

No. 635,913.

Patented Oct. 31, 1899.

J. BUCK.
BOWLING ALLEY.

(Application filed Apr. 19, 1898.)

(No Model.)

Fig: 1.

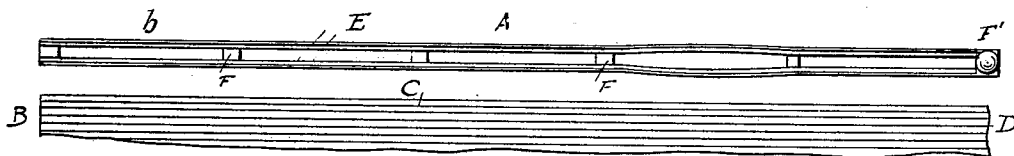


Fig: 2.

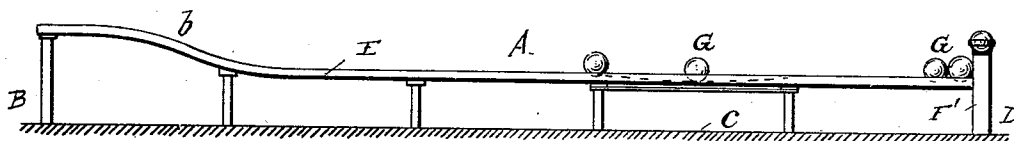


Fig: 3.

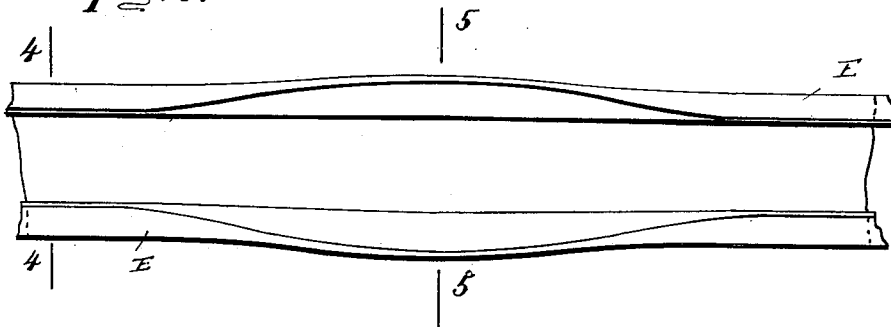
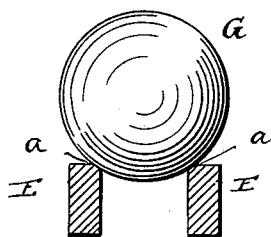


Fig: 4

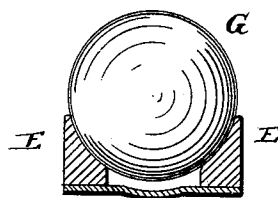


Fig: 5.

Witnesses
P. Albertine Jr.
N. M. Flannery

J. Buck Inventor
By his Attorney O'Connell & Tamm

UNITED STATES PATENT OFFICE.

JOHN BUCK, OF WEEHAWKEN, NEW JERSEY, ASSIGNOR TO JUSTUS BRUNS,
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BOWLING-ALLEY.

SPECIFICATION forming part of Letters Patent No. 635,913, dated October 31, 1899.

Application filed April 19, 1898. Serial No. 678,106. (No model.)

To all whom it may concern:

Be it known that I, JOHN BUCK, a citizen of the United States, and a resident of the town of Weehawken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Bowling-Alleys, of which the following is a specification.

This invention relates to improvements in bowling-alleys, and especially to improvements in the return-track on which the balls are returned from the pit at the pins to the bowler's end of the alley.

The object of my invention is to provide a new and improved return-track or runway which is so constructed that the ball runs at a high speed under the action of gravity from the pit of the alley to the bowlers, but is automatically retarded in its speed about ten to fifteen feet from the bowling end of the return-track, so as to prevent the balls from forcibly bumping into each other, thereby practically preventing the balls from being cracked, chipped, or nicked by striking against each other and which improved return-track is simple in construction, strong, durable, and not expensive.

In the accompanying drawings, forming a part of this specification, and in which like letters of reference indicate like parts in all the views, Figure 1 is a plan view of my improved return-track for bowling-alleys. Fig. 2 is a side elevation of the same. Fig. 3 is a plan view of part of the same on an enlarged scale. Fig. 4 is a vertical transverse sectional view of the same on the line 4 4 of Fig. 3. Fig. 5 is a vertical transverse sectional view of the same on the line 5 5 of Fig. 3.

The return-track or ball-runway A extends from the pit B of the bowling-alley C to the bowler's end D and is composed of two rails E, which rest on suitable supports F, of any approved construction—such as standards, posts, or brackets—the nature of such supports being immaterial.

The rails E may be made of wood or metal, either solid or hollow, and may have any desired or suitable cross-section, and are placed so wide apart that the largest regulation ball can readily run on the same, as well as smaller

balls. I have shown the rails E made of wood, square in cross-section and having the upper inner edges beveled off or chamfered, as at *a*. The rails have a sudden descent or incline *b* at the pit end, so as to give the ball the necessary impetus required to run to the bowler's end of the alley, and from the lower end of said descent or incline *b* the track is practically level to the newel or post F at the bowler's end of the alley. About ten to fifteen feet from the post F, I gradually increase and then decrease the bevel or chamfer *a*—say for a length of about ten feet, more or less—and the chamfer or bevel is curved on a concave line, so as to permit the surface of the ball to rest snugly against it, as shown, and by preference the rails are spread at this part, as shown.

Ordinarily the ball G rests upon the tracks E in the manner shown in Fig. 4, and there is a minimum contact between the ball and rails and the friction is reduced to a minimum; but when the ball runs upon that part of the rails having the enlarged bevel or chamfer for a greater or less length the ball gradually descends, as shown in Fig. 5, its contact with the rails is increased materially, and consequently also the friction, and the friction acts on the ball much nearer the center than when the ball runs on the ordinary part of the rails. The resistance offered by the rails to the ball thus gradually increases and remains uniform for a short time, then gradually decreases again, so as to leave sufficient impetus to the ball to finish its run. The speed of the ball is not checked suddenly, but gradually, to such an extent as to prevent the balls bumping forcibly against each other when they arrive at the end of the run.

As the small balls would drop down between the rails when they arrive at the widened part, a board G is secured under this widened part of the track, on which board the smaller balls can run, and which board is provided with a longitudinal shallow groove.

I am aware that such return-tracks have been constructed to descend toward the bowler's end and then rise again, and I do not claim this as my invention.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

A return-track for bowling-alleys, having two rails, which are provided some distance
5 from the bowler's end of the alley, in their inner upper edges, with bevels, which gradually increase and then decrease toward said bowler's end and a board secured in close proximity beneath the rails, at those parts of
10 the rails having a gradually increasing and

decreasing bevel, substantially as herein shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 5th day of April, 15 1898.

JOHN BUCK.

Witnesses:

N. M. FLANNERY,
P. ALBERTINE, Jr.