Dec. 13, 1949 R. R. WILSON 2,491,349

BALL STOP FOR BOWLING BALL RETURN RACKS

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Fig. 1.

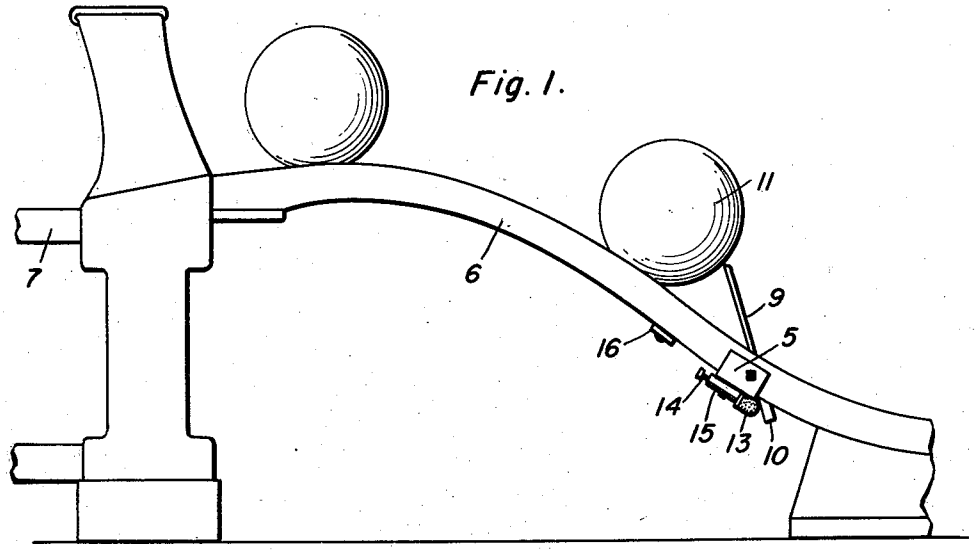
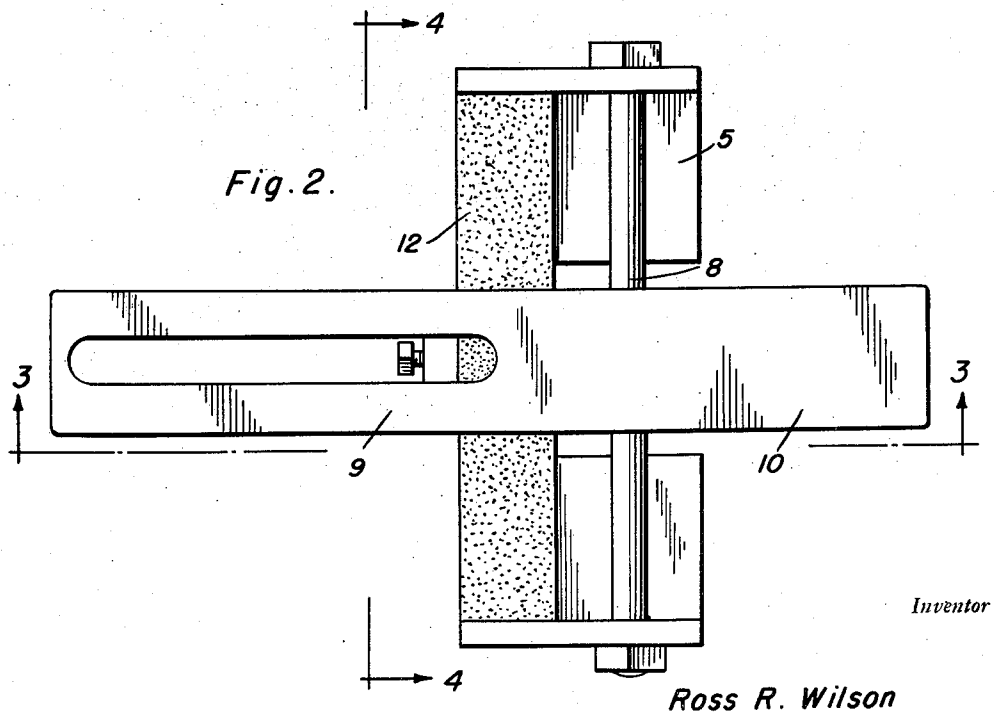


Fig. 2.



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Fig. 3.

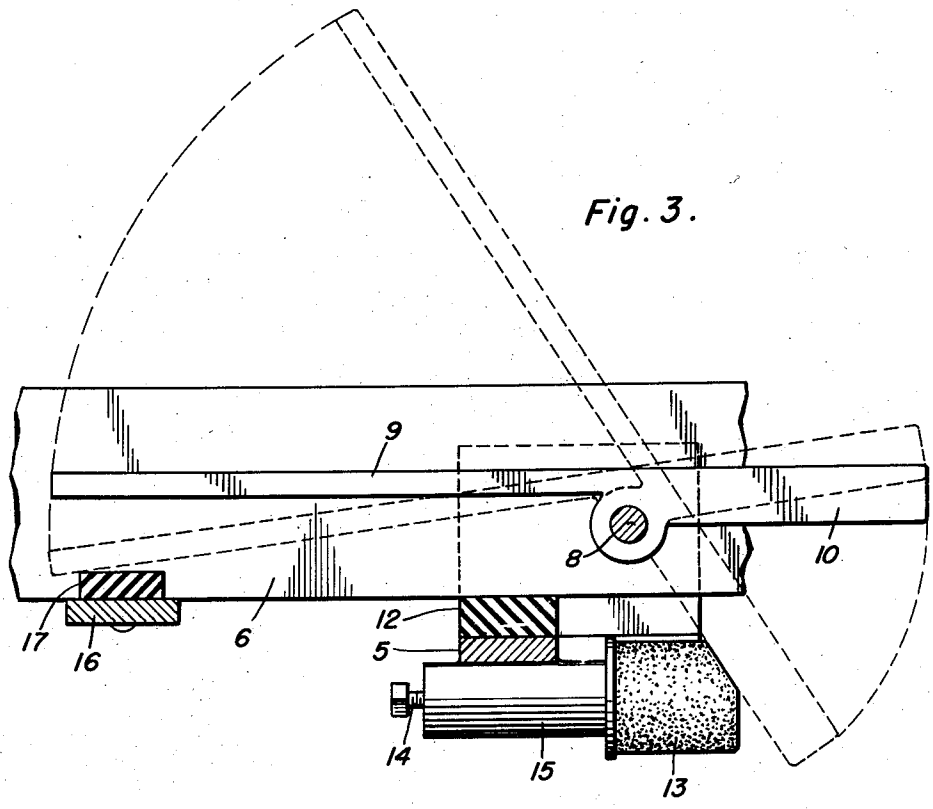
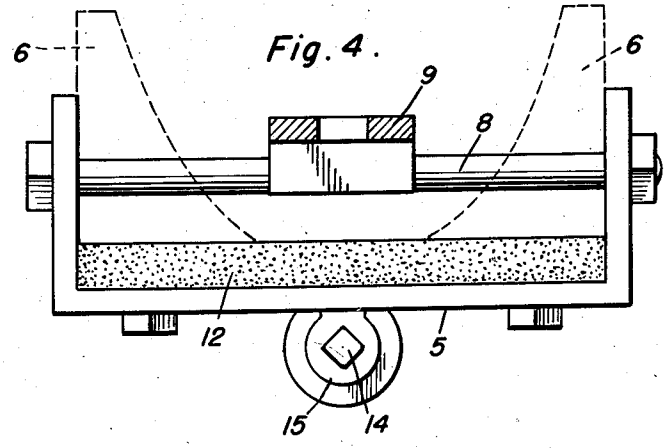


Fig. 4.



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BALL STOP FOR BOWLING BALL RETURN RACKS

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Application October 13, 1947, Serial No. 779,579

1 Claim. (Cl. 273—47)

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The present invention relates to new and useful improvements in ball stops for bowling ball return racks and more particularly to means for preventing a bowling ball from rolling backward on a ball return from the rack toward the pit.

In bowling ball return racks a ramp is provided in advance of the rack to raise the ball to the rack and frequently a ball will have too little momentum to roll up the ramp and as a consequence will roll back toward the pit and interfere with the movement of other balls onto the track. Accordingly, an object of the present invention is to provide means in the path of the ball to stop such backward movement thereof and to hold the ball on the ramp in a convenient position for removal out of the path of other balls travelling on the ball return.

An important object of the invention is to provide a ball stop which automatically swings out of the path of a ball approaching the rack by impact of the ball with the stop and which swings back into the path of the ball to stop reverse rolling movement thereof should the ball fail to negotiate the ramp.

Another object is to provide a device of this character which may be easily and quickly mounted in position on a ball return without necessitating any changes or alterations in the construction thereof and which at the same time is simple and practical in construction, efficient and reliable in use, relatively inexpensive to manufacture and otherwise well adaped for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view of a ball return rack showing the ball stop mounted in position thereon.

Figure 2 is an enlarged top plan view of the ball stop removed from the rack.

Figure 3 is a sectional view taken on a line 3—3 of Figure 2, and

Figure 4 is a transverse sectional view taken on a line 4—4 of Figure 2.

Referring now to the drawings in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of my invention, the numeral 5 designates a U-shaped bracket secured to the rails of the ramp portion 6 of a ball return rack 7 by means of a bolt 8 extending transversely of the ramp and with the

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bottom of the bracket extending under the ramp.

An arm 9 is pivoted intermediate its ends on the central portion of the bolt and positioned between the sides of the ramp, one end of the arm being weighted as shown at 10 to counterbalance the arm and to swing the other end thereof into an upstanding position in the path of a ball 11 rolling up the ram toward the rack.

A cushion 12 of sponge or live rubber is secured on the upper surface of the bottom portion of the bracket and positioned under the lower edges of the rails of the ramp 6.

A second cushion 13 of similar material is carried at the rear edge of the bottom of the bracket 5 in the path of the downward swinging movement of the weighted end 10 of the arm to provide shock absorbing means for the arm when struck by a ball rolling backwardly down the ramp. The cushion 13 is preferably secured to the rear end of a bolt 14 mounted in a tubular support 15 suitably secured to the bottom of the bracket, but it will be apparent the cushion may be attached to the bracket in any suitable manner. A stop bar 16 is secured transversely under the rails of the ramp 6 with a pad or cushion 17 on the upper surface of the bar and in the path of downward swinging movement of the upper end of the arm.

In the operation of the device, the arm 9 is normally held in an upright position by its counterbalanced end 10 and in the path of a ball rolling up the ramp. The impact of the ball against the arm will swing its upper end downwardly as shown by the lower dotted lines in Figure 3 to permit free passage of the ball onto the rack. The striking of the end of the arm against cushion 17 will cause the arm to quickly rebound upwardly. Should the ball fail to travel high enough on the ramp to reach the rack and start to roll down the ramp back toward the pit, the ball will strike the upper end of arm 9 to stop the ball, the arm being prevented from swinging in a reverse direction by the lower end of the arm striking the cushion 13 and the ball is then held on the ramp until removed. The cushion 13 takes up the shock of the ball striking the arm in its reverse movement and cushion 12 takes up the shock of the bracket 5 against the rails of ramp 6.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the construction, operation and advantages of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even

though there is herein shown and described a preferred embodiment of the invention the same is susceptible of certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claim.

Having described the invention what is claimed as new is:

A ball stop for a bowling ball return ramp comprising a U-shaped bracket straddling the bottom of the ramp, a fastening member extending transversely through said bracket and ramp for securing the bracket in place, an arm pivotally supported on said fastening member for vertical swinging between the sides of the ramp and having a counterweighted end normally holding said arm in upright position with its other end in the path of a ball rolling along the ramp for swinging of said other end of the arm downwardly by impact of a ball rolling against the same in one direction, a bolt adjustably mounted on the bottom of the bracket and carrying a cushioning

member adjustable thereby and for engagement by the counterweighted end of the arm to act as a shock absorber between said counterweighted end and said bracket, and a cushion member extending along said bracket between the same and the bottom of the ramp to act as a shock absorber between said bracket and ramp.

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