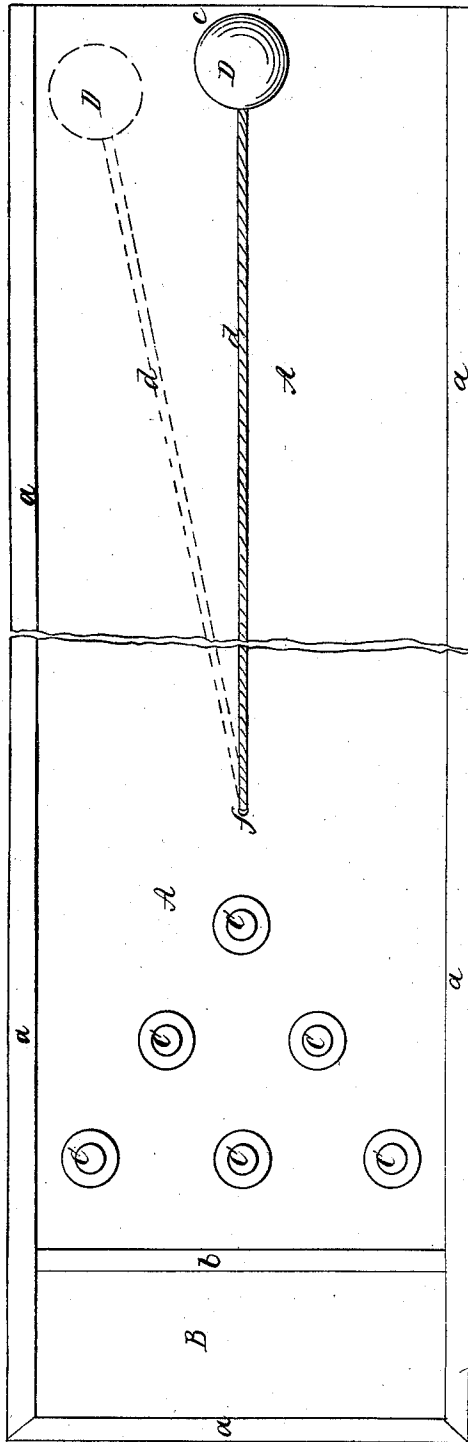


C. Robinson.

Ten Pin Alley.

N^o 86,593.

Patented Feb. 2, 1869.



*Witnesses,
E. Beale
R. S. Turner.*

*Inventor,
Charles Robinson
By his Atty.,
J. L. Brown*

United States Patent Office.



CHARLES ROBINSON, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 86,593, dated February 2, 1869.

IMPROVEMENT IN TEN-PIN ALLEYS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, CHARLES ROBINSON, of Boston, in the county of Suffolk, and State of Massachusetts, have invented an Improved "Ten-Pin" Board or Alley; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, making part of this specification, and representing a plan of a "ten-pin" board provided with my improvement.

Let A represent the board or alley, having raised sides, *a a*, and also one raised end, *a*, the other end, *e*, being open, for the better direction of the ball.

This board may be of any desired dimensions, but, for parlor-use, it may be four feet or more long, and six inches wide.

The closed end of the board may be partitioned off, at *b*, so as to form a box, B, for the reception of the pins, when not in use.

The pins, C C, may be arranged in the usual manner. There may be nine or ten pins, or a less number, six being represented in the drawing.

My invention consists in the employment of an elastic cord, or strip, *d*, for guiding and throwing the ball, D, toward the pins.

For this purpose, the cord is attached, at one end, to the board, forward, toward the pins, in a central po-

sition, as at *f*. The other end is secured to the ball. Its length is such as to require it to be stretched, when the ball is brought to the end of the board in position for throwing, (as represented,) sufficiently to throw the ball with the proper force. Its operation is obvious.

Not only does the cord serve to throw the ball with ease and celerity, but it enables the most accurate aim to be taken, since, when the ball is drawn back, the action of the cord is invariably in the direction of its centre line, so that it becomes the line of aim; and the ball may not only be placed in a central position for aiming, as shown by dark lines, but, in the progress of knocking over the pins, it may be placed in any lateral position, as indicated, for instance, by the red lines.

What I claim as my invention, and desire to secure by Letters Patent, is—

The elastic cord or strip *d*, attached to the board or alley A, and to the ball D, for throwing and directing the ball to the pins, substantially as herein specified.

The above specification signed by me, this 6th day of November, 1868.

CHARLES ROBINSON.

Witnesses:

C. P. JUDD,
H. MERRILL.