Aug. 16, 1949. R. C. CLARK 2,479,003

RENEWABLE BASE FOR BOWLING PINS

Filed Nov. 29, 1946

FIG. 1.

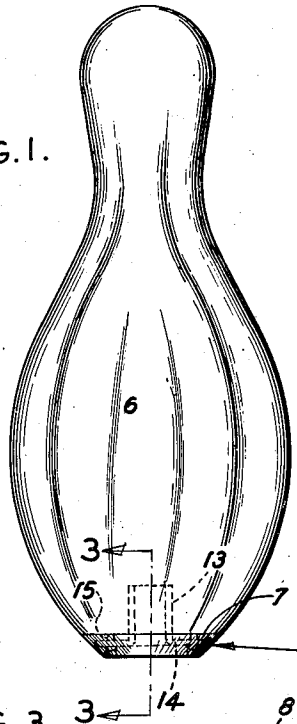


FIG. 2.

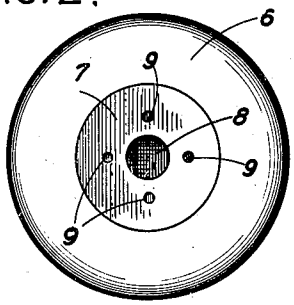


FIG. 5.

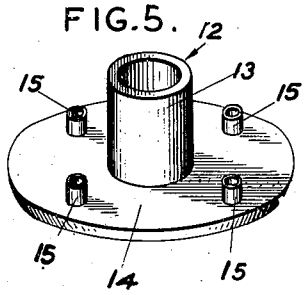


FIG. 3.

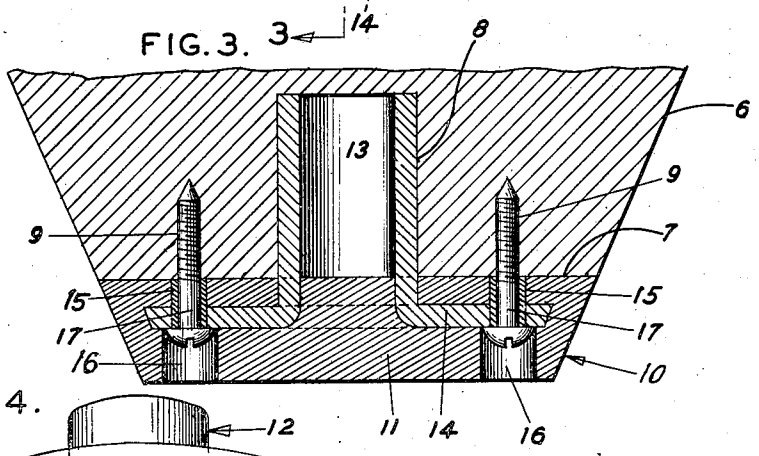
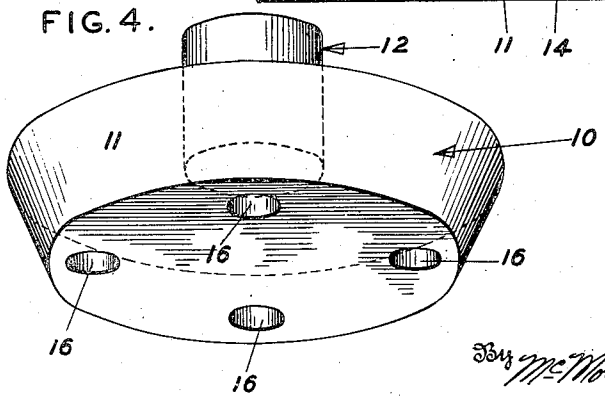


FIG. 4.



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RENEWABLE BASE FOR BOWLING PINS

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2 Claims. (Cl. 273—82)

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My invention relates to improvements in bowling pins.

An important object of my invention is to provide a bowling pin made in such a manner that the useful life of the pin is greatly prolonged.

A further object of the invention is to provide a bowling pin having means for preventing the lower end of the pin from becoming rounded at its edge.

A further object of the invention is to provide a convenient unit, in the form of a reinforced resilient tip, to be used in the manufacture of bowling pins, or in repairing and improving used bowling pins.

A further object is to provide a bowling pin having a lower cap or tip of reinforced rubber, tending to prevent damage to other pins when they are struck by such rubber tips.

A still further object of my invention is to provide a bowling pin which is superior to conventional wooden pins, durable, and relatively inexpensive to manufacture.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a side elevation of a bowling pin embodying my invention,

Figure 2 is a bottom plan view of the same before the reinforced tip is applied,

Figure 3 is an enlarged fragmentary central vertical section taken on line 3—3 of Figure 1,

Figure 4 is a perspective view of the reinforced tip, and,

Figure 5 is a perspective view of a reinforcing member.

In the accompanying drawings, forming a part of this application, the numeral 6 designates the body portion of a bowling pin of conventional shape and size. The lower end 7 of the bowling pin is provided with a central cylindrical opening or recess 8, terminating within the pin, a short distance above its lower end. Also formed in the lower end 7, and spaced equidistantly from each other, and from the opening 8, are small openings 9.

The numeral 10 designates a reinforced tip or cap for the bowling pin, adapted to be applied as a unit upon the lower end 7 of the pin. The tip or cap 10 includes a flat frusto-conical disc 11, preferably formed of molded rubber, or the like. Molded within the rubber disc 11 is a

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metal reinforcing member 12. This reinforcing member 12 includes an upstanding cylindrical portion 13, and a horizontal circular disc or plate 14 preferably formed integral with the cylindrical portion 13. Rigidly secured within openings in the disc or plate 14, by any suitable means, are vertical screw receiving tubular spacers 15, which are spaced to register with the openings 9 in assembly. The lower ends of the spacers 15 are flush with the lower surface of the reinforcing disc 14, and the upper ends of the spacers are flush with the upper surface of the rubber disc 11. Formed within the lower flat surface of the rubber disc 11, adjacent to the tubular spacers 15, are openings or recesses 16, for receiving the heads of screws 17, or the like.

In use, the reinforced tip 10 may be applied as a unit to the lower end 7 of the bowling pin. The cylindrical portion 13 of the reinforcing member 12 engages within the opening 8, and the upper surface of the rubber disc 11 engages against the lower end 7. The tubular spacers 15 are brought into registration with the openings 9, and the screws 17 are inserted. The spacers 15, which are flush with the upper surface of the rubber disc 11, bear against the lower surface 7 of the bowling pin, and when the screws are tightened, these spacers prevent deformation of the rubber disc 11, and at the same time act as guides and supports for the screws 17.

It is obvious that the reinforced tip 10 is useful both as means for repairing used bowling pins, the ends of which become rounded due to wear, and also in the manufacturing of new improved bowling pins. Bowling pins provided with this reinforced rubber tip will not tend to become rounded at the lower end, and the useful life of the pin is thereby prolonged.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of my invention or the scope of the subjoined claims.

Having thus described my invention, what I claim is:

1. A bowling pin, comprising a body portion having a flat lower end provided with a main recess and other recesses, a rubber cap adapted for attachment to the flat lower end and having a flat bottom provided with recesses arranged in alignment with the first named recesses, a reinforcing disc moulded within the rubber cap and including a portion extending into the main

recess, tubular spacers secured to the reinforcing disc and arranged in alignment with the first and second named recesses and engaging against the flat lower end of the body portion, and fastener elements extending through the tubular spacers and engaging in the first named recesses for attaching the rubber cap to the flat lower end of the body portion.

2. A cap for the bottom of a bowling pin having a main recess and circumferentially spaced recesses, the cap comprising a rubber disc having a flat bottom provided with circumferentially spaced recesses arranged for alignment with the first named recesses, a rigid reinforcing disc moulded within the rubber disc and including a central axial extension projecting beyond that side of the rubber disc remote from the recesses therein and adapted for insertion into the main recess, and tubular spacers carried by the reinforcing disc and in registration with the recesses

in the rubber disc and having their free ends flush with the side of the rubber disc remote from the recesses therein, the spacers being adapted to engage the bottom of the bowling pin and to register with the circumferentially spaced recesses therein and to receive fastening elements for securing the cap to the bowling pin.

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