

No. 840,401.

PATENTED JAN. 1, 1907.

E. F. UPTON.

HARD RUBBER COMPOSITION BALL AND PROCESS OF MAKING THE SAME.

APPLICATION FILED MAY 3, 1906.

Fig. 1.

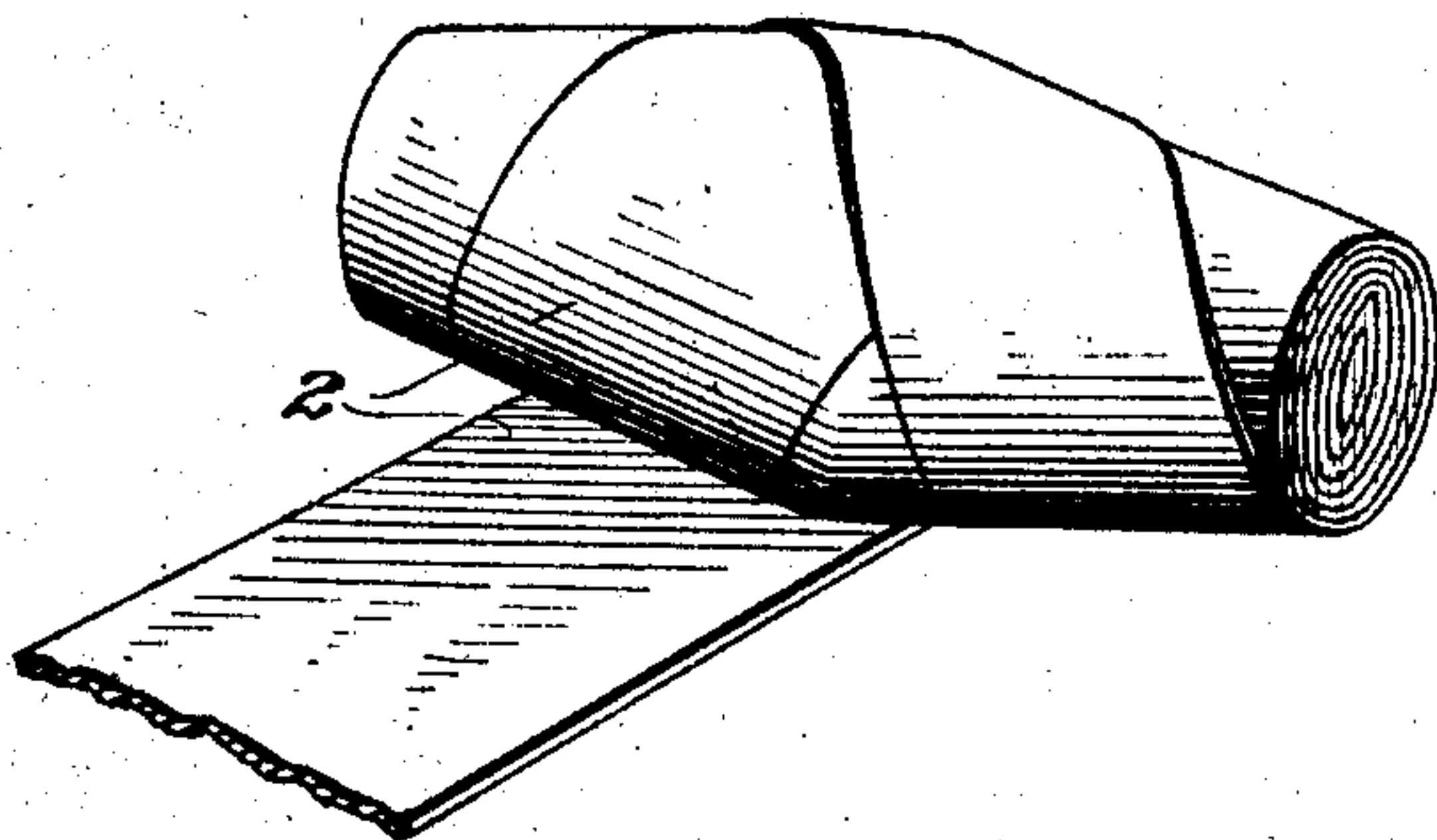


Fig. 2.

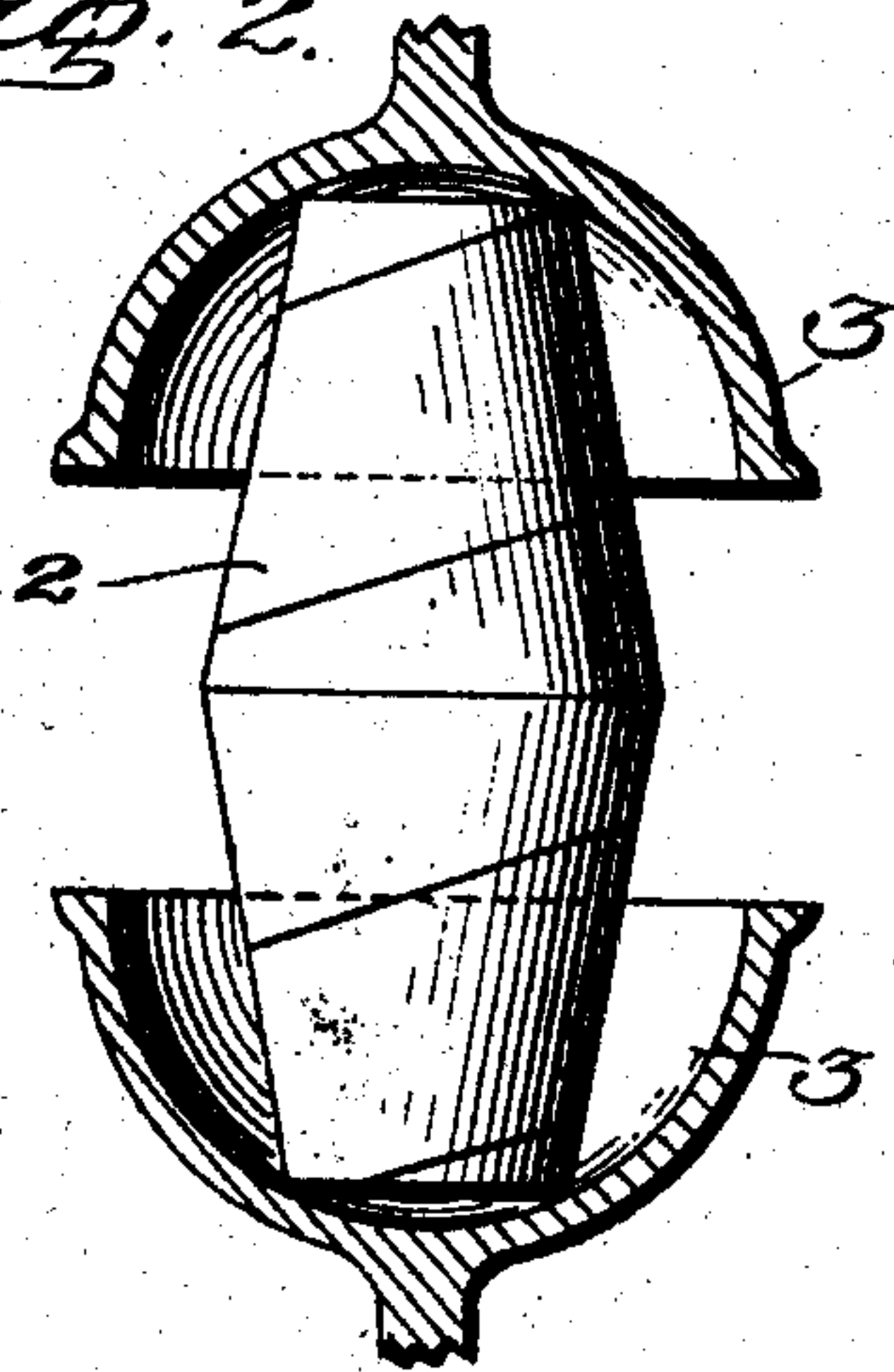


Fig. 3.

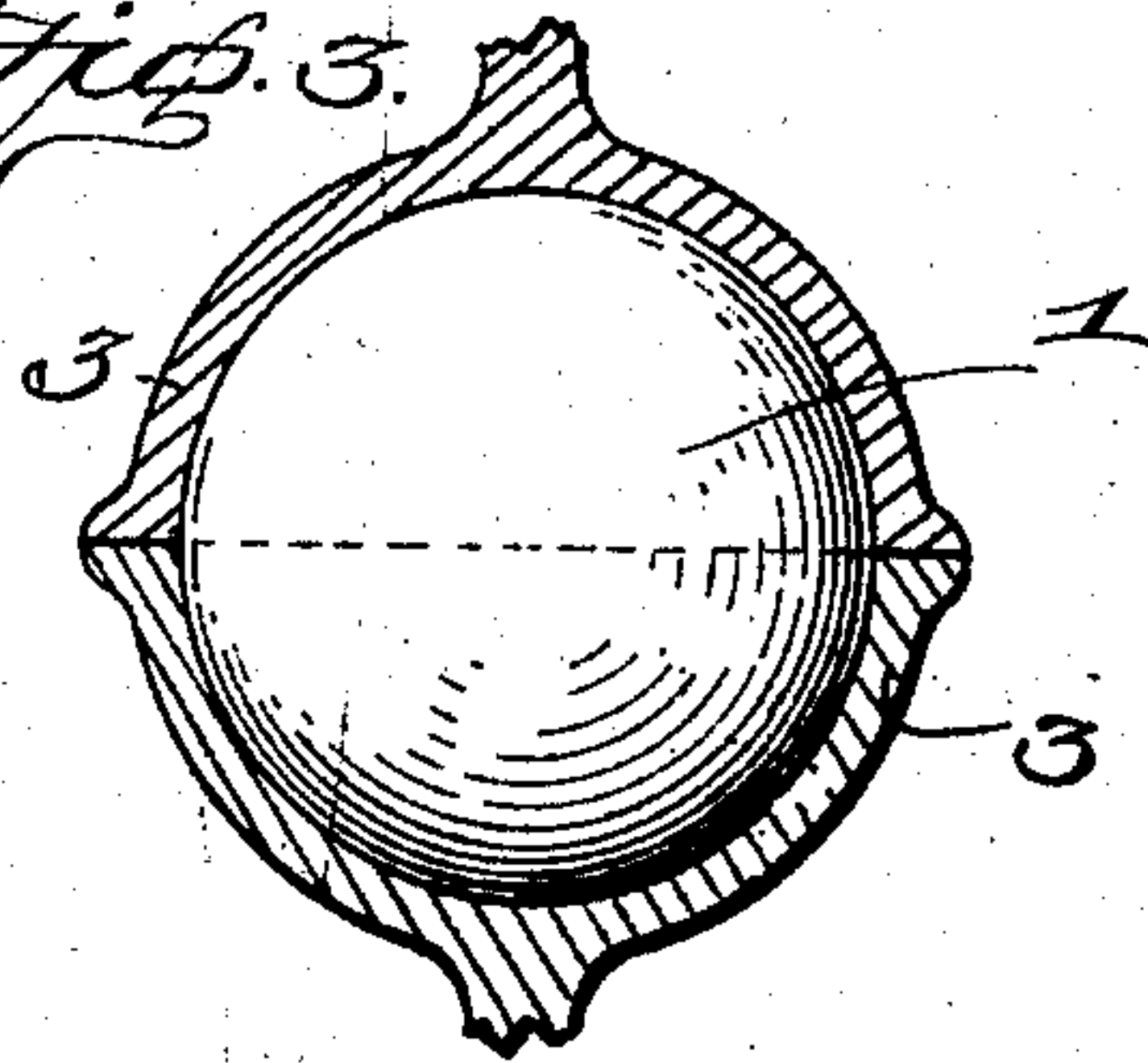
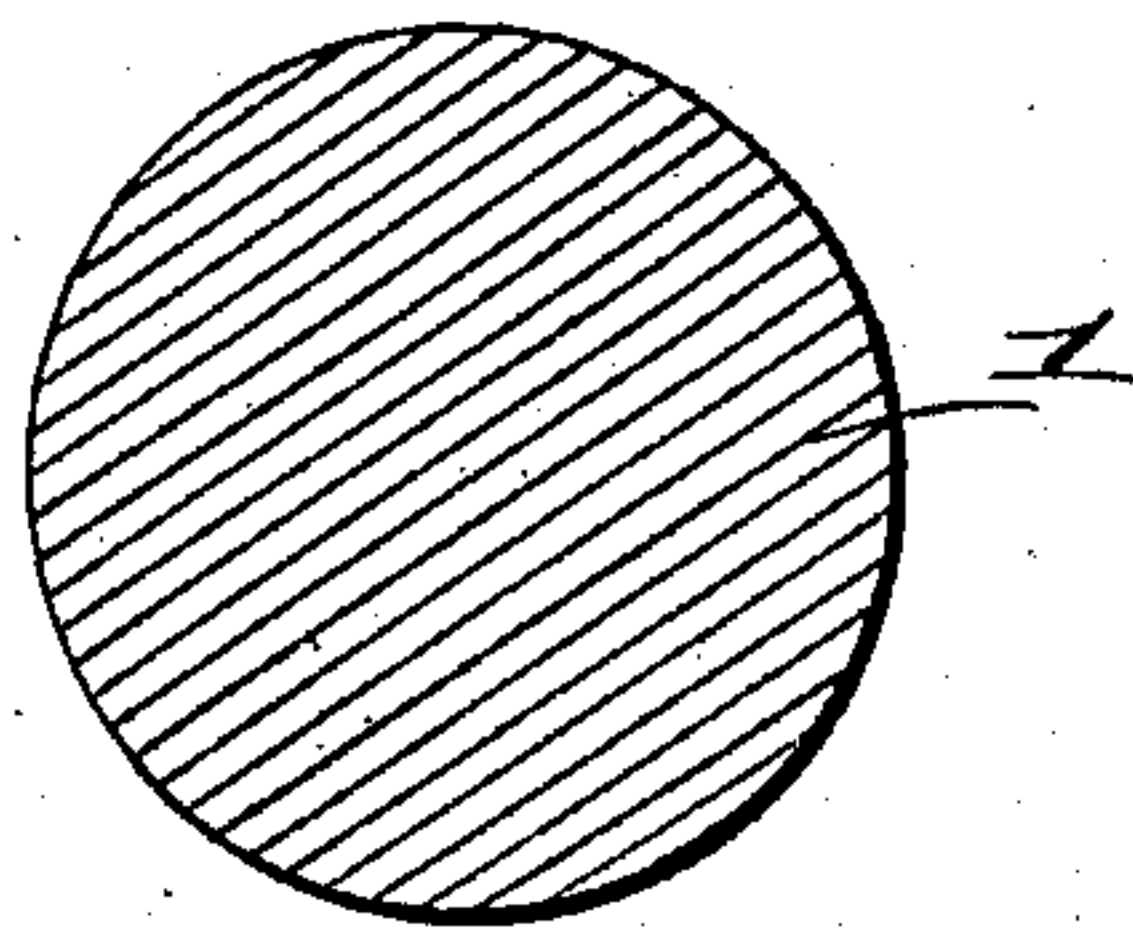


Fig. 4.



Witnesses
C. E. Hunt.
C. H. Griesbauer.

Inventor
E. F. Upton.
by *H. B. Wilson & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

EDMUND F. UPTON, OF MINERAL CITY, OHIO, ASSIGNOR OF ONE-FOURTH TO E. VAN KIRK, ONE-FOURTH TO D. O. VAN KIRK, AND ONE-FOURTH TO M. E. FISHER, OF MINERAL CITY, OHIO.

HARD-RUBBER-COMPOSITION BALL AND PROCESS OF MAKING THE SAME.

No. 840,401.

Specification of Letters Patent.

Patented Jan. 1, 1907.

Application filed May 3, 1906. Serial No. 315,089.

To all whom it may concern:

Be it known that I, EDMUND F. UPTON, a citizen of the United States, residing at Mineral City, in the county of Tuscarawas and State of Ohio, have invented certain new and useful Improvements in Hard-Rubber-Composition Balls and Processes of Making the Same; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in hard-rubber-composition balls and the process of making the same.

The object of the invention is to provide an improved construction of hard-rubber-composition ball and the process of manufacturing the same, whereby a solid, strong, and durable ball is formed having more or less resilient qualities.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view showing the manner of winding the strips of which the ball is composed. Fig. 2 is a side view, partly in section, showing the roll of strips in the dies ready to be pressed. Fig. 3 is a similar view of the ball after being pressed, and Fig. 4 is a sectional view of the finished ball.

Referring more particularly to the drawings, 1 denotes the ball, which is constructed from a strip or series of strips 2 wound upon themselves to form an elongated roll, the axis of which is greater than the width of the strip, which tapers slightly from the center toward its ends, as shown in Fig. 1. The strips 2 are preferably formed of a composition of rubber and other ingredients.

In forming a ball the strips are preferably rolled by hand into the form hereinbefore described, after which said roll is placed in a two-part mold or die 3, each part of which is preferably hemispherical in shape. After the roll has been thus placed in the dies pressure is applied thereto and the roll of strips compressed endwise into a solid spherical form, as shown in Fig. 3 of the drawings. By

forming a ball in this manner and subjecting the same to hydraulic or other high pressure a compact solid construction will be had, which will possess more or less resiliency and which will not readily split or chip off.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined by the appended claims.

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

1. The process of making balls which consists in winding strips of material diagonally upon each other, and then pressing said so-wound strips into a spherical body.

2. The process of making balls which consists in winding strips of elastic material diagonally upon each other, and then pressing said so-wound strips into a solid spherical body.

3. The process of making balls from sheets or strips of material, said sheets being first wound into an oblong body, the axis of which is greater than the width of the strip, and then exerting an endwise pressure on said body to form it into a solid, spherical body.

4. The process of making balls of sheets or strips of elastic composition, said strips or sheets being rolled together to form an elongated body, the axis of which is greater than the width of the strip and then compressing said body endwise to form it into a solid spherical body.

5. A ball comprising an endwise compressed coil composed of a strip of diagonally-crossed, elastic material.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EDMUND F. UPTON.

Witnesses:

D. O. VAN KIRK,
E. VAN KIRK.