

No. 836,763.

PATENTED NOV. 27, 1906.

R. H. HARTLEY.
COIN CONTROLLED BOWLING ALLEY.

APPLICATION FILED JAN. 29, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

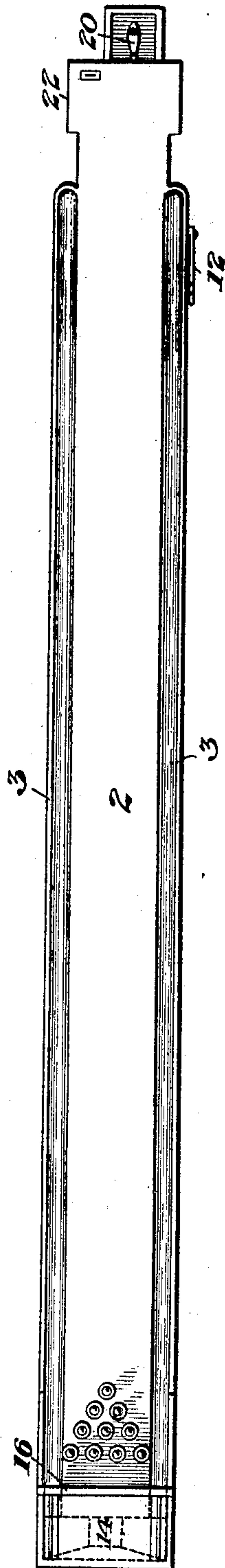
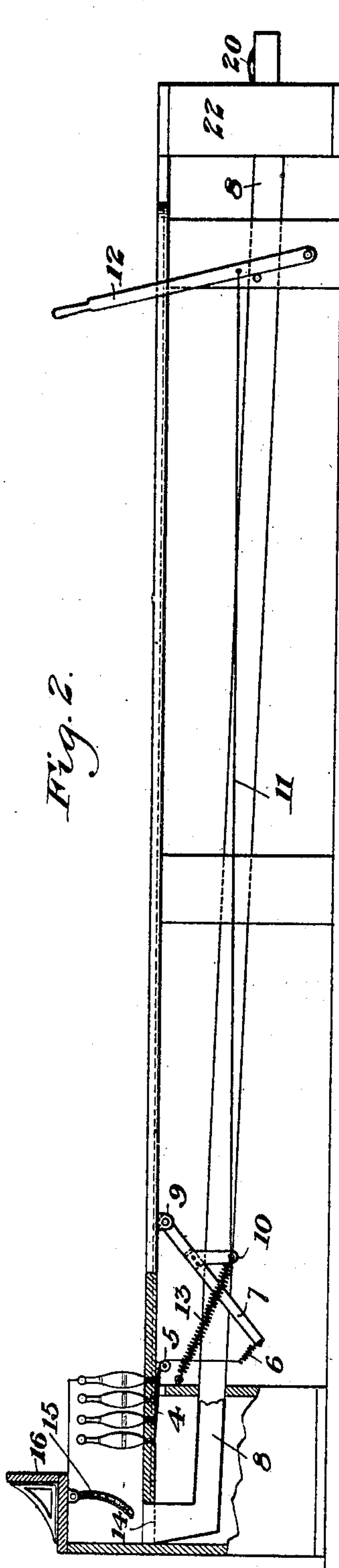


Fig. 2.



WITNESSES

L. A. Conner
H. M. Conner

INVENTOR

R. H. Hartley
by D. C. Conner
his atty

No. 836,763.

PATENTED NOV. 27, 1906.

R. H. HARTLEY.
COIN CONTROLLED BOWLING ALLEY.

APPLICATION FILED JAN. 29, 1904.

2 SHEETS—SHEET 2.

Fig. 5.

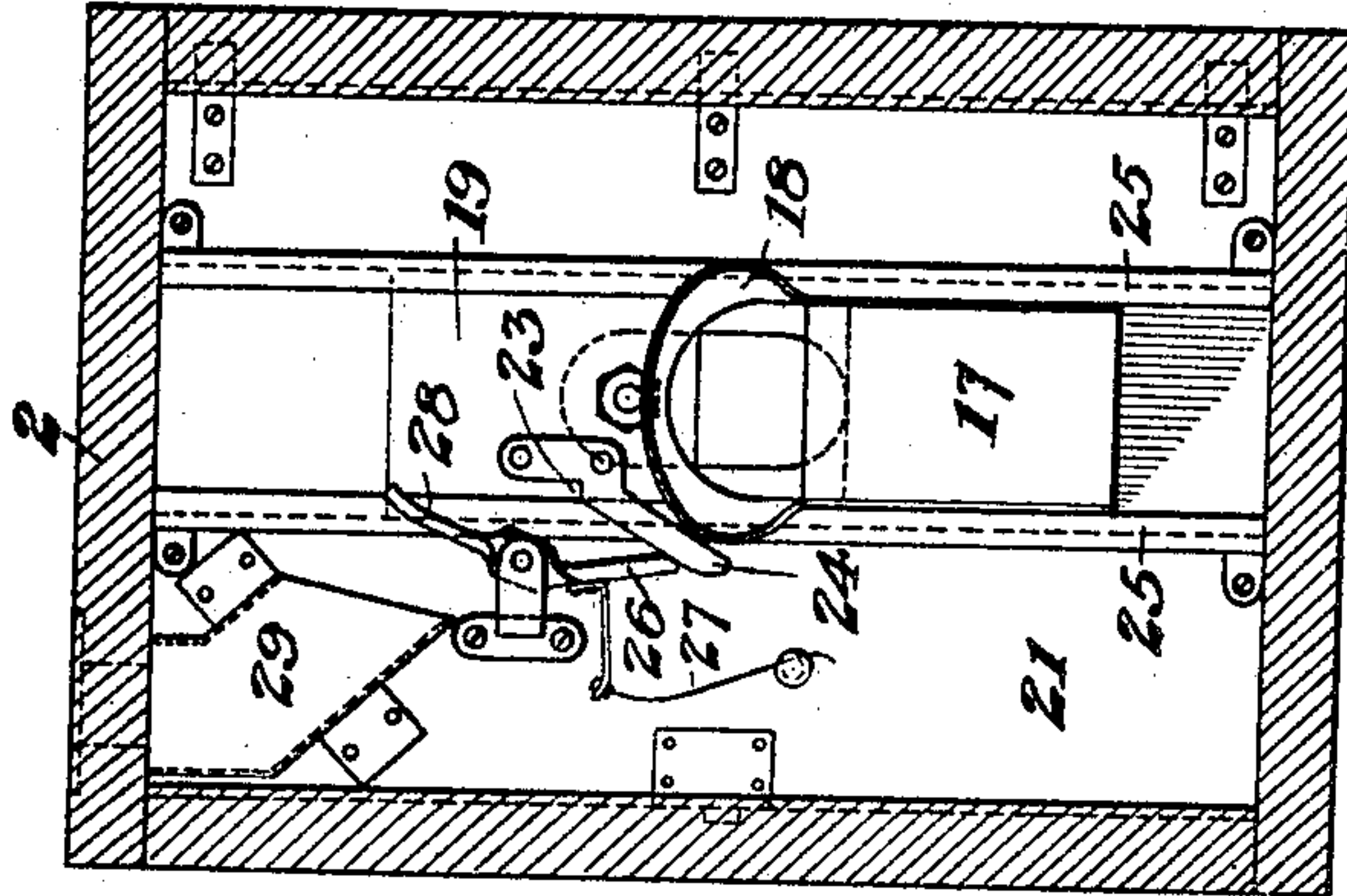


Fig. 4.

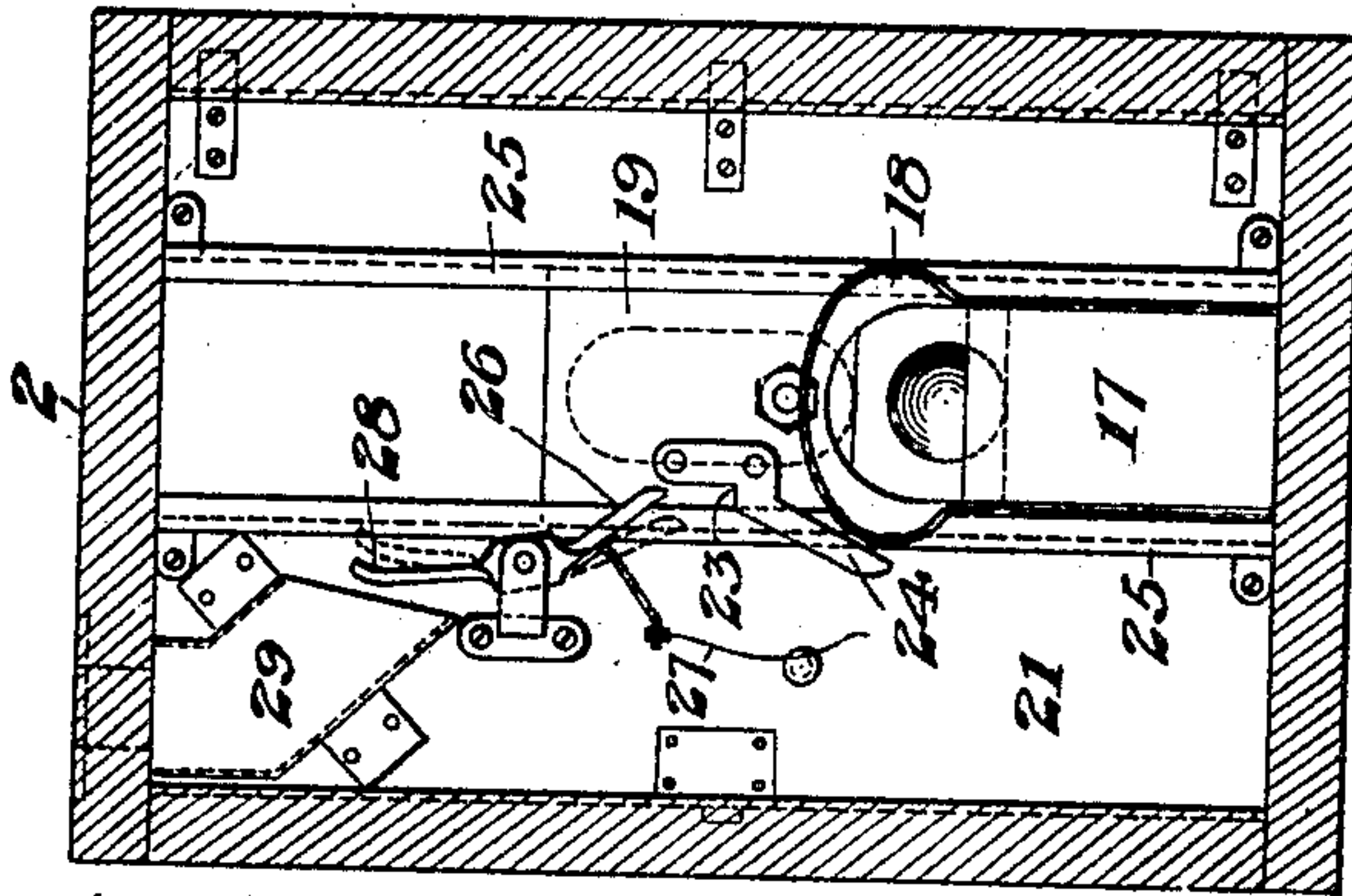
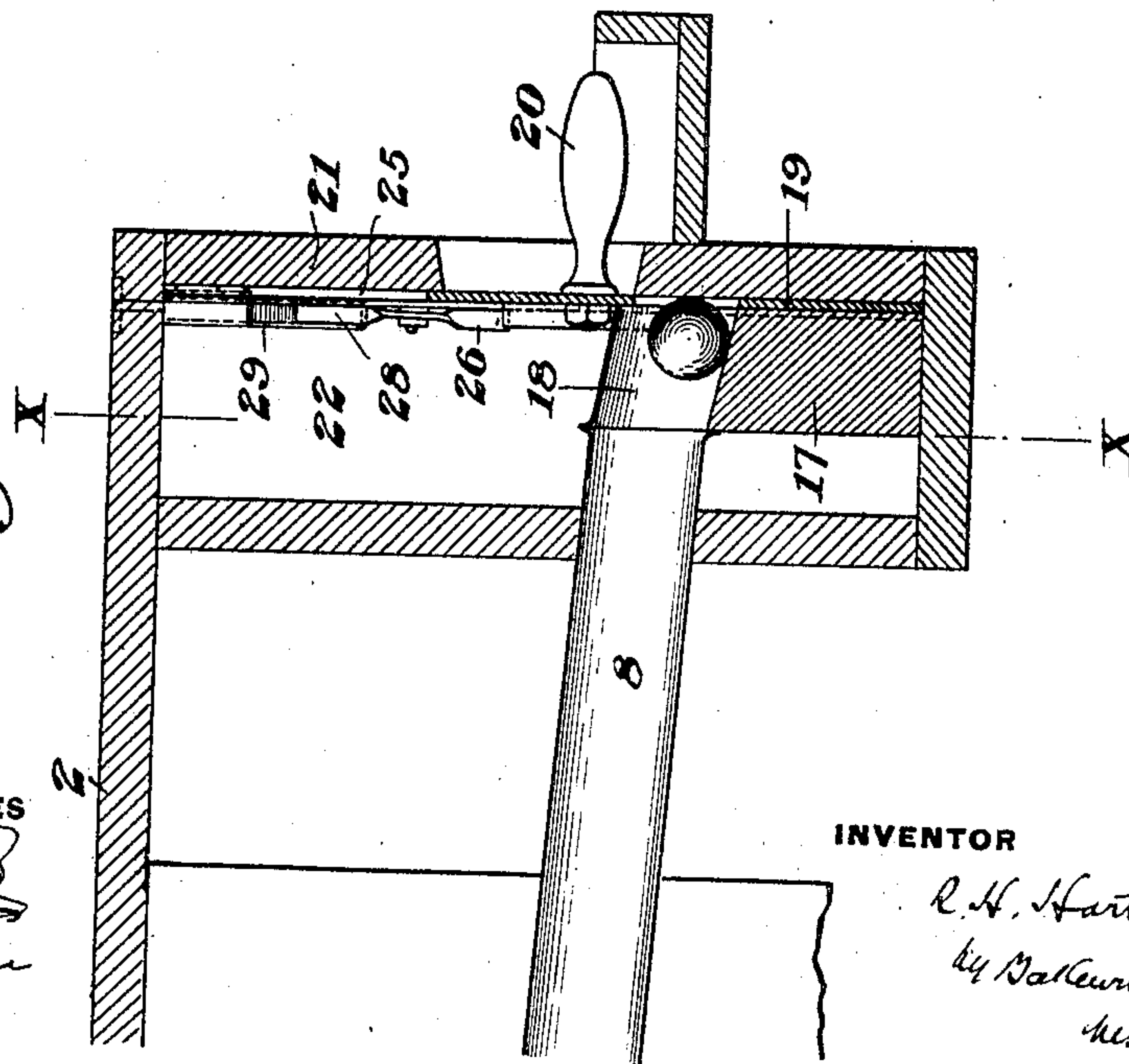


Fig. 3.



WITNESSES

L. A. Brown
H. M. Corwin

INVENTOR

R. H. Hartley
by Barlow & Byrnes
his attys

UNITED STATES PATENT OFFICE.

ROBERT H. HARTLEY, OF PITTSBURG, PENNSYLVANIA.

COIN-CONTROLLED BOWLING-ALLEY.

No. 836,763.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed January 29, 1904. Serial No. 191,136.

To all whom it may concern:

Be it known that I, ROBERT H. HARTLEY, of Pittsburg, Allegheny county, Pennsylvania, have invented a new and useful Coin-
5 Controlled Bowling-Alley, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

10 Figure 1 is a top plan view of my improved apparatus. Fig. 2 is a side elevation, partly broken away. Fig. 3 is a partial vertical longitudinal section at the front end of the alley; and Figs. 4 and 5 are cross-sections on
15 the line X X of Fig. 3, showing the lock and coin release device in different positions.

My invention relates to the class of bowling-alleys, and is designed to provide a coin-controlled bowling-alley in which the ball can
20 only be obtained by dropping a coin in the machine. It is also designed to provide a bowling-alley wherein the bowler can reset the pins from the front end of the apparatus, means being provided for insuring the setting
25 of the pins.

In the drawings, 2 represents the floor of the alley proper, which may be provided with side grooves 3 3, if desired. At the rear or pin end of the alley the floor is provided with
30 holes beneath each pin, through which extend cords 4. Each cord is fastened at one end to the lower end of its pin, extends down through the hole covered by the pin, and thence over and along roller 5, its other end
35 being secured to spiral spring 6. The ends of the springs 6 for the different cords are all secured to the cross-bar of a U-shaped lever 7, which extends below the return-trough 8 for the balls. This lever is pivoted at opposite
40 sides, as shown at 9, and has an arm 10, connected by a flexible cord 11 with the hand-operated lever 12 at the front end of the alley. A spiral spring 13 is connected to the arm 10, its other end being secured to the frame.
45 This spring 13 normally holds the lever 7 in retracted position, so that the strain on the cords is released after the pins are pulled to set position. The springs 6 serve to take up and compensate for stretching of the cords
50 connected to the pins. Heretofore in such systems these cords would stretch and lengthen and prevent proper setting of the pins. These interposed springs overcome this difficulty and insure the proper setting
55 of the pins.

At the rear end of the floor 2, beyond the pins, there is a transverse hole 14 through the floor, at the entrance of which hangs a flapper or valve 15. This flapper is hinged
6c to the overhead shield or cover 16 and is deflected backwardly by the ball, which then drops down through the port 14 and rolls back through the inclined chute 8.

In order to prevent access to the ball except when the coin is inserted, I provide at
65 the front end of the chute 8 a vertical movable block 17, carrying the movable section 18 of the chute. A plate 19 is secured to the block, this plate having a projecting handle 20, which extends through a hole in the
70 front plate 21 of the chamber 22. On the inside of the plate and above the chute 18 is rigidly secured a stop 23, having an inclined laterally-projecting arm 24. The plate 19 moves within suitable side guides 25, and a
75 swinging latch 26 is pivoted to the inner surface of the wall 21 and is pressed, by spring-arm 27, into the position shown in full lines in Fig. 4. In this position the lower arm of the
8c latch will contact with the shoulder 23 of the stop and prevent the lifting of the slide to a point where the chute 18 will register with the hole in the front wall, so as to allow access to the ball.

The upper arm 28 of the latch is in front of
85 the coin-chute 29. When a coin is dropped into the chute, it strikes the arm 28 and swings the lever into the position shown in dotted lines in Fig. 4, acting against the pressure of the light spring 27. In this new position
90 of the latch its lower arm will strike the incline 24 of the stop, thus allowing the slide to be raised to a point where the ball can be reached. As the slide is thus raised by the handle 20 the tilting of the latch releases the
95 coin, which drops down into the chamber or a suitable receptacle therein. When the slide is lifted, the block 17 closes the end of the runway 8 and prevents the ball from being reached by wedging or holding up the slide
100 while waiting for the ball to return. It will therefore be seen that after using the ball it can only be obtained for another throw by dropping a coin in the chute and then lifting
105 up the handle 20. After the ball is obtained the slide is lowered and is then again in position to receive the ball.

The advantages of my invention result from the lock and coin-release device for the ball, from the blocking of the return-channel
110

when the ball is obtained, and from the use of the springs which compensate for stretching or variations in the pin-setting cords.

Variations may be made in the form and arrangement of the lock and coin-release and the other parts without departing from my invention.

I claim—

1. A bowling-alley having a closed return-
10 chute for the ball, a slide having a movable chute portion arranged to permit access to the ball, a lock arranged to prevent movement of the slide and a coin-controlled release for the lock; substantially as described.

2. A bowling-alley having a closed return- 15
chute for the ball, a sliding block having a chute portion arranged to permit access to the ball and arranged to close the chute when it is moved, a lock arranged to prevent sliding of the block and a coin-controlled release 20
for the lock; substantially as described.

In testimony whereof I have hereunto set my hand.

ROBERT H. HARTLEY.

Witnesses:

JOHN MILLER,
H. M. CORWIN.