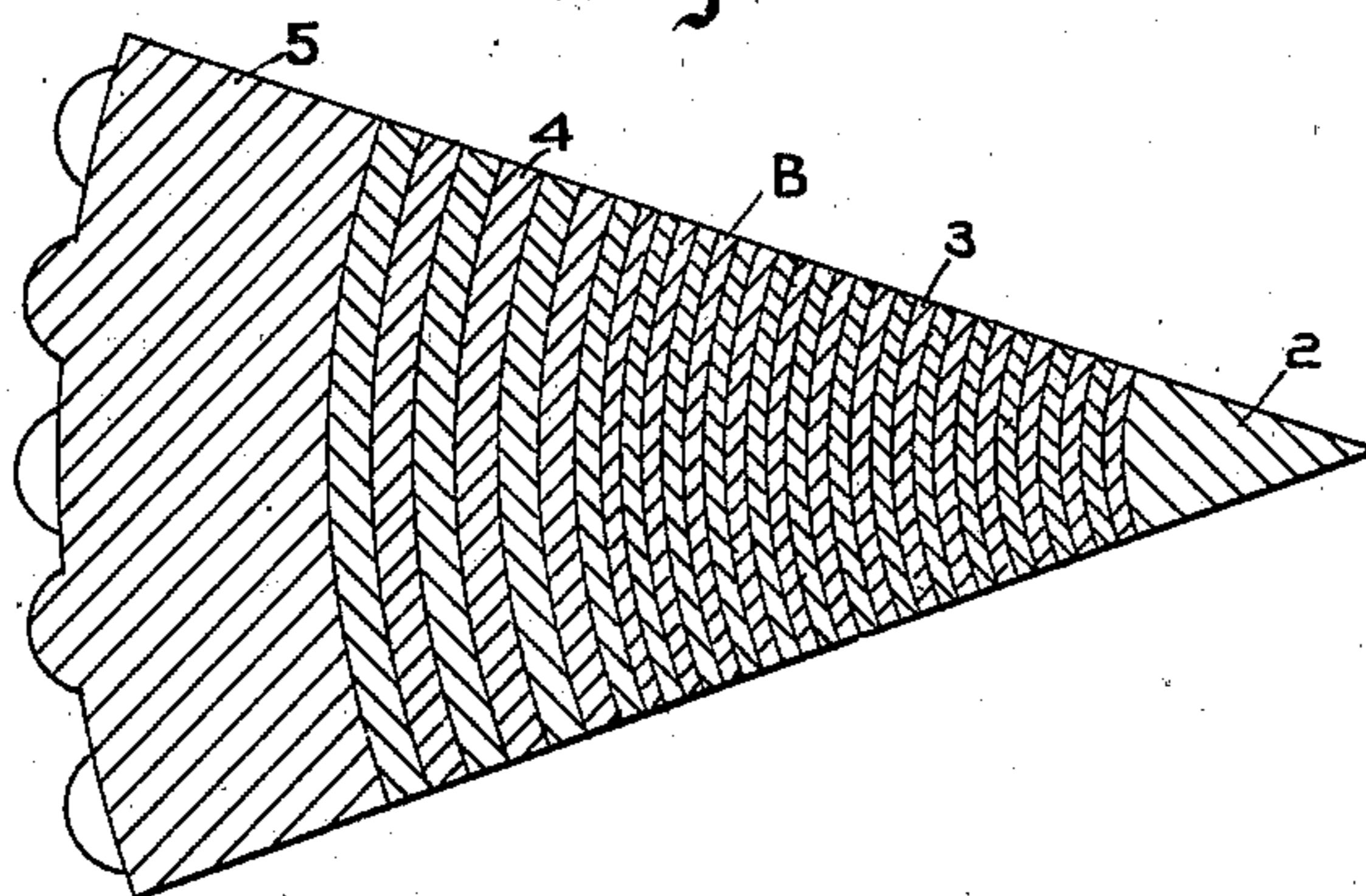


Fig. 3.



Witnesses.

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# UNITED STATES PATENT OFFICE.

ANSON R. SPEAR, OF ST. PAUL, MINNESOTA.

## GOLF-BALL.

SPECIFICATION forming part of Letters Patent No. 712,611, dated November 4, 1902.

Application filed September 8, 1902. Serial No. 122,467. (No model.)

*To all whom it may concern:*

Be it known that I, ANSON R. SPEAR, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Golf-Balls, of which the following is a specification.

My invention relates to improvements in golf-balls, its object being particularly to provide a ball which will have in the maximum degree the quality of resiliency under a heavy blow, but which will be comparatively non-resilient under a light blow.

To this end my invention consists particularly in constituting the body of the ball of inner and outer elastic windings, the inner windings being wound under tension to the elastic limit and the outer windings being wound under very much less tension to form a cushion; and it consists, further, in the features of construction and combination hereinafter particularly described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a sectional elevation of my improved ball, partly broken away the better to show the construction. Fig. 2 is a similar view of a modified construction, and Fig. 3 is a sector in cross-section of Fig. 1.

As shown in the accompanying drawings, the ball is preferably provided with a central solid core 2, of rubber or other suitable material. Around the core 2 is wound in miscellaneous directions the rubber strip B, forming the body of the ball. The portion of the strip B constituting the inner layers or windings 3 is preferably wound under tension to the elastic limit. The portion of the strip constituting the outer layers 4 is, as shown in Fig. 3, wound under much less tension than the inner windings 3 and forms a cushion for said windings. The inner windings 3, as shown, constitute the larger portion of the body of the ball. The strip B is preferably a single strip of rubber of initially uniform width and thickness.

In the form shown in Fig. 2 the windings consist of a narrow strip or thread wound in the same manner as the wider strip in the form shown in Fig. 1.

By having the inner windings 3 under very

great tension and the outer windings 4 under much less tension the windings 4 constitute an elastic cushion, preventing cracking and breaking of the shell. The outer windings 4 will also take up light blows, making the ball comparatively non-resilient under such blows, while at the same time being elastic the heavy blows will be transmitted to the hard inner windings 3. If desired, the solid center piece may be dispensed with and the windings started from the center.

5 indicates an inclosing shell of gutta-percha or other suitable wear-resisting material.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a playing-ball, the combination of a core consisting of rubber windings in miscellaneous directions, the inner portion of the windings being under higher tension than the outer portion, and an inclosing shell for said windings.

2. In a playing-ball, the combination of a core consisting of outer and inner elastic windings, the inner windings being stretched to their elastic limit, and the outer windings being wound under less tension so as to be thicker and wider than the inner windings, and an inclosing shell for said core.

3. In a playing-ball, the combination of a core, consisting of a strip of rubber wound in miscellaneous directions, the portion of the strip constituting the outer layers being wound under much less tension than the portion constituting the inner layers, and a cover of wear-resisting material.

4. In a playing-ball, the combination of a center piece, an inclosing body therefor consisting of elastic windings in miscellaneous directions, the portion of said windings constituting the inner layers being under higher tension than the portion of said windings constituting the outer layers, and an inclosing shell of wear-resisting material.

In testimony whereof I affix my signature in presence of two witnesses.

ANSON R. SPEAR.

Witnesses:

H. S. JOHNSON,  
EMILY EASTMAN OTIS.