

(No Model.)

P. J. FOULON.

MEANS FOR LOCKING OR UNLOCKING CLOSING PLUGS IN TENPIN BALLS.

No. 539,751.

Patented May 21, 1895.

Fig. 1.

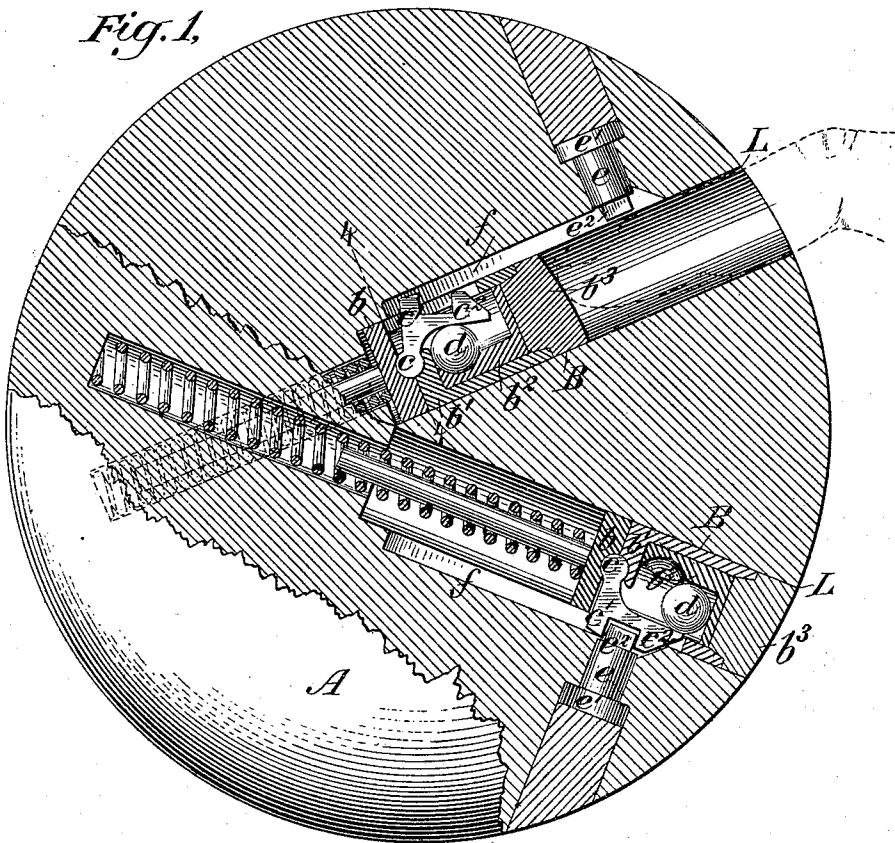


Fig. 3.

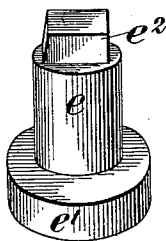
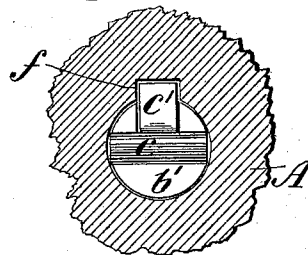


Fig. 2.



Witnesses:-

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UNITED STATES PATENT OFFICE.

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MEANS FOR LOCKING OR UNLOCKING CLOSING-PLUGS IN TENPIN-BALLS.

SPECIFICATION forming part of Letters Patent No. 539,751, dated May 21, 1895.

Application filed September 20, 1894. Serial No. 523,596. (No model.)

To all whom it may concern:

Be it known that I, PETER J. FOULON, a citizen of the United States of America, residing in the city, county, and State of New York, have invented and made certain Improvements in Means for Locking or Unlocking Closing-Plugs in Tenpin-Balls; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings forming part of this specification.

These improvements are related particularly to the devices patented to Charles Webster Rodman June 5, 1894, for improvements in tenpin balls, and are designed to secure the finger hole closing plugs more firmly in their proper positions when locked, and to release them more readily when desired, and in a more certain and positive manner.

In order that persons skilled in the art may understand, construct and use my invention, I will proceed to describe it, referring to the drawings, in which—

Figure 1 represents a tenpin-ball, partly in section and provided with finger-holes, in which my locking and unlocking mechanism is incorporated. This figure shows one closing-plug in its extreme outward position and locked to the ball and the other in its inward position unlocked, the section being taken through the center of the finger-holes and their closing-plugs. Fig. 2 is a section on line 4 4 of Fig. 1, showing a bottom view of latch *c* and the guiding-groove slot *e*. Fig. 3 is a view of the stop-plug.

A is the ten pin ball.

L are the finger holes, supplied with closing plugs.

B are the closing plugs; which fit and slide in the finger holes L, actuated outwardly by their springs, as shown, and inwardly against the tension of the springs, when pressed by the fingers of the bowler, in order to gain a firm hold of the ten pin ball.

The locking and unlocking mechanism is the subject of my invention.

The plugs B, are constructed in several

parts, viz., the base *b*, the outer metallic tube *b'*; the inner metallic shell *b''*; and the end piece or plug of wood *b'''*. The base *b*, and the piece *b'*, are secured together and clasp between their surfaces, a pivoted latch *c'*, in bearing *c*, which at all times projects beyond the walls of the plug, into a guiding groove *f*, in the ball. This groove is shown in Fig. 2. Stop plugs, *e*, are inserted in the ball at right angles to the finger holes L, and appropriately placed in holes provided for them, and flanges *e'*, define their inward position, the forward end being in line with the circumference of the finger holes. A plug is driven in to fill the hole left by boring. The plug *e*, at its inner end has a shoulder *e''*, which acts as a stop against the part *C'*, of latch *c*, in its outward course and throws the latch catch *c''*, over the stop plug *e* at *e''*, and thus securely locks the closing plug B to the stop plug *e*. The little ball *d*, when the tenpin ball is turned, with the plug B downward, rolls into the end of its chamber between the latch catch *c''*, and the walls of its chamber and prevents it from receding from its locked position on plug *e''*. In the reverse position Fig. 1, the parts are shown pressed in by the fingers of the bowler. In pushing the plug B inward the ball is in an upright position, with the plug B standing vertical. The ball *d* consequently has rolled to the other end of its chamber, into a recess, and out of contact with the latch *c''*, so that the plug *e''* in resisting the latch *c''* has thrown it backward into the recess of the plug B, and released its hold on the plug stop *e*. The part *c'*, being still in the guiding groove *f*, directs its motion and prevents any turning of the plug B. In returning to its outward position, the part *c'*, strikes *e''*, and turns the latch on its pivot *c*, and throws the part *c''*, over the stop plug *e''*, and when the ball turns over with the plug B, downward, the ball *d* rolls behind the latch *c''*, and prevents any retreat of the latch, or inward movement of the plug B, in rolling on the bowling alley.

Having now fully described my invention

and the manner in which I have embodied it, what I claim as new, and desire to secure by Letters Patent, is—

5 In a finger hole closing plug for a ten pin ball, a locking and unlocking mechanism, located in said plug, consisting of a pivoted lever latch; a loose ball; arranged to operate substantially as described to secure and re-

lease said latch to and from a fixed stop in the walls of the finger hole of the ten pin ball, 10 by the change of position of the ten pin ball.

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Witnesses:

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