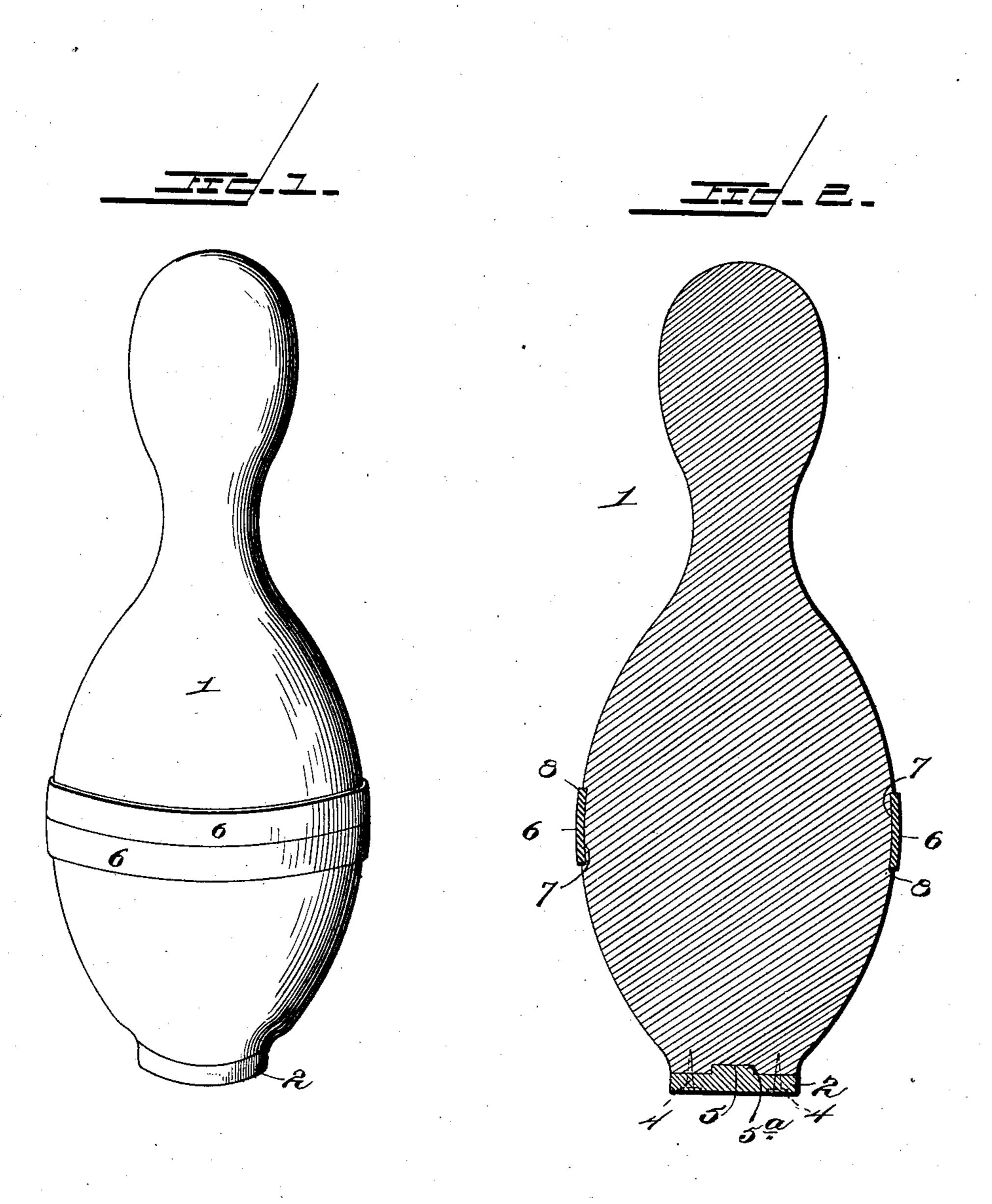
No. 608,294.

Patented Aug. 2, 1898.

H. H. LUKE. BOWLING ALLEY PIN. (Application filed Ma 19, 1896.)

(No Model.)



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By his Alterneys,

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## United States Patent Office.

HENRY H. LUKE, OF FREDONIA, NEW YORK.

## BOWLING-ALLEY PIN.

SPECIFICATION forming part of Letters Patent No. 608,294, dated August 2, 1898.

Application filed May 19, 1896. Serial No. 592,158. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. LUKE, a citizen of the United States, residing at Fredonia, in the county of Chautauqua and State of 5 New York, have invented a new and useful Bowling-Alley Pin, of which the following is a specification.

This invention relates to bowling-alley pins; and it has for its object to provide a pin of 10 this character with a bottom-protecting piece formed of suitable tough and unbreakable material, which will prevent the battering and wearing away of the base of the pin, thus enabling the latter to stand plumb.

With the above object in view the invention consists in the construction and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the drawings, Figure 1 is a perspective 20 view of a bowling-alley pin fitted with the improvement contemplated by the present invention. Fig. 2 is a vertical sectional view of the pin.

Referring to the accompanying drawings, 25 the numeral 1 designates an ordinary bowling-alley pin of the usual form or shape and the base of which is protected by a bottom protector-disk 2, preferably formed of rawhide, but which may be made of hard rubber 30 or any other tough non-breakable material which will stand the violent battering and jarring incident to bowling.

It is well known that the bases of bowlingpins become so battered and worn after short 35 service that it is impossible to set the same up and they have to be discarded and replaced by new pins. However, by the use of the non-breakable protector-disk 2 the life of a bowling-pin is greatly increased and the 40 setting up of the pins is greatly expedited by reason of the bases always remaining perfectly flat.

To provide for firmly securing the protectordisk 2 to the base of the pin 1, the latter is 45 provided in its base or bottom with a central circular recess 5, the walls of which are perpendicular to the base and which receives the upwardly-projected boss or reinforcing-shoulder 5<sup>a</sup>, projected integrally from the upper 50 side of the protector-disk 2.

the disk 2, near its edges, into the body of the pin 1 to provide for firmly securing the protector-disk to the pin; but it will be observed that the engagement of the boss or shoulder 55 5° in the recess 5 of the pin-body prevents any lateral movement of the protector-disk with relation to the pin, while the auxiliary fasteners 4 prevent rotation of said disk. It will also be observed that the reinforcing 60 boss or shoulder 5<sup>a</sup> stiffens the central part of the protector-disk and prevents any tendency of said central part of the disk to spring outwardly from the bottom of the pin.

The improvement contemplated by the 65 present invention is especially designed for use in connection with a pin having an annular cushion 6 around the body thereof. To provide for securing the annular cushion 6 in position, the body of the pin is formed 70 with an annular depression or seat 7 at a height corresponding to the point where the balls contact with the pin. Within this depression or seat are arranged one or more bands of flexible or elastic material, such as 75 rubber, the width of the band or the combined width of the bands being greater than the depth of the depression or seat 7. This depression or seat 7 is formed with square upper and lower shoulders 8 and has its bot-80 tom curved to conform to the outer contour of the pin, whereby the outer surface of the band or bands conforms to the curvature of the pin-body, and thereby forms a surface presenting the same angles to the ball in all 85 directions as would be presented if the cushion were not used.

The cushion 6 is prevented from slipping by the shoulders 8 and serves not only to prevent indentation and mutilation of the 90 pin, but also renders the pin to some extent noiseless.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or 95 sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

A bowling-alley pin, provided with a flat Auxiliary fasteners 4 are passed through base having a central circular recess the walls

of which are perpendicular to the base, and a bottom-protector consisting of a disk of raw-hide, indurated fiber or analogous material applied to the base of the pin and secured thereto, said protector having a central reinforcing boss or projection filling the recess in the base of the pin, and the outer edge of the protector lying flush with the outer surface of the pin, and fastening devices pass-

ing through the disk near its edge into the ropin, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HENRY II. LUKE.

## Witnesses:

A. R. MOORE, II. A. CLARK.