

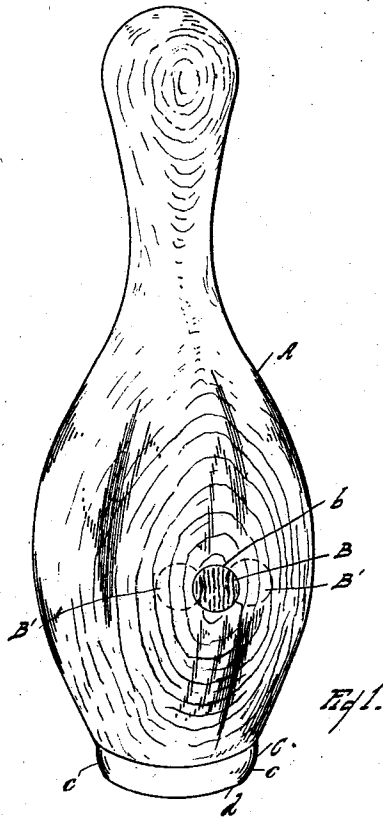
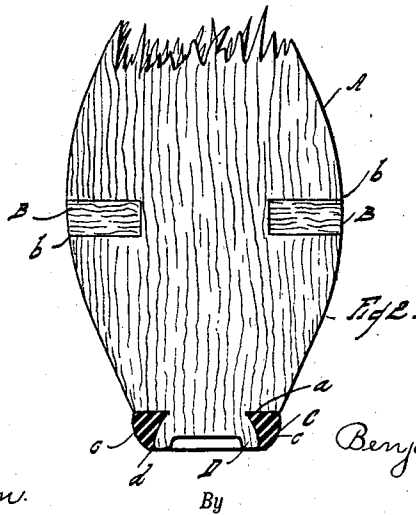
No. 721,976.

PATENTED MAR. 3, 1903.

B. A. STEVENS.
BOWLING PIN.

APPLICATION FILED JULY 21, 1902.

NO MODEL.



WITNESSES

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UNITED STATES PATENT OFFICE.

BENJAMIN ABBOTT STEVENS, OF TOLEDO, OHIO.

BOWLING-PIN.

SPECIFICATION forming part of Letters Patent No. 721,976, dated March 3, 1903.

Application filed July 21, 1902. Serial No. 116,326. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN ABBOTT STEVENS, a citizen of the United States, residing at Toledo, county of Lucas, State of Ohio, have
5 invented a certain new and useful Improvement in Bowling-Pins; and I 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 pertains to
10 make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to bowling-pins; and it consists in the improvements hereinafter
15 described, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a perspective view of a pin embodying my invention, the plane of the grain of the timber of which the pin is made being
20 turned slightly toward the right of the observer. Fig. 2 is a sectional view of the lower portion of a pin, the section being taken in a plane perpendicular to the plane of the grain.

25 A is the bowling-pin. About four and one-half ($4\frac{1}{2}$) inches from the lower end of the bowling-pin holes *b b* are bored radially inward at such a position that they extend normal to the plane of the grain of the timber of
30 which the pin is composed.

B B are wooden pins having their grain extending longitudinally. The pins B B are fitted tight into the holes *b b* and are glued therein. Said pins are fixed in position when
35 the pin is "roughed out." The pin is then turned accurately to shape with the pins B B in place, so that the ends of the pins B B form integral portions to the surface of the finished bowling-pin.

40 Around the lower end of the bowling-pin A is turned a groove *a*, which groove cuts away a part of the periphery of the base of the pin.

C is a ring of rubber or flexible material formed in cross-section as shown in Fig. 2, placed in the groove *a*, so that its resiliency
45 shall hold it firmly in place. The lower surface *d* of the ring C forms an annular ring which is an extension of the surface of the base or lower end of the bowling-pin A. The outer

surface of the ring C is convex, as indicated 50 in Fig. 2 at *c c*.

It will be observed that the wooden base of the bowling-pin A is not entirely cut away by the groove *a*, but that a sufficient quantity of the material of the said bowling-pin is left
55 to form a strong and firm base or support D and that the rubber ring C forms an annular ring at the periphery of the base, which helps to steady the pin and prevents, by reason of the resiliency of the material of said ring, the
60 wearing away and splitting off of the edge of the base.

The standard bowling-ball is about nine (9) inches in diameter, and it contacts the bowling-pin therefore at about four and one-half
65 ($4\frac{1}{2}$) inches from the lower end, and in bowling-pins as usually made at the sides at which the plane of the grain is at right angles to the motion of the ball the repeated blows loosen
70 the grains of the wood and cause it to scale off. With the pins B B in place, as above described, the ends of said pins receive the impact of the ball and prevent it from loosening and scaling off the wood of the bowling-pin A.

More than one pin, as indicated by the dotted circles B' B' in Fig. 1, may of course be used without departing from my invention.

What I claim is—

1. A wooden bowling-pin provided with a
80 pin extending into it approximately perpendicular to the plane of the grain, the end of said pin forming part of the surface of the bowling-pin.

2. A wooden bowling-pin provided with a
85 pin extending into it approximately perpendicular to the plane of the grain, the end of said pin forming part of the surface of the bowling-pin at the height at which the majority of impacts occur.

3. A bowling-pin having a base of the material of which the pin is made adapted to contact the floor when the pin is in place, and a ring of resilient material surrounding the
90 bowling-pin at its lower end, the lower surface of said ring forming a part of the surface of the base of the bowling-pin.

4. A bowling-pin having a base of the ma-

terial of which the pin is made adapted to contact the floor when the pin is in place, and a ring of resilient material having a convex outersurface, said ring surrounding the bowling-pin at its lower end, the lower surface of said ring forming a part of the surface of the base of the bowling-pin.

In testimony whereof I sign this specification in the presence of two witnesses.

BENJAMIN ABBOTT STEVENS.

Witnesses:

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