

No. 646,350.

Patented Mar. 27, 1900.

A. R. BREINL.
PLAYING BALL.

(Application filed Aug. 19, 1899.)

(No Model.)

Fig. 1.

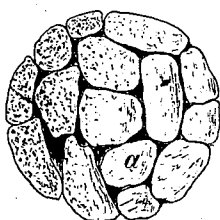


Fig. 2.

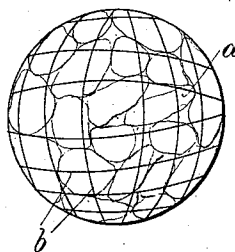


Fig. 3.

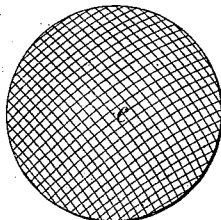


Fig. 4.

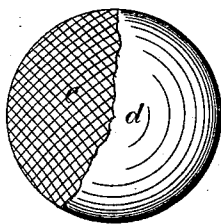
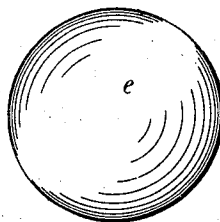


Fig. 5.



Witnesses

W. H. Boulter

[Signature]

Inventor:

Anton R. Breinl

By *[Signature]*
Attorney

UNITED STATES PATENT OFFICE.

ANTON RICHARD BREINL, OF GRASLITZ, AUSTRIA-HUNGARY.

PLAYING-BALL.

SPECIFICATION forming part of Letters Patent No. 646,350, dated March 27, 1900.

Application filed August 19, 1899. Serial No. 727,842. (No model.)

To all whom it may concern:

Be it known that I, ANTON RICHARD BREINL, a subject of the Emperor of Austria-Hungary, residing at Graslitz, Bohemia, Austria-Hungary, have invented certain new and useful Improvements in Playing-Balls, of which the following is a full, clear, and exact description.

The present invention relates to the manufacture of playing-balls which have the advantage of being light, durable, and much more elastic and also cheaper than balls of this kind hitherto known. As the accompanying drawings will show, these improved playing-balls consist of waste pieces of the ordinary so-called "bath" or other sponge, a suitable quantity of which to make up the required size is prepared according to the process hereinafter described, the fragments being sewed or bound with yarn or thread and then provided with a covering consisting of cotton or other fabric, over which for the purpose of keeping out water a thin impermeable skin or covering, of animal or other skin—for example, gold-beater skin—is placed, the covering being then preferably coated with a varnish-like non-cracking layer of cellulose material or the like.

In the accompanying drawings, Figure 1 is a view of the filling mass. Fig. 2 shows the filling mass with the wrapping of yarn. Fig. 3 shows the ball after the covering of fabric has been applied. Fig. 4 shows the ball with the outer covering-skin partly broken away. Fig. 5 is a view of the complete ball after receiving the external coating of varnish or the like.

a is the filling mass of the ball, consisting of waste pieces of sponge; *b*, the yarn winding; *c*, the covering of fabric; *d*, the outer covering-skin impermeable to moisture, and *e* the external coating, of varnish, celluloid, or other coating matter.

The method of manufacturing these balls is as follows: Waste pieces of sponge of the kind known as "bath-sponge" are not suitable in their original condition to be used as a filling mass for these playing-balls, as they are either too hard or too soft and in most cases are more or less filled with sand or other substances and do not possess sufficient elas-

ticity. In order to make this sponge elastic and suitable for ball-filling, it is exposed for some time to the action of steam and then immediately cooled with cold water. This operation makes the hard parts of the sponge soft and removes the impurities. The product prepared in this manner is elastic and is excellently suitable as a springy material to be used as the filling material for balls. In fact, it excels in consequence of its lightness and extreme elasticity that of all rubber balls hitherto used. The required amount of sponge prepared in this manner suitable for the size of ball required is then chosen and is wound around with cotton yarn or other binding or fastening material until the approximate spherical shape of the ball is attained. This partly-formed ball is then pressed into a round shape in a suitable hand-press until it has acquired the desired degree of elastic bounce. After this has been done the ball is again wound around until any portions of the sponge which may still project beyond the original meshes are completely covered and invisible. The next covering which is placed over the ball is one of cotton or other fabric, for which parts of the well-known tubular fabrics made on knitting-machines are particularly suitable, these parts being suitably cut out from these tubes and the free meshes of which are drawn together above and below in order to inclose the filling on all sides. By this means the ball assumes a uniform appearance and could in this condition be used as a ball in dry places. In order, however, to make the ball suitable for any use and to make it impermeable to water and moisture, the above-mentioned covering of fabric is covered with a thin water and moisture tight skin, of animal or other nature, and is then coated with a rapidly-drying coating of non-cracking oil-color, celluloid or rubber mass, varnish, &c., for the purpose, on the one hand, of entirely keeping out moisture, and, on the other hand, of making the outer appearance of the ball of a suitable color or appearance.

I claim—

1. A playing-ball consisting of a body composed of pieces of sponge, a wrapping of yarn or thread around said body, a covering of

textile fabric over the yarn or thread wrapping, and a water-tight skin covering the textile fabric.

5 2. A playing-ball consisting of a body composed of pieces of sponge, a wrapping of yarn or thread around said body, a covering of textile fabric over the yarn or thread wrapping and a water-tight skin covering the textile fabric and a coating of oil or varnish such as

described over the surface of the said skin for the purpose set forth.

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

ANTON RICHARD BREINL.

Witnesses:

RUDOLF LANG,
ARTHUR J. NOVAK.