June 6, 1950 S. L. LEONARD, SR 2,510,505

REINFORCED PLASTIC BOWLING PIN

Filed Nov. 20, 1945

FIG. 1

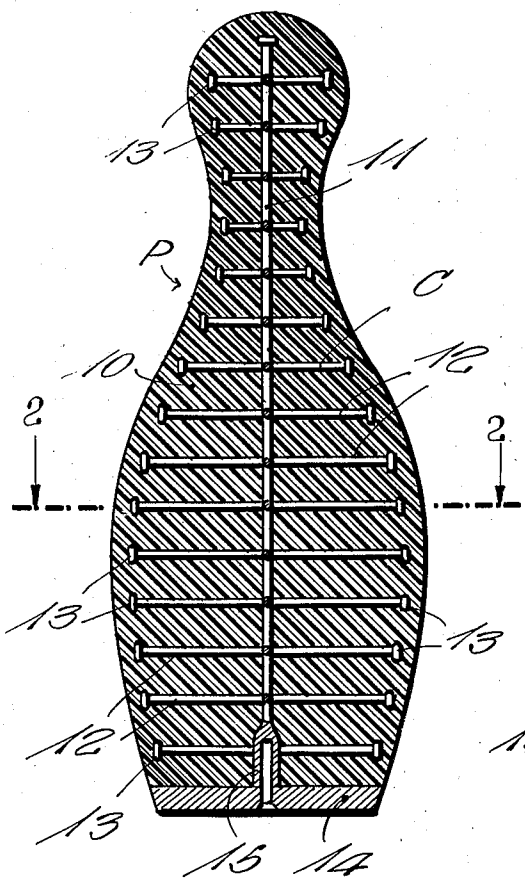
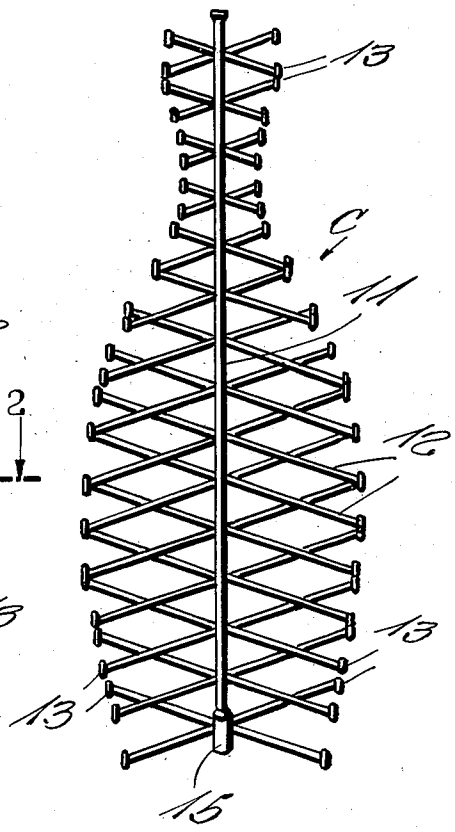


FIG. 2



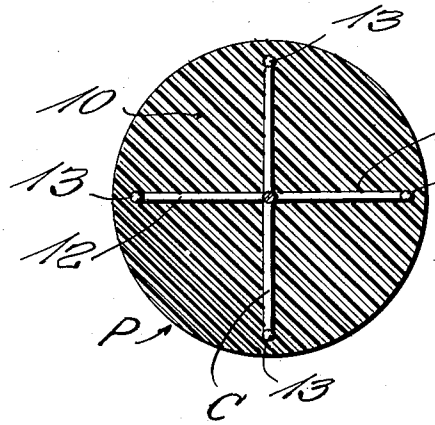


FIG. 3

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REINFORCED PLASTIC BOWLING PIN

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2 Claims. (Cl. 273—82)

1

This invention is a game piece or "pin" of the type employed in playing the games of ten pins, duck pins, candle pins and the like.

One of the objects of the invention is to provide a "pin" of the character mentioned having a body constructed of plastic material which is strongly reenforced to withstand the shocks of ball-impact as well as to prevent warping or other distortion of the pin body.

A further object is to provide a novel reenforcing means for the pin body, which may be readily embedded within the plastic material in such manner that the pin itself may be accurately made to conform strictly with the weight and dimensions imposed by the standard rules of bowling.

The invention will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawing:

Figure 1 is a longitudinal sectional view illustrating a bowling pin constructed in accordance with the invention.

Figure 2 is a transverse sectional view thereof on the line 2—2, Figure 1.

Figure 3 is a perspective view of the reenforcing member.

Referring to the drawing, P designates a bowling pin, the body of which is constructed of molded plastic 10, having a reenforcing core C embedded therein. Any desired moldable plastic material or synthetic resin which is capable of withstanding the shocks incident to being struck by a heavy ball, may be employed for the plastic body. A satisfactory example is cellulose butyr acetate because of its inherent elasticity.

The core C is constructed of an axially disposed support rod or backbone 11, having a plurality of spaced sets of ribs 12, disposed at angles to said backbone 11 and rigidly secured thereto. The outer ends of the respective ribs terminate at positions near the surface of the pin body, but at locations to be well covered by the plastic material 10. The lengths of the respective ribs vary to conform to the external contour of the pin body. That is, the ribs are shortest at the smallest diameter of the pin body and longest at the largest diameter of the pin body, so that the outer end of each rib terminates at approximately the same distance from the surface of the pin body. The extremities of said ribs are also provided with enlarged portions 13 which serve to anchor the ribs within the plastic material.

It is preferred to provide the pin body with a base plate 14, which is welded or otherwise secured to the lower end of the backbone 11. Said

2

backbone is provided at its lower end with a tubular enlargement or boss 15 having an inwardly extending central aperture as shown to register with a corresponding aperture in the plate 14. The opening thus formed centrally and longitudinally of the pin at its base is to receive the pin or peg of a pin setting device.

It is to be understood that although the invention has been illustrated herein as embodying the contour of the commonly-employed "ten pin," it is not limited in this particular, because the dimensions of the reenforcing core may be varied to conform to the contour of any other type of "pin," without departing from the spirit of the invention. Therefore, wherever the term "bowling pin" is employed in the specification or the claims, it is to be understood that any "pin" which is used in games which require the knocking down of pins by a moving ball, is considered to be the equivalent thereof.

The advantages of the invention will be readily understood by those skilled in the art to which it belongs. For instance, a very simple and inexpensive form of plastic bowling pin is provided, that may be made to conform to the standard weight and dimensions required by the accepted rules of the game. An important advantage is that a molded pin body may be produced which is strongly reenforced against warping due to any cause, and which is effectively strengthened to resist shocks due to normal ball-impact incident to the playing of the game.

Having thus explained the nature of the invention and described an operative manner of constructing and using the same, although without attempting to set forth all of the forms in which it may be made, or all of the forms of its use, what is claimed is:

1. A bowling pin of the character described comprising a molded body of plastic material, and a core member embedded in said plastic material, said core member including an axially disposed backbone rod having a series of pairs of spaced ribs rigidly secured thereto and radiating therefrom, the outer extremities of said ribs terminating adjacent to but being spaced inwardly from the external surface of said body, and respective ribs being of different lengths so that each will terminate at approximately the same distance from the surface of the said body.

2. In a bowling pin, a molded body of plastic material, a core member comprising a backbone embedded in said plastic material and disposed centrally and longitudinally of said pin, an enlargement integral with said core member at the

base of said pin, said enlargement having a recess disposed longitudinally of the pin and opening at the base of the pin, a base plate covering the base of said pin, and said base plate having a central aperture therein to register with the opening in said enlargement.

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