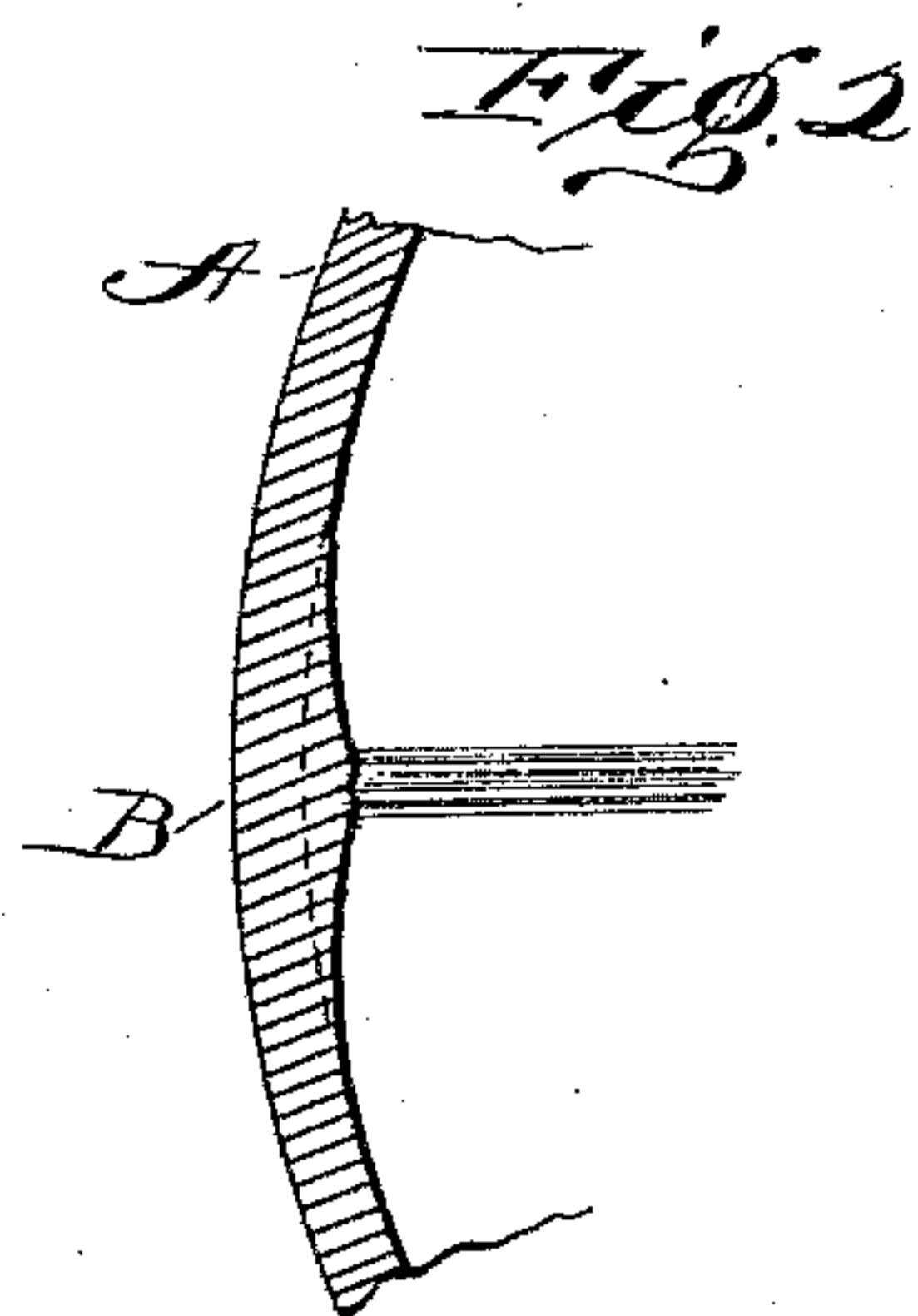
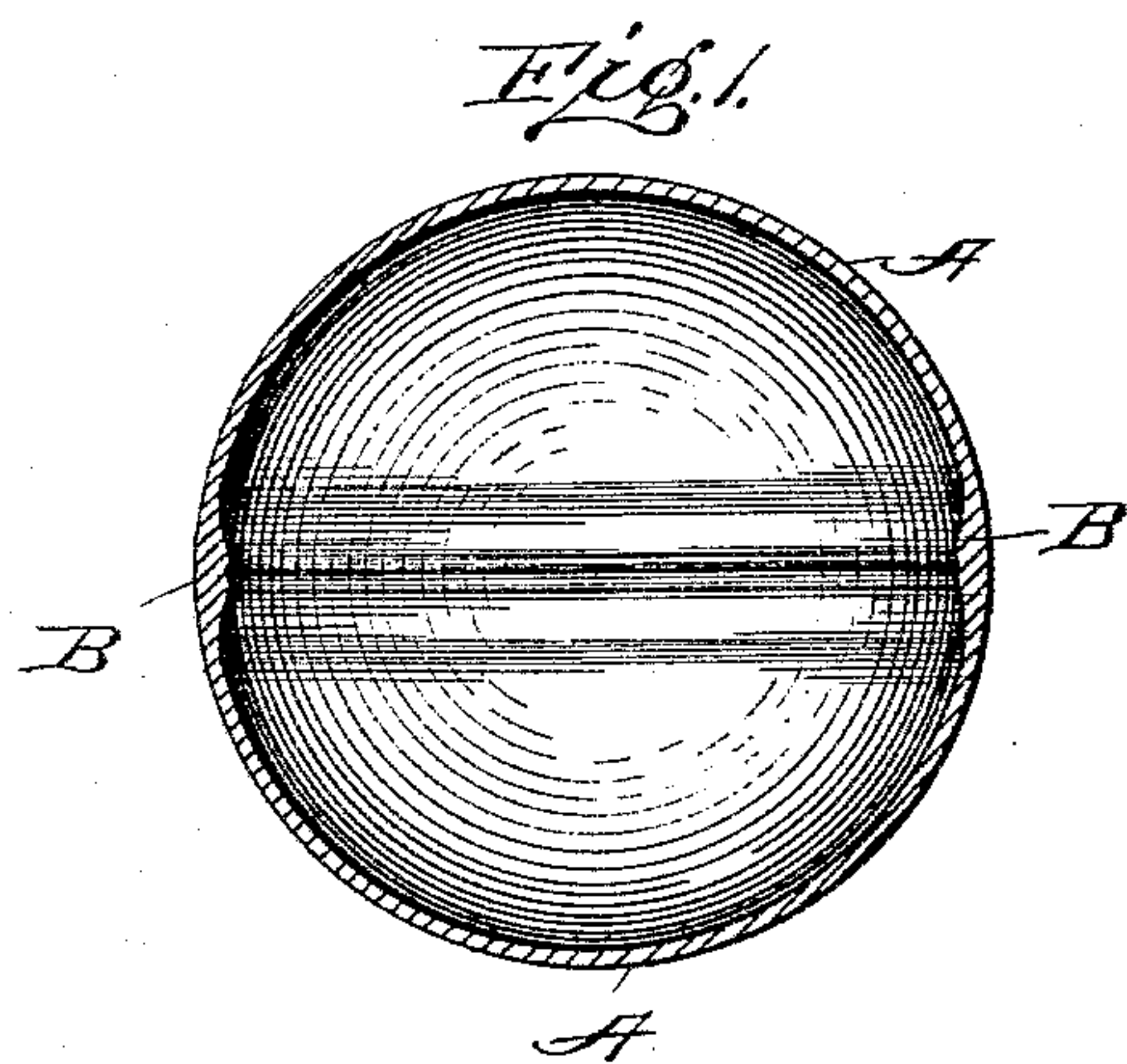


(No Model.)

H. G. WOLCOTT.
SOFT RUBBER BALL.

No. 593,264.

Patented Nov. 9, 1897.



Witnesses:

J. M. Fowler Jr.
Alex. Stewart

Inventor
Henry G. Wolcott.

by *Charles H. Church*

his Attorneys.

UNITED STATES PATENT OFFICE.

HENRY G. WOLCOTT, OF FISHKILL-ON-THE-HUDSON, NEW YORK, ASSIGNOR
OF ONE-HALF TO JOHN P. RIDER, OF SAME PLACE.

SOFT-RUBBER BALL.

SPECIFICATION forming part of Letters Patent No. 593,264, dated November 9, 1897.

Original application filed July 13, 1895, Serial No. 555,902. Divided and this application filed October 7, 1895. Renewed September 22, 1897. Serial No. 652,639. (No model.)

To all whom it may concern:

Be it known that I, HENRY G. WOLCOTT, of Fishkill-on-the-Hudson, in the county of Dutchess, State of New York, have invented certain new and useful Improvements in Soft-Rubber Balls, &c.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, and to the letters of reference marked thereon.

This invention relates to improvements in articles, such as balls made of soft rubber with an internal cavity or chamber or, more properly, with relatively thin walls, the objects of the invention being first to reduce the amount of stock and weight of the article to the minimum without reducing or diminishing the wearing qualities.

A further object is to provide an article having an integral strengthening rib or portion along the seam uniting the sections from which the article is made, said rib being on the inside and tapered gradually off to the normal thickness of the stock.

The invention consists in certain novel details of construction to be now described, and pointed out particularly in the appended claim.

In the accompanying drawings, Figure 1 is a sectional view through a ball made in accordance with my present invention and by the process set forth in my contemporaneous application, Serial No. 555,902, filed July 13, 1895, patented December 17, 1895, No. 551,741, of which this case is a division. Fig. 2 is an enlarged detail sectional view through the butt-weld seam.

Balls and like hollow articles made of soft rubber and vulcanized are made in sections and the sections united by seams prior to vulcanization. Upon the strength and durability of the seams uniting the sections largely depends the wearing qualities of the ball, and where the greatest durability was desired the articles were heretofore made with lap-seams—that is to say, the edges of the sections were brought together, overlapped, and cemented or united autogeneously, after which the article was vulcanized; but such seam takes a great deal of stock, and hence many articles are made with butt-weld

seams—*i. e.*, seams in which the two edges of the material are simply abutted and cemented or united autogeneously. This latter form of seam, however, as heretofore made, was weak, the articles when subjected to rough usage giving away along the seams, and so becoming useless. To overcome these several defects, in my present invention I design to upset or thicken the material at the edges of the sections and to form a seam which shall be a butt-edge seam of greater thickness than the thickness of the body of the stock, as shown clearly in Fig. 2, where the dotted line shows the normal thickness of the stock and the full lines the thickness of the seam of the present invention. Thus the advantages of a butt-edge seam are secured with the strength of a lap-weld. An additional advantage is also secured—*i. e.*, the thickened portion forms a uniform supporting-rib on the inside, giving greater rigidity and quicker recovery when the ball is compressed.

In the drawings referred to the body of the ball is indicated by the letter A, and the butt-weld upset or thickened-edge seam by the letter B. Both edges are equally upset or thickened, and the material is gradually brought down to the thickness of the stock or wall, making not only a uniform seam throughout, but also a rib on the inner side of the ball, having no irregularities such as would cause it to bound erratically or tend to cause undue and repeated flexure at any one point, and so start a break.

What I claim is—

A ball or similar article formed of soft rubber with an internal chamber, the sections of stock forming the article having their edges abutted and upset or thickened uniformly on the innerside forming a butt-weld upset seam, and a uniform supporting-rib or thickened portion gradually diminishing in thickness on each side of the seam whereby greater rigidity and quicker and more uniform recovery when compressed are secured and the union of the sections of the stock in the manufacture of the article is facilitated; substantially as described.

HENRY G. WOLCOTT.

Witnesses:

JAMES G. MEYER,
MARGARET H. KEATING.