April 13, 1926. 1,580,688

C. J. SHELDON

BOWLING PIN

Filed July 16, 1925

Fig. 1.

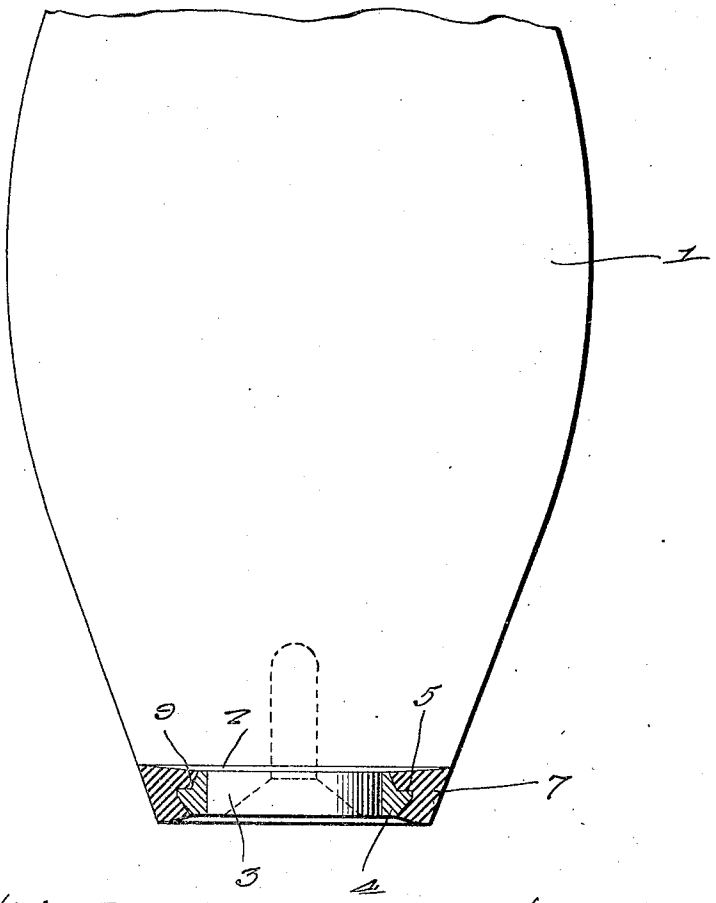


Fig. 2.

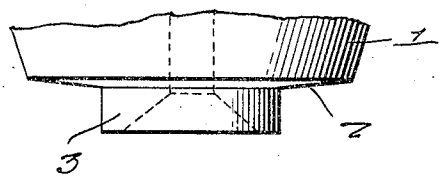


Fig. 3.

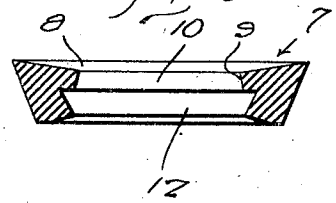
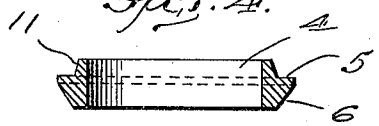


Fig. 4.



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UNITED STATES PATENT OFFICE.

CARSON J. SHELDON, OF YOUNGSTOWN, OHIO.

BOWLING PIN.

Application filed July 16, 1925. Serial No. 44,017.

To all whom it may concern:

Be it known that I, CARSON J. SHELDON, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in a Bowling Pin, of which the following is a specification.

This invention relates to improvements in bowling alley pins, and more particularly to an improvement over the bowling pin embodied in my copending application bearing Serial No. 32997, filed May 26, 1925.

One of the important objects of the present invention is to provide a bowling pin which is of such construction as to protect the lower edge of the pin so as to render the bowling pin indestructible.

A further object is to provide a bowling pin of the above mentioned character which includes a fiber ring supported on the depending shank formed on the bottom of the pin, the rubber protector member being sprung over the fiber ring so that a protector is provided for the bottom of the pin.

A further object is to provide a bowling pin of the above mentioned character which is simple in construction, inexpensive, strong and durable and further well adapted to the purpose for which it is designed.

Other objects and advantages of the invention will become apparent during the course of the following description taken in connection with the accompanying drawing.

In the accompanying drawing forming a part of the application and in which like numerals designate like parts throughout the same:

Figure 1 is a sectional view of the fiber ring and the rubber protector showing the manner in which the same are arranged on the lower end of a bowling pin.

Figure 2 is a fragmentary side elevation of the lower end of the bowling pin, the fiber ring and the rubber protector being removed therefrom.

Figure 3 is a sectional view through the rubber protector ring, and

Figure 4 is a cross sectional view of the fiber ring.

In the drawing, wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 1 designates a bowling pin which is preferably formed of maple wood, and may be either a ten pin or a duck pin. The lower end of base of the pin is under cut as illustrated at 2, and extending downwardly therefrom is a central shank portion 3. This shank 3 is circular and is of the same diameter throughout its entire length. Adapted to be fitted over the shank 3 is the fiber ring 4. This fiber ring is slightly smaller in diameter than the shank 3 of the pin 1, the ring is forced over the shank 3 of pin 1 and secured on the shank by any suitable adhesive such as glue.

Formed on the outer face of the fiber ring 4 intermediate the upper and lower edges thereof is the annular flange 5, the lower portion of the ring sloping gradually inwardly from the flange to the bottom edge as illustrated more clearly at 6. The purpose of the flange 5, and the sloping portion 6 will hereinafter be more fully described.

The rubber protector ring designated generally by the numeral 7 is the same as illustrated and described in my copending application, bearing Serial No. 32997. The rubber protector ring is provided with the downwardly beveled upper face 8 which coacts with the under cut 2 of the pin 1. The pitch of the under cut portion 2 is substantially one-half the pitch of the beveled upper face 8 of the rubber protector ring 7. An inwardly extending annular flange 9 is formed at the upper portion of the rubber protector ring 7, and the inner diameter of the annular flange 9 is about 25% less than the outside diameter of the fiber ring 4. The inner wall 10 of the annular flange 9 is of the same shape as the outwardly flared portion 11 of the fiber ring 4 to conform therewith.

The rubber protector ring has its opening 12 corresponding in shape to the peripheral face 6 of the fiber ring 4, and as is clearly illustrated in Figure 1 of the drawing, the bottom edge of the rubber protector ring is disposed slightly below the bottom edge of the fiber ring 4.

After the fiber ring 4 has been secured on the shank portion 3, it being understood that the fiber ring is of the same height as the length of the shank portion; the rubber ring is sprung over the fiber ring so that the upper portion of the rubber ring will be forced to cut or cling against the under cut portion 2 of the pin 1. The various angles formed by the construction of the fiber ring and the rubber protector ring will

enable the rubber ring to be securely held on the lower end of the pin against accidental disengagement therefrom.

As the purpose of the rubber protector ring has been more fully described in my copending application, above mentioned, it is not thought necessary to further go into detail relative to the same.

The simplicity in which my improved protector is constructed enables the same to be readily and easily attached to a bowling pin or ten pin, and will not in any way interfere with the operation of the pin spotting mechanism now generally in use on bowling alleys.

It is of course understood that the lower end of the pin is provided with the usual countersunk opening in the central portion thereof for cooperation with pin setter or spotter.

While I have shown the preferred embodiment of the invention it is to be understood that minor changes in the size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention and the scope of the appended claims.

Having thus described the invention, what I claim as new is:—

1. A bowling pin having a central reduced shank portion formed on the lower end thereof, a ring of composite material fitted on said shank portion, and a rubber protector ring fitted around said aforementioned ring.

2. A bowling pin having a central reduced shank portion formed on the lower end thereof, a ring of composite material fitted on said shank portion, an annular flange formed on the outer peripheral face of said ring, a rubber protector ring sprung over said aforementioned ring, and an inwardly extending annular flange formed at the upper portion of said rubber protector ring and adapted for engagement with the aforementioned flange.

3. A bowling pin having a central reduced shank portion formed on the lower end thereof, a ring of composite material fitted over said reduced shank portion, an annular flange formed on the outer peripheral face of said ring, said flange sloping inwardly gradually from the intermediate portion of the ring to the bottom edge thereof, a rubber protector ring sprung over said aforementioned ring, an inwardly extending annular flange formed at the upper portion of said rubber protector ring, said flange engaging the upper portion of the outer peripheral face of said first mentioned ring and disposed between the bottom of the pin, and the flange formed on the first mentioned ring.

4. A bowling pin having its lower extremity under cut, a central shank portion depending therefrom, a ring of composite material fitted on said shank portion, an annular flange formed on the outer peripheral face of the lower portion of said ring, and a rubber protector ring sprung over said aforementioned ring, an annular flange extending inwardly from the upper portion of said rubber ring and adapted to engage the upper portion of the outer peripheral face of said composite ring, the upper face of said rubber protector ring and said flange being beveled downwardly toward the center for engagement with the undercut portion of the pin.

5. A bowling pin having its lower extremity under cut, a central shank portion depending therefrom, a fiber ring fitted on said shank portion and being of the same height as the length of the shank portion, an annular flange formed on the outer peripheral face of the lower portion of the fiber ring, a rubber protector ring adapted to be sprung over said fiber ring, an annular flange extending inwardly from the upper portion of said ring and adapted to engage the upper portion of the outer peripheral face of said fiber ring, the lower portion of the inner peripheral face of said rubber ring being beveled to coact with the beveled face of the flange formed on the fiber ring, the upper face of the rubber ring and said inwardly extending annular flange being beveled downwardly toward the center for engagement with the undercut portion of said pin.

In testimony whereof I affix my signature.

CARSON J. SHELDON.