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2,482,250

BOWLING BALL RETURN RUNWAY

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Fig. 1.

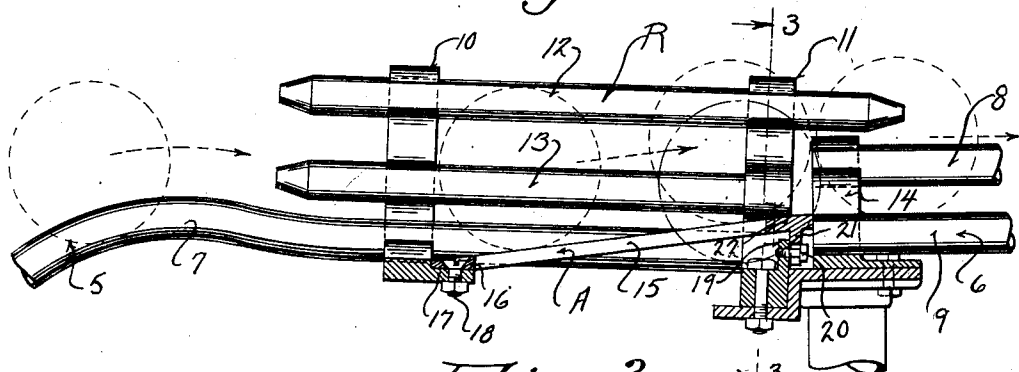


Fig. 2.

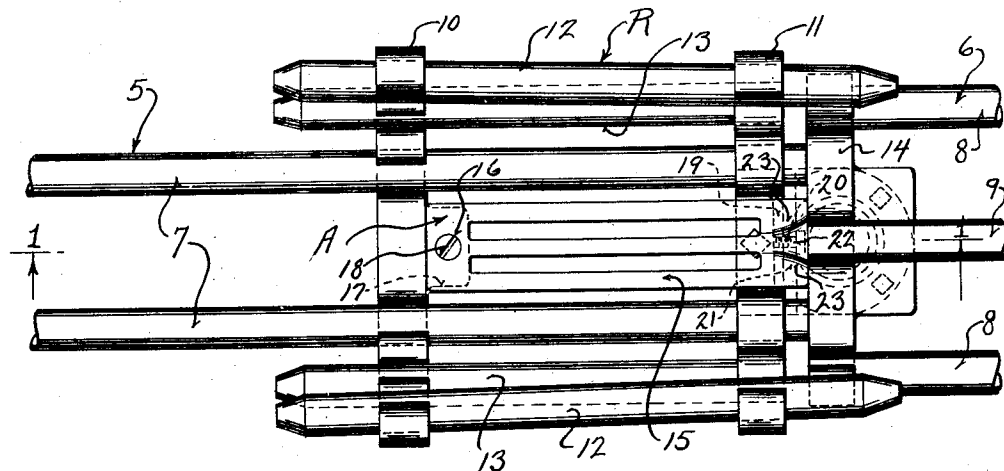
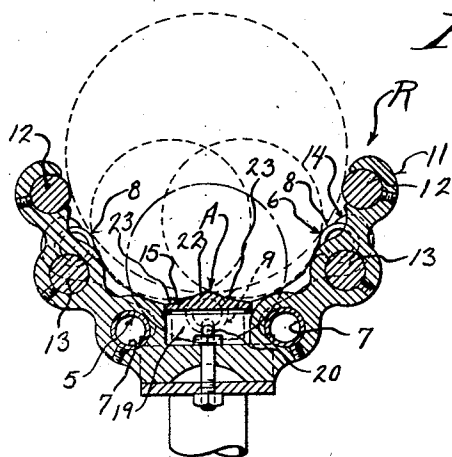


Fig. 3.



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UNITED STATES PATENT OFFICE

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BOWLING BALL RETURN RUNWAY

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2 Claims. (Cl. 273-47)

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This invention appertains to bowling ball return runways or troughs and is an improvement over my prior patent, No. 2,345,964, issued April 4, 1944.

In my prior patent, I showed a device for retarding or slowing up the speed of balls as the same reach the ball supporting rack. This device functions perfectly for the large balls used in ten pins. However, where the same rack is used for both large balls and small duck pin balls, the lifting and retarding rails of the retarding device are spaced too far apart to engage the small balls; consequently the small balls strike the rails of the supporting rack, causing objectionable noise, injury to the balls, and the slowing up of the game.

It is therefore one of the prime objects of my invention to provide a novel and simple device for use in connection with the ball retarder to effectively lift and guide the small balls on to the receiving rack without objectionable noise or injury to the balls.

Another salient object of the invention is to provide a novel riser guide plate, which can be readily associated with the above mentioned ten pin ball retarder so that small balls will be guided on to the rails of a ball receiving rack.

A further important object of my invention is to provide a bowling ball receiving rack having a central rail in addition to the two usual side rails, with means on the riser plate for directing and guiding small duck pin balls to either one side or the other of the central rail, whereby said small balls can be supported by either side rail and the central rail.

A still further object of my invention is to provide an attachment for a ball retarding device, so that both large and small balls can be effectively handled, the attachment being of such a construction that the same can be manufactured at a small cost and readily associated with my ball retarder.

With these and other objects in view the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter more specifically described, claimed, and illustrated in the accompanying drawing, in which drawing:

Figure 1 is a longitudinal central sectional view through my ball retarder showing the same in its operative position relative to a return runway and

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a ball receiving trough with my novel small ball riser and guiding plate associated therewith, the view being taken on the line 1-1 of Figure 2 looking in the direction of the arrows.

Figure 2 is a top plan view showing my novel plate associated with the ball retarder.

Figure 3 is a transverse sectional view taken substantially on the line 3-3 of Figure 1 looking in the direction of the arrows.

Referring to the drawing in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter A generally indicates my novel attachment for the ball retarder R.

The ball retarder R is of the same character and type shown in my mentioned patent and cooperates with the ball return runway or trough 5 and the ball receiving rack 6. The ball return runway 5 includes a pair of spaced parallel rails 7 which lead toward the rack 6. The rack 6 likewise embodies outer or side spaced parallel ball supporting rails 8, and in accordance with my invention I employ a centrally disposed bottom rail 9. The rails 8 support large tenpin balls, while the rails 9 in conjunction with either one of the rails 8 support duckpin balls.

The ball retarder R will not be described in detail, but it can be seen that the same includes spaced parallel transversely extending brackets 10 and 11. The brackets are firmly secured to the rails 7 of the runway and at this point attention is called to the fact that the rails 7 at the upper end of the runway incline downwardly and terminate below the rails of the receiving rack 6. The brackets 10 and 11 also support the upper short friction or ball retarding rails 12 and the brace rails 13.

When the balls are returned by the pin boy and the same ride toward the rack 6 the large balls will be engaged by the rails 12 which will elevate the balls and slow up the speed thereof and gently deposit the balls on the rails 8 of the rack. If small balls are being returned these balls will not be engaged by the rails and consequently, under normal conditions these small balls will ride on the rails 7 of the runway until they strike the rails 8 and 9 or the supporting bracket 14 therefor.

In order to utilize the rack for small balls as well

as large balls, I associate my novel attachment A with the ball retarder.

This attachment A can be in the nature of an elongated plate 15. The plate is of such a width as to lie between the rails 7 of the runway. This plate 15 inclines upwardly from the bracket 10 toward the receiving rack and extends over the central portion of the bracket 11.

This plate terminates substantially flush with the upper face of the rack bracket 14. The plate has its lower surface adjacent to its forward end provided with a flat horizontal face 16, which rests upon the upper face of a forwardly projecting ear 17 formed on the central portion of the bracket 10. A nut and bolt 18 can be utilized for connecting the plate with this ear. The central portion of the bracket 11 has formed thereon an upwardly extending ear 19. The ear 19 supports the clamping screw 20. Formed on the rearward end of the plate is a depending bifurcated lug 21 which straddles the screw 20. By tightening the screw the lug can be firmly clamped to the bracket 11. While the plate 15 is formed from somewhat rigid material, the same will possess sufficient resiliency to permit the end carrying the lug to be sprung up and down a slight distance on the screw, when the same is loosened, so that this plate can be lined up perfectly with the bracket 14.

The upper central portion of the plate 15 at the end thereof which abuts the rack carries a raised boss 22 which is aligned with the central rail 9. The opposite faces of the boss diverge rearwardly from a central line as at 23, and this boss functions to guide small balls to one side or the other of the rail 9.

In use of my attachment A, small balls riding the runway 5 will engage the upwardly inclined plate 15 and consequently these balls will be elevated to the same height as the bracket 14. When these balls strike the boss they will be guided to one side or the other of the rail 9 and the balls will rest between one rail 8 and the central rail 9.

Changes in details may be made without departing from the spirit or the scope of my invention, but what I claim as new is:

1. The combination with a return runway for bowling balls including a pair of spaced rails and a receiving rack arranged in front of the runway including side rails and a bottom central rail, of a device for facilitating the delivering of small balls to the rack including a centrally disposed plate arranged between the rails of the runway and gradually inclining upwardly toward the rack, and a centrally disposed guide boss on the upper surface of said plate at substantially the same height as the central rail of the rack, said boss having flaring sides for directing small balls to one side or the other of said central rail.

2. The combination with a return runway for bowling balls including spaced rails, a receiving rack arranged in front of the runway, said runway having a portion inclining downwardly toward the rack and a retarder for large balls including spaced rails disposed above the spaced rails of the runway, and spaced transversely extending brackets secured to the runway; of a device for elevating and delivering small balls to the rack between the spaced rails of the retarder including a plate disposed between the rails of the runway, said plate gradually inclining upwardly toward the rack, an ear on one bracket extending forwardly therefrom for receiving the plate, an upwardly extending ear on the other bracket, an adjusting screw carried by said last mentioned ear, and a depending bifurcated lug on the plate straddling said screw.

EDWARD W. DISCHER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,345,964	Discher	Apr. 4, 1944