No. 828,415. PATENTED AUG. 14, 1906.

T. MAYHEW.

BOWLING ALLEY PIN.

APPLICATION FILED MAY 2, 1906.

Fig. 1

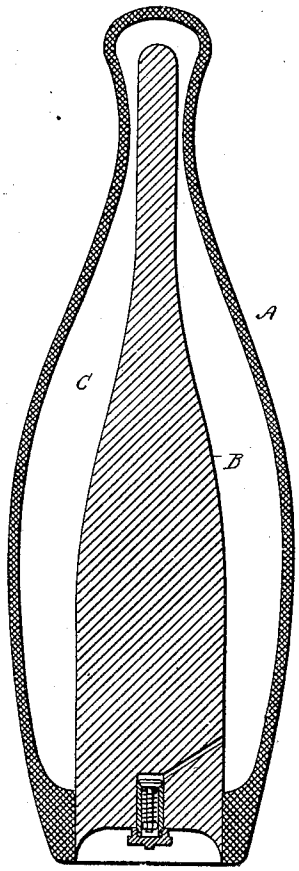


Fig. 2

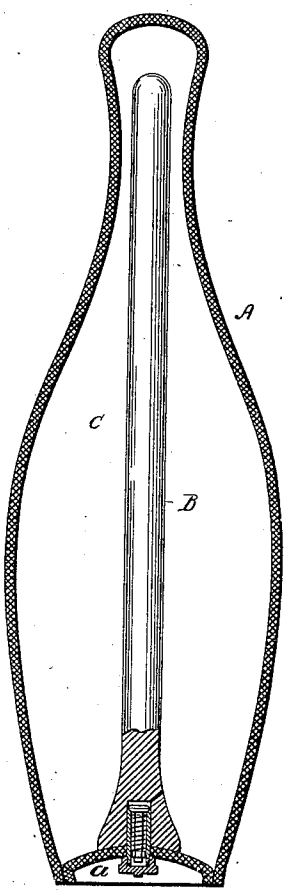
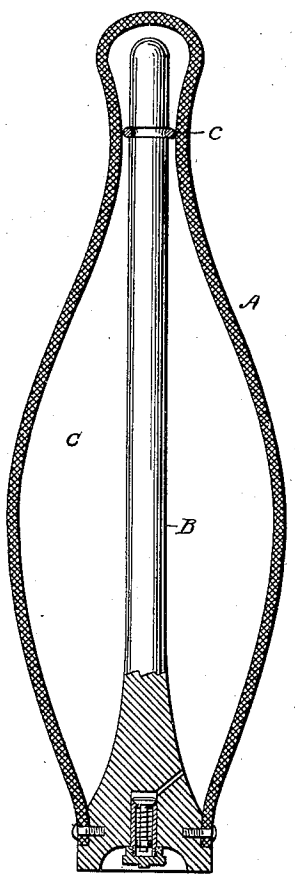


Fig. 3



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BOWLING-ALLEY PIN.

No. 828,415. Specification of Letters Patent. Patented Aug. 14, 1906.

Application filed May 2, 1906. Serial No. 314,758.

To all whom it may concern:

Be it known that I, THEOPHILUS MAYHEW, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Bowling-Alley Pins, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of this invention is to make the game of bowling less noise-producing by providing for it pins which emit little or no sound when struck by the ball.

To this end my invention consists of a pin having an elastic outer shell and a core wholly separated from the impact portions of the shell by an air-space and, further, in the combination thereof with means for compressing air into said space, all as more fully hereinafter described, and shown in the drawings, in which—

Figures 1, 2, and 3 represent vertical central sections of a bowling-alley pin embodying my invention in three modifications in which it may be carried out.

As shown in the drawings, A represents the shell of the pin, preferably made of a combination of canvas and rubber or equivalent fabric adapted to yield on the impact of a ball without producing noise and firm enough to retain air under pressure without alteration in its form.

B is the core, made of any suitable material and form adapted to give the pin the desired stability and weight and rigidly united with the shell, preferably at the base. This may be accomplished in any suitable manner, some of the preferable ways being shown in the drawings, wherein the shell is shown as formed with an opening in the base, in which the core is secured, as in Figs. 1 and 3, or the core is secured to a separate cap *a* of the same fabric as the shell, as shown in Fig. 2. In the constructions shown in Figs. 1 and 2 the shell projects below the core and protects it from being struck by the ball in any position, while in Fig. 3 the core projects below and forms the base of the pin.

It is an essential part of my invention that the impact portion of the shell—that is, that portion where a ball is liable to strike the standing pin—should be wholly free of the core and separated therefrom by a continuous air-space C; but preferably I make the core to be entirely free and out of contact with the inner wall of the shell except just at the end where it is secured. If desired, however, some elastic support, such as a rubber ring *c*, may be placed upon the core to keep it centered within the shell.

As a large interior air-space would deprive the pin of the essential quality of the solid pin, which is termed the "life," I restore the same to the pin by filling the air-space with compressed air, and to this end I fix in the lower end of the core the usual valve for connecting with an air-pump, as on the pneumatic tires. The cap of the valve must be within a suitable recess to protect it from any possible injury.

Having thus fully described my invention, what I claim is—

1. A bowling-alley pin composed of a hollow body or shell of elastic material and a core extending within the shell and separated from the inner wall thereof at the impact portion of the body by a surrounding air-space forming a pneumatic cushion.

2. A bowling-alley pin composed of a hollow body or shell of elastic material and a core secured in the base of the shell and extending upwardly into the body wholly free and separated from the inner wall thereof by an air-space forming an air-cushion for the body.

3. A bowling-alley pin composed of a hollow body or shell of elastic material and formed with an opening in the bottom, and a core having an enlarged lower portion secured in said opening and hermetically closing the same, said core projecting upwardly into the neck portion of the body wholly free and out of contact therewith.

4. A pneumatic bowling-alley pin composed of a hollow body or shell of elastic material and formed with an opening in the bottom, a core secured in said opening and extending freely into the neck of the body and means centering said core within the neck.

5. A pneumatic bowling-alley pin composed of a hollow body or shell of elastic material, a core secured in said body and forming the same with an interior air-space between the core and the impact portion of the

body and means carried by the core for admitting compressed air into said space.

6. A bowling-alley pin composed of a hollow body or shell of elastic material and formed with an opening in the bottom, a core secured in said opening and projecting upwardly wholly within the body and separated therefrom by a surrounding air-space forming an air-cushion, and means for supplying the air-space with air under pressure.

In testimony whereof I affix my signature in presence of two witnesses.

THEOPHILUS MAYHEW.

Witnesses:
OTTO F. BARTHEL,
THOS. G. LONGSTAFF.