(No Model.)

J. BRUNS.

BOWLING ALLEY.

No. 456,375. Patented July 21, 1891.

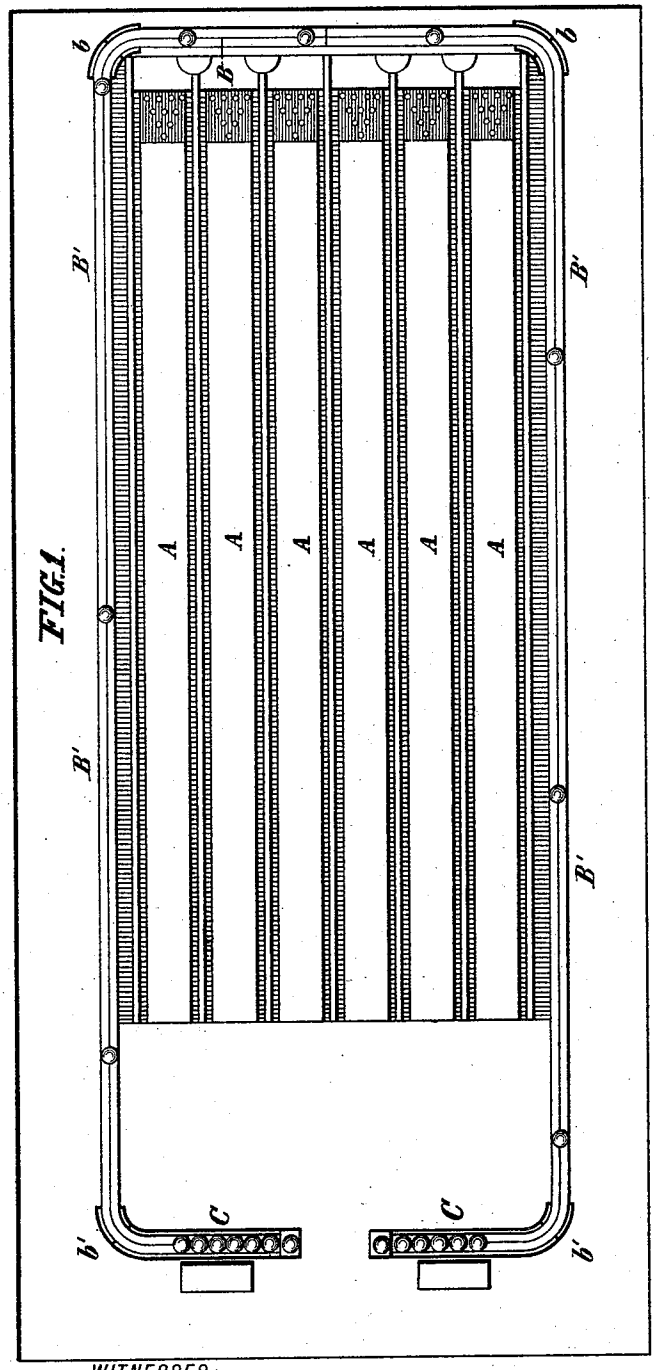

FIG. 1.

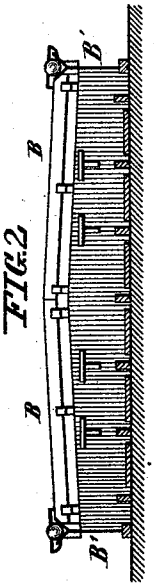

FIG. 2.

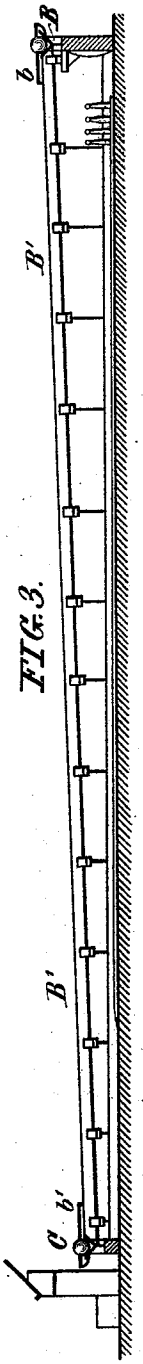

FIG. 3.

WITNESSES:

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JUSTUS BRUNS, OF WEEHAWKEN, NEW JERSEY.

BOWLING-ALLEY.

SPECIFICATION forming part of Letters Patent No. 456,375, dated July 21, 1891.

Application filed March 14, 1891. Serial No. 385,120. (No model.)

To all whom it may concern:

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

When several bowling-alleys are arranged sidewise of each other, and especially when they are used for prize bowling, it is found inconvenient to use a separate return-gutter for the balls of each pair of alleys for the reason that these gutters and their supports prevent a free view of the alleys by the spectators who are assembled around the same.

The object of this invention is to construct a bowling-alley in such a manner that this objection is obviated and a simpler and more advantageous arrangement of the gutters is obtained; and the invention consists of a number of bowling-alleys arranged sidewise of each other, and of an inclined gutter that extends around the outer ends and the sides of the alleys, the highest point of said gutter being arranged at the center of the transverse portion, from which it slopes down at opposite sides of the alleys to collecting troughs or boxes that are arranged transversely to and at the rear of the inner or throwing end of the alleys.

In the accompanying drawings, Figure 1 represents a plan of my improved bowling-alley; and Figs. 2 and 3 are respectively a vertical transverse section and a vertical longitudinal section on lines 2 2 and 3 3, Fig. 1.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents a number of bowling-alleys, which are arranged in pairs. Each bowling-alley A is provided at each side with the usual depressions and with a separating piece of timber for preventing the balls from passing from one alley to the other. An inclined gutter for returning the balls is not arranged between each pair of alleys, as heretofore, but the gutter is so arranged that its highest part B extends transversely to all the alleys along the outer ends of the same, said transverse portion B being connected by curved corners *b* with two longitudinal portions B′, which run parallel with and alongside of the outermost alleys so as to form a continuation of the transverse portion B. The longitudinal gutters B′ are arranged at opposite sides of the alleys, two being only required for the entire set of alleys. The gutters B′ are connected at their lowermost ends by curved corners *b′* with collecting troughs or boxes C for the balls, which terminate in stout pillars at their adjacent ends. The collecting-troughs C, instead of being arranged sidewise of the alleys, are arranged at the rear of the inner or throwing ends of the alleys back of the players, providing sufficient space for the players to throw their balls, but not sufficient space for any spectators or others, who have to remain outside of the gutters and collecting-troughs. The marking-tables are located outside of the collecting-troughs, where the players, when not throwing their balls, also take places. The transverse portion B of the gutter is gradually inclined from its highest middle part to the curved corners of the said gutters, so that the boys employed for setting up the pins can drop the balls at any convenient portion of the gutter, the balls continuing to run from the same along the inclined longitudinal portions of the collecting-troughs. At the curved corners of the gutters *b b′* the latter are provided with upward-extending guard devices to prevent the jumping of the balls from the gutters when passing around the corners of the gutters. The transverse portion B of the gutter is arranged on top of the end wall of the alleys, which end wall is provided with the usual cushions for the balls and pins, and intermediately between the same with projecting seats for the boys who attend to the setting up of the pins.

The advantages of my improved bowling-alley are that two gutters only are required for three or more pairs of alleys; secondly, that the alleys are not obstructed, so that the progress of the game can be watched by the spectators and the teams interested in the game, and, thirdly, that the players cannot be interfered with when throwing their balls, which is an important point, as only those who throw the balls are permitted to enter into the space inclosed by the gutter and collecting-troughs.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a series of bowling-alleys, of an inclined gutter formed of a transverse portion extending across the outer ends of the alleys and having its highest point midway between the alleys and of longitudinal portions extending along the outer sides of the entire set of alleys, and collecting-troughs at the lower ends of the longitudinal portions, said troughs being arranged transversely to the gutter at some distance from the inner or throwing ends of the alleys, substantially as set forth.

2. The combination, with a series of bowling-alleys, of an inclined gutter extending transversely along the outer ends of the alleys and then longitudinally along the outer sides of the entire groups, collecting-troughs extending transversely to the longitudinal portions of the gutter at some distance from the inner or throwing ends of the alleys, and rounded-off corners connecting the transverse and longitudinal portions of the gutter and the latter with the collecting-troughs, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JUSTUS BRUNS.

Witnesses:
PAUL GOEPEL,
A. M. BAKER.