

(No Model.)

S. S. HARMAN.
BOWLING BALL

No. 447,011.

Patented Feb. 24, 1891.

Fig. 1.

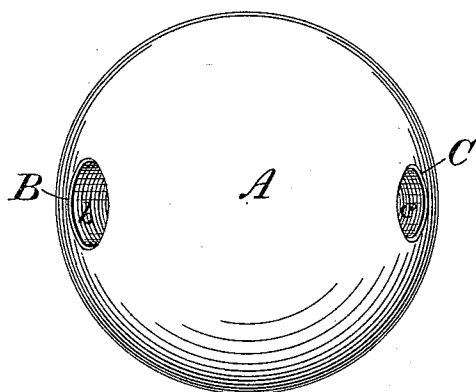
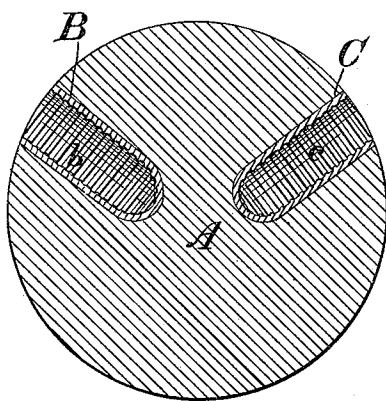


Fig. 2.



Witnesses;
L. N. Legendre
R. H. Haywood

Inventor
Stephen S. Harman
by *Wm. V. Savard*
Attorney

UNITED STATES PATENT OFFICE.

STEPHEN S. HARMAN, OF NEW YORK, N. Y.

BOWLING-BALL.

SPECIFICATION forming part of Letters Patent No. 447,011, dated February 24, 1891.

Application filed December 31, 1890. Serial No. 376,334. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN S. HARMAN, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Bowling-Balls, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates more particularly to balls for the game of ten-pins, but is applicable to other balls of wood or hard material to be thrown by hand in other bowling games. Such balls are commonly provided with two internal sockets, one for the thumb and the other for the second finger, by which they are held to be thrown. The hard material of which the balls are made is apt by long-repeated use of the balls to frequently produce soreness and callosities on the thumb and finger.

The object of my invention is to obviate the above-mentioned defect and at the same time to afford not only a more secure, but a more easy grasp for the thumb and finger, and thereby to give a more perfect control of the ball and enable a more powerful throw to be made; and to this end my invention consists in providing the sockets of the ball with internal cushions or linings of soft elastic material, such as soft india-rubber.

Figure 1 in the accompanying drawings represents a view of that side of a bowling-ball in which the sockets are provided. Fig. 2 represents an axial section through the sockets.

Similar letters of reference designate corresponding parts in both figures.

A designates the wood or hard material of which the ball is composed; B C, the sockets for the thumb and finger, and *b c* the internal cushions or linings of soft india-rubber or other elastic material. These cushions or linings are represented as consisting of tubes open at their outer ends and closed at their inner ends, the last-mentioned ends being of concave form internally. The said tubes, linings, or cushions may be secured in the sockets by any suitable cement. I prefer that the interiors of the said linings or cushions shall be corrugated or roughened, in order to give a better hold for the thumb and finger, and have represented them with annular corrugations. A ball having such linings or cushions in its sockets may be played with for a long time, even by a novice, without the player incurring any pain or cramp in or inconvenience to the thumb or finger, and may be held with perfect ease with so firm a grip that there will be no danger of the thumb or finger slipping before the proper time for the ball to leave the hand.

What I claim as my invention, and desire to secure by Letters Patent, is—

A bowling-ball the socket or sockets of which are provided with linings or internal cushions of soft elastic material, as india-rubber, substantially as herein described.

STEPHEN S. HARMAN.

Witnesses:

FREDK. HAYNES,
L. M. EGBERT.