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G. I. SMITH

3,094,330

BOWLER'S PRACTICE AND GUIDE APPARATUS

Filed March 3, 1961

FIG. 1

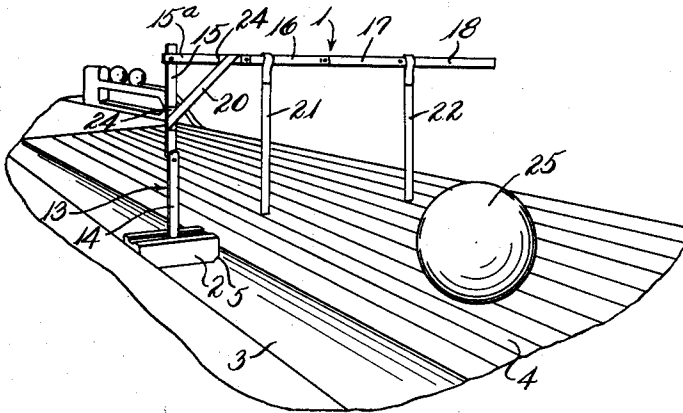


FIG. 2

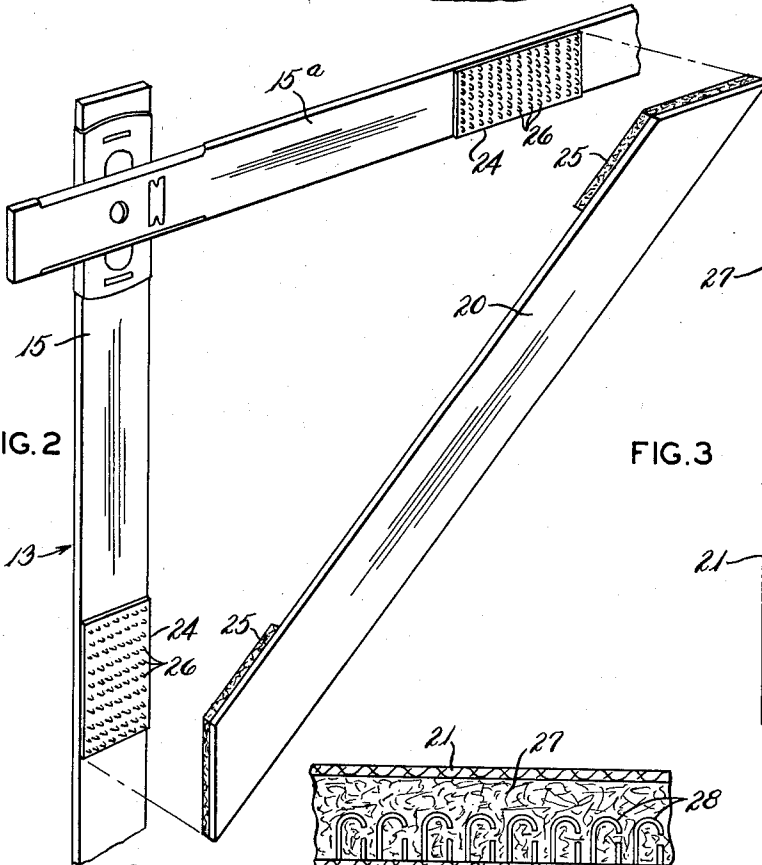


FIG. 3

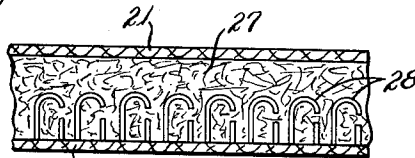
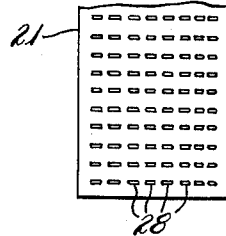
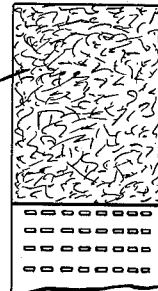


FIG. 4

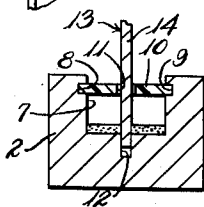


FIG. 5

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3,094,330
BOWLER'S PRACTICE AND GUIDE APPARATUS
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The present invention relates to means, or apparatus for use by bowlers when practicing, which means or apparatus is adapted to aid the bowler in checking on, and improving the accuracy of release, or placement of the ball when throwing it down the bowling alley.

In bowling actions, it is well known that very slight differences in the release of the ball by the bowler, and the particular position of the ball on the alley when released by the bowler will make a great deal of difference in the accuracy of the throw and whether a strike or other accurate bowling action can be obtained. Marks may be made on the bowling alley to provide the bowler with ball release gaging means so that the bowler can improve his accuracy in bowling actions and to give him some target or guides for use in ball release and deposit action. However, any such marks do not give a positive indication as to the accuracy of the throw, and the marks can not be adjusted laterally of a bowling alley.

The general object of the present invention is to provide a novel and improved type of bowler's practice apparatus characterized by its ready positioning on any desired longitudinal portion of the bowling alley and with adjustable means being provided therein to give the bowler a positive indication of exactly where his ball has been at a particular portion of the bowling alley.

Another object of the invention is to provide a relatively lightweight, compact bowler's guide that can be readily transported from place to place but which can be readily set up for operative use by the bowler for practice bowling action to improve the bowler's accuracy and to give him a target for use in releasing the ball onto the alley.

A further object of the invention is to furnish a practice guide for bowlers to aid them in improving their bowling accuracy.

Yet another object of the invention is to provide a cantilever type of a support member that can be positioned in the gutter portion of the alley and extend out over the alley with lightweight guides thereon to give the bowler targets for shooting at when throwing the ball down the alley; which apparatus is compact to store and move, which has good strength, which is easily assembled and disassembled, and which has indicator straps secured thereto in a special manner.

The foregoing and other objects and advantages of the invention will be made more apparent as the specification proceeds.

In the accompanying drawings, one currently preferred embodiment of the invention is shown, and in the drawings:

FIG. 1 is a perspective view of a bowler's practice and guide apparatus embodying the principles of the invention shown in association with a bowling alley;

FIG. 2 is an enlarged broken away perspective of the support part of the practice apparatus of FIG. 1;

FIG. 3 is an enlarged, broken away, elevation of a strap of FIG. 1;

FIG. 4 is an enlarged fragmentary vertical section of the connection between parts of the strap of FIG. 3; and

FIG. 5 is a vertical section through the base of the apparatus as operatively assembled.

When referring to corresponding members shown in the drawing and referred to in the specification, corre-

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sponding numerals are used to facilitate comparison therebetween.

In general, this invention relates to a bowler's practice unit or guide comprising a base adapted to be positioned in a gutter of a bowling alley, a support arm engaging the base and positioned thereby, the support arm including a vertically extending section at the base and an upper horizontal section for extending transversely of a bowling alley, readily engageable and removable means for supporting the horizontal section of the support arm, guide straps, and readily releasable means carried by the guide straps to secure them to the support arm to be suspended therefrom at any desired position thereon for guide action relative to a bowling ball rolling along the bowling alley and passing the guide straps.

Referring now in detail to the structures shown in the accompanying drawings, the bowler's practice apparatus of the invention is indicated as a whole by the numeral 1. This practice apparatus 1 includes a suitable base 2 formed of a shape so as to be snugly received in a gutter 3 shown at the side of a bowling alley 4. The base 2 may have curved or contoured end portions indicated at 5 to aid the base 2 in being securely positioned in the gutter 3 to extend transversely thereof. The base 2 has, in this embodiment of the invention, a longitudinally extending groove 7 in and extending the length of the upper surface thereof for a purpose to be described hereinafter in more detail. The present embodiment of the invention also has a pair of inwardly facing slots 8 and 9 formed in and extending the length of the walls of the groove 7 adjacent the upper margins thereof. These slots 8 and 9 are adapted to receive, slidably, a cover plate 10 therein. The cover plate 10 has an aperture 11 extending therethrough and the cover 10 is so positioned on the base 2 that such aperture 11 is in vertical alignment with a correspondingly shaped slot or recess 12 provided in the bottom of the groove 7.

It is a feature of the invention that guide means are provided in association in the apparatus 1 to guide a bowler to determine where he should throw the ball for successful bowling action and to give a ready indication as to whether or not the desired accuracy or rolling action of the ball is obtained as it moves down the bowling alley. To achieve this goal, the base 2 positions thereon an articulated support arm 13, which in this instance is shown as made from a plurality of sections. Thus the support arm 13 in the lowermost section 14 thereof is received in and extends through the aperture 11 in the cover 10 to be firmly anchored in the slot 12 in the base. The next adjacent upper section 15 of the support arm extends vertically upwardly while other sections 15a, 16, 17 and 18 are shown extending out normally to the sections 14 and 15 in cantilever relationship thereto. These horizontally extending sections will be positioned over a bowling alley higher than the height of a bowling ball. Preferably all of these support arm sections are pivotally secured to each other, as in a folding carpenter's rule whereby the support arm can be collapsed into a relatively small, compact position or condition, in which the support arm 13 can be received within the groove 7 in the base. The sections of the support arm 13 have sufficient friction as to retain given portions and they lock in aligned positions. Furthermore, the cover 10 then can still be positioned in the slots 8 and 9 to aid in retaining the support arm within the base 2 when it is desired to carry the apparatus 1 of the invention from one place to another, or to store the apparatus.

FIG. 2 of the drawings best shows that a brace, or lock arm 20 is secured to the support arm section 15 spaced from the upper end thereof and it is positioned as a brace to extend to the support arm section 15a to engage it by

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releasable connection means hereinafter described. The locking arm 20 is positively secured to both support arm sections 15 and 15a and prevents any pivotal movement of the support arm section 15a down past a perpendicular position to the straight support arm portion formed by the sections 14 and 15 of the support arm.

It should be noted that the base 2 may be made from one block or piece of material or be of other form such as a molded plastic to engage and support the support arm 13 in a suitable manner. The base 2 is positioned in the gutter or other part of the alley normally laterally offset from the bowling surface.

The desired guide means in the apparatus 1 of the invention necessarily should be of light weight, and should be adjustably associated with the cantilever section of the support arm. Thus a pair of straps 21 and 22, which are removably secured to the support arm 13 at their upper ends, are provided. Hence the straps 21 and 22 can be secured in spaced relationship to permit the passage of a bowling ball 25 therebetween without contact with either strap if the ball is accurately located on the bowling alley. The straps 21 and 22 preferably are made from a material, such as Velcro, which comprises a fabric strip having a plurality of relatively rigid burrs or hooks 28 extending up therefrom. Then by use of a pad 27 of felt or fibrous material at an end of the strip, the pad 27 can be pressed against the hooks 28 and will tightly but readily removably engage therewith, and the straps 21 and 22 can be tightly secured to the support arm at any desired location.

This same Velcro material made by American Velcro, Inc., Manchester, Vt., is also formed into pads 24 attached to the support arm sections 15 and 15a. Fibrous pads 25 are suitably secured to the lock arm 20 at the ends thereof whereby the desired bracing action for the support arm horizontally extending sections is obtained. Yet the lock arm 20 can be readily pulled from its operative position or be secured in place, as desired.

Naturally the apparatus 1 of the invention can be positioned at any longitudinal portion of the bowling alley where the bowler desires to put such apparatus for indication of proper release or position of the ball on that part of the alley. Usually the apparatus 1 would be placed on the alley just a few yards from the foul line on the alley and be on the right side of the alley. Then with normal hook action of the ball, if the ball passes between the straps 21 and 22, as desired, proper bowling action and a strike should be obtained. After use of the practice guide of the invention, the bowler gets the proper feeling and sensing of ball release onto the bowling alley, and he can see exactly what ball release position is required to produce a strike with his particular hook action. Thus after use of the practice device, the bowler will find that he obtains improved bowling action even when the practice device or guide is removed.

Obviously, if desired, the support arm 13, which is of generally L-shape when in operation, can be made from two continuous members pivotally associated with each other. In such instance, it will not be possible to fold the member as compactly for storage or transport action as with the apparatus shown.

It will be realized that the base 2 must have sufficient weight as to position and support the support arm 13 operatively. The apparatus of the invention can be made from relatively inexpensive materials and it will provide a structure that will have a long service life, and will provide effective aid to bowlers in their practice bowling actions to improve their accuracy and bowling results. Any desired protective means may be secured to or be carried by the contoured ends of the base 2 so that it can not possibly harm the bowling alley. The straps 21 and 22 may be of any suitable length and they are readily movable along the horizontal portion of the support arm.

In the apparatus of the invention, it should be realized that any desired type of a carrying case can be provided

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for the apparatus, or that the base means in the apparatus may engage and position the support arm in any suitable manner. It also should be understood that any type of a cover or top member can be provided on the upper portion of the base, when desired, to aid in supporting the support arm means on the base, and to aid in covering the apparatus when compacted for storage action.

The apparatus is light in weight and can be readily positioned on the bowling alley without any interference with use of the alley and can be readily removed therefrom when the bowler is done with his practice session. The apparatus is easily assembled and disassembled but is positively held in assembled position. The brace 20 will readily take any given position and its positioning means is compact, easily stored and is carried neatly by the members to be secured together. Thus it is believed that the objects of the invention have been achieved.

This application is a continuation-in-part of my application Serial No. 30,839, filed May 23, 1960, and now abandoned.

While one complete embodiment of the invention has been disclosed herein, it will be appreciated that modification of this particular embodiment of the invention may be resorted to without departing from the scope of the invention as defined in the appended claims.

What is claimed is:

1. In combination with a bowling alley having a gutter, a bowler's guide apparatus comprising an elongate base support positioned in the gutter of the bowling alley and having a slot in an upper surface thereof, said base support extending transversely of and being snugly received in the gutter, a support arm secured to said base support by engaging said slot and extending vertically upwardly therefrom, said support arm having a section extending therefrom as a cantilever parallel to the surface of the bowling alley, brace means adjustably and removably engaging said section of said support arm and also a vertical portion thereof, guide straps, and means carried by said guide straps securing them to said support arm to be suspended therefrom at a fixed position thereon for guide action relative to a bowling ball rolling along the bowling alley and passing said guide straps.

2. A compact easily carried bowling guide comprising a base adapted to be positioned on a bowling alley and having a groove extending the length of its upper surface, said base being externally contoured on its lower surface for snug engagement of a gutter of a bowling alley when extending transversely thereof and having a pair of inwardly facing horizontal slots formed in the adjacent walls of said groove, a cover plate slidably received in said slots, said cover plate and said base having vertically aligned openings therein to receive a member therein, a support member engaging and passing through said opening in said cover plate and being received and positioned in the opening in said base, said support member extending vertically upwardly from said base, said support member being made from a plurality of sections pivotally secured together and adapted to be positioned in an inoperative juxtaposed relation and in extended straight line relation, brace means removably carried by one of said support member sections to engage an adjacent one of said sections and position it as a cantilever to extend over a bowling alley parallel to the surface thereof, and a strap releasably secured to said cantilever portion of said support member to be suspended thereby to provide an indicator to determine if a bowling ball passes a selected portion of the bowling alley, said support member being receivable in said groove in said base when the sections of said support member are juxtaposed.

3. A compact easily carried bowling guide comprising a base having a lower contour to be securely positioned in a gutter of a bowling alley to extend transversely thereof, a support member engaging said base and being positioned thereby to extend upwardly therefrom, said support member being made from a plurality of sections

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pivotaly secured together and adapted to be positioned in an inoperative juxtaposed relation and in an extended straight line relation, brace means adjustably and removably carried by one of said support member sections to engage an adjacent one of said sections and position it as a cantilever to extend over a bowling alley substantially parallel to the surface thereof, and strap means secured to said cantilever portion of said support member to be suspended thereby to provide an indicator to determine if a bowling ball passes a selected portion of the bowling alley, said brace means and support member as a unit, and said strap means each having burr means and felt means secured thereto for removable engagement therebetween to facilitate operatively and removably positioning said brace means and said strap means.

4. A bowler's practice guide comprising a support base having a lower external contour roughly complementary to at least portions of the transverse contour of a gutter of a bowling alley for secure positioning therein, a support arm engage in said base and positioned thereby, said support arm including an articulated vertically extending section at said base and an articulated horizontal section for extending transversely of a bowling alley, a brace engaging said vertical and horizontal sections and extending therebetween to reenforce said horizontal section, a guide strap, and means carried by said guide strap to secure it removably to said support arm and suspended therefrom at a fixed position thereon for guide

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and indicator action relative to a bowling ball rolling along the bowling alley and passing said guide strap.

5. In combination with a bowling alley having a gutter, a bowler's guide apparatus comprising a base support positioned in the gutter of the bowling alley and having at least a portion of its lower surface contoured complementary to the gutter for secure positioning therein, an articulated support arm removably secured to said base support and extending vertically upwardly therefrom, said supported arm having an articulated section extending therefrom as a cantilever parallel to the surface of the bowling alley, said support arm having a compact collapsed inoperative position, said base support having a recess therein for receiving and storing said support arm in its inoperative position, brace means removably engaging said section of said support arm and also a vertical portion thereof, guide straps, and means carried by said guide straps to secure them adjustably and removably to said support arm to be suspended therefrom at a position thereon for guide action relative to a bowling ball rolling along the bowling alley and passing said guide straps.

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