Sept. 19, 1961 G. C. BONOVICH 3,000,633

BOWLER'S AID

Filed Aug. 31, 1959

Fig. 1.

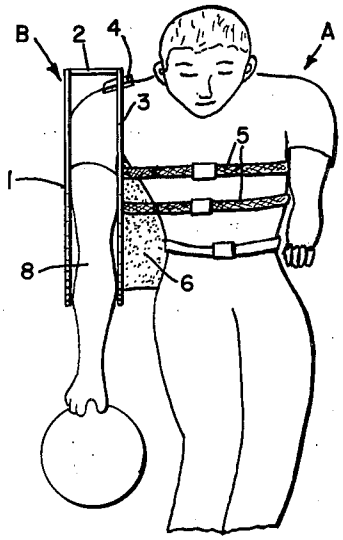


Fig. 2.

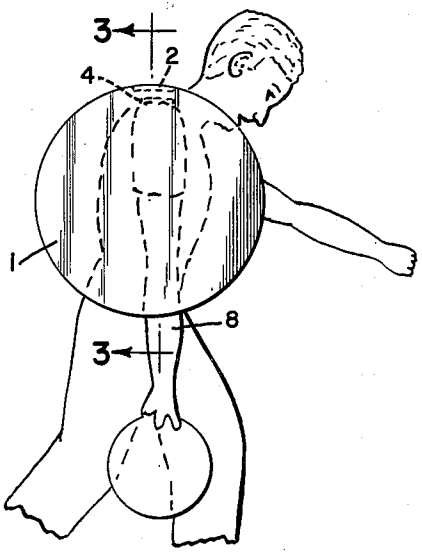


Fig. 3.

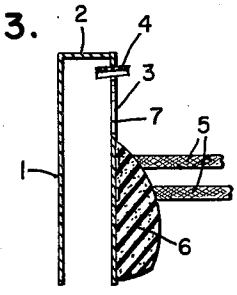


Fig. 4.

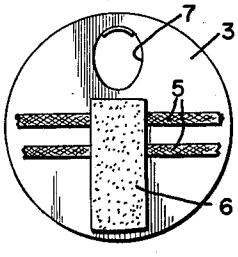


Fig. 5.

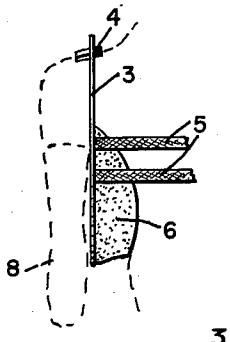
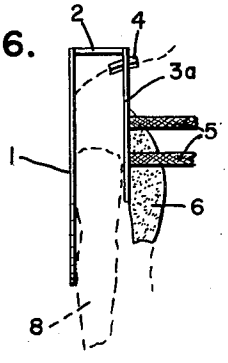


Fig. 6.



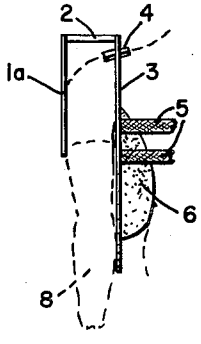


Fig. 8.

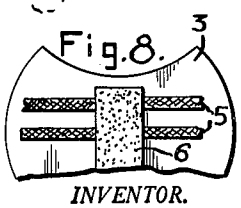


Fig. 7.

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BOWLER'S AID

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This invention relates to a device regarding restricted movement of the arm and is primarily directed toward a device to aid bowlers who have difficulty in swinging their arms through the proper paths of delivery because of a tendency to cross the delivery arm in front of the body or because of a tendency for it to veer off from the body.

The object of the invention is to prevent the bowler's arm from crossing in front of the body at the point of release during the follow-through of his swing.

An additional object of the invention is to provide a device which will prevent outward swing of the bowler's arm to the outside or gutter of the alley.

A further object of the invention is to improve the stance of the bowler in that continued use of the device would enable the bowler to more naturally swing his arm through the proper path of delivery.

Additionally, it is an object of the invention to provide a device which would permit correction of the delivery faults of the inside or outside very easily according to the bowler's degree of fault.

Another object of the invention is to produce a training aid, that is, a bowling device which may be cheaply and easily constructed, packaged and shipped.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings in which similar characters of reference represent corresponding parts in each of the several views.

In the drawings:

In FIG. 1 is pictured the whole bowler's aid device with straps as it is worn by a bowler.

In FIG. 2 is pictured a side view of FIG. 1.

In FIG. 3 is pictured a front view of the device which is worn by the bowler in FIG. 1.

In FIG. 4 is pictured a side view of the device which is worn by the bowler.

In FIG. 5 is pictured a modification of the device in which is utilized only the inside guide plate.

In FIGS. 6 and 7 are pictured further modifications of the device in which the device of FIG. 6 prevents the excessive out-swing of the bowler's arm and the device of FIG. 7 prevents the excessive in-swing or cross-swing of the bowler's arm.

FIGURE 8 is an additional modification of the device shown in FIG. 5.

The present device consists of two plates, including an inner plate and an outer plate, both of which enable the bowler to guide his arm in the straight, forward direction of the bowling path, thus aiding the bowler to correct any faults in his delivery.

The purpose of the inner plate is the correcting of the bowler's tendency to cross his arm over in front of the body at the end of the swing and consequently to release or deliver a ball that swerves to the center or inside of the alley.

The purpose of the outer plate is to provide a guided path through the double guide plates to produce an even swing and also to help the bowler squarely face the pins to prevent him from delivering the ball to the outside or gutter of the alley.

Referring now more particularly to the drawings in FIGS. 1 through 7 of the present invention in which these figures show the various embodiments and modifications of the present invention, the letter A indicates the bowler

and B indicates the bowling aid. The device comprises outer plate **1**, inner plate **3**, top plate **2**, a resting or pad **4**, body straps **5**, and support member **6**. The inner plate is provided with an armhole **7**.

In FIGS. 6 and 7, the modifications as shown indicate that in FIG. 6 the inner plate is represented by **3***a*, and in FIG. 7 the modification is indicated by the outer plate being **1***a*.

As illustrated by the drawings, preferably the guide plates have a generally circular shape conforming to the arcuate swing of the bowler's arm.

A first embodiment of the invention includes the beginners aid shown in FIG. 1 and comprises two downwardly depending substantially parallel flat plates located on opposite sides of the bowler's arm terminating at a point below the bowler's elbow and above the bowler's hip. These plates project rearwardly substantially beyond the back of the bowler and frontwardly substantially beyond the chest of the bowler.

This first embodiment is designed primarily for beginners and will correct both excessive inward and outward swing of the bowler's arm. The rear and front extensions of the plates function to guide the swing when the arm is located at positions not adjacent the bowler's side.

The modifications shown in FIGS. 6 and 7 are for bowlers whose major fault is either an arm swing characterized by excessive movement of the arm outwardly and away from the body when delivering the ball or excessive arm movement inwardly and across the front of the bowler's body. The aid illustrated in FIG. 6 is designed to correct the first mentioned fault and that shown in FIG. 7, the latter mentioned fault. In these two embodiments the critical guide is the longer of the two provided and is dimensioned similar to the guides shown in FIG. 1. The shorter guides tend to correct a slight or minimal fault in a direction opposite to the bowler's major swing fault, and extend only to a point slightly below the shoulder of the bowler as seen from the drawings.

The embodiment of FIG. 5 is provided to correct the main tendency of most bowlers, which is excessive swinging of the arm inwardly and across the front of the body when delivering the ball to the bowling alley. Again, the plate shown in FIG. 5 has a dimension similar to the plates shown in FIG. 1.

Plate **3** bearing on the inner surface of the arm is adapted to fit below the arm and extend downwardly along the rib cage of the body and to prevent the arm from moving across in front of the body when delivering the bowling ball. Numeral **7** indicates the armhole into which the bowling arm is inserted when attaching a device of the inner plate, while the outer surface **1** is rigid, solid and straight, the inner surface may be fitted to the contour of the adjacent part of the upper torso and backed with padding in order to maintain the device in position and also to give added comfort to the player. Numeral **2** indicates a structural member which functions to pair plates **1** and **3** and to maintain plate **1** in a rigid relationship adjacent to the outer portion of the arm **8**. The under portion of the structural member **2** may be fitted with a pad **4** on the under surface thereat to prevent caffing and for comfort purposes. The device is fitted with a pair of body straps **5** which fit around the upper torso of the body and secure the device and maintain it in proper position. As shown in FIGS. 5 and 8, the device may be utilized merely with inner plate **3** when it is desired to correct only the cross swing in front of the body without necessity to correct the swing out from the body. The device as shown in FIG. 5 is attached to the bowler by inserting the arm **8** into the armhole **7** and connecting the straps **5** around the body. In FIG. 8 a modification of this type of guide is shown with the upper

portion of the device cut to fit under the arm thereby eliminating the armhole and resting pad.

In operation when the bowler's arm is at the end of the swing, the inner and outer guide plates prevent the arm deviation inwardly across the front of the body and also outwardly in the direction of the gutter by guiding the swing to a straight, accurate path at the point of release and during the follow-through, thereby narrowing the variable fault effecting the path of the ball due to the player's stance and to the grip used. The present device necessarily improves the stance of the player in that the player is enabled to soon locate the proper facing position by observing the proper angle of delivery and making the appropriate adjustment.

Although the foregoing invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes and modifications may be practiced within the spirit of the invention as limited only by the scope of the appended claims.

What is claimed is:

1. A bowler's arm guiding device having an outer plate and an inner plate; joining means securing said plates together in substantially parallel alignment and in spaced-apart relationship, said joining means having a length slightly greater than the width of the bowler's arm to permit the arm to swing freely between said plates; means connected to said inner plate to attach and secure the guiding device to the bowler's torso; said outer and inner plates extending from a point above the bowler's shoulder downwardly on opposite sides of the bowler's arm to a point below the elbow and slightly above the hip; means for said inner plate to receive the bowler's arm therethrough whereby the arm of the bowler is guided through a predetermined arcuate path.

2. A bowler's arm guiding device according to claim 1 wherein said plates are substantially circular in shape and project forwardly of the bowler's chest and rearwardly of the bowler's back.

3. A bowler's arm guiding device according to claim 1 and wherein the means to secure said device to the bowler's torso comprises a pair of straps attached to said inner plate, said straps to encircle the upper torso of the bowler; means on said straps to adjust the straps in position and secure the bowling device in firm position.

4. A bowler's arm guiding device according to claim 1 wherein spacer means is provided between said inner plate and the bowler's side to maintain said plate substantially vertical and spaced apart from the bowler's side.

5. A bowler's arm guiding device comprising a plate, said plate having a substantially straight outer face; means formed in said plate to permit entrance of the bowler's arm therethrough and causing said plate to be located between the arm and the side of the bowler; said plate extending downwardly to a point below the elbow and above the hip; means to firmly secure said plate to the bowler above the waist; spacer means connected to said plate spacing said plate from the bowler's side and maintaining the plate in substantially vertical alignment.

6. A bowler's arm guiding device comprising: an inner and an outer plate; means for structurally connecting said plates at a point near the top of said plates; access means in said inner plate to allow insertion of the bowler's arm therethrough and to allow movement of the bowler's arm between said plates; at least one strap attached to said inner plate to go around the torso of the bowler; spacer means between said inner plate and the bowler's side to maintain said inner plate in substantially vertical alignment and spaced apart from the bowler's side; cushion means affixed to said inner plate to bear against the shoulder of the bowler when the guiding device is in arm guiding position; said inner and outer plates terminating at a point below the elbow and above the hip and projecting forwardly of the bowler's chest and rearwardly of the bowler's back.

7. A bowler's arm guiding device comprising: an outer plate and an inner plate; joining means securing said plates together in substantially parallel alignment and in spaced apart relationship; said joining means having a length slightly greater than the width of the bowler's arm to permit the arm to swing freely between said plates; means connected to said inner plate to attach and secure the guiding device to the bowler; said outer plate extending from a point above the bowler's shoulder downwardly along the outer side of the bowler's arm to a point below the elbow and slightly above the hip; said inner plate extending from a point above the bowler's shoulder downwardly along the inner side of the bowler's arm to a point slightly below the underarm; said inner and outer plates projecting forwardly of the bowler's chest and rearwardly of the bowler's back, and means for said inner plate to receive the bowler's arm therethrough whereby excessive movement of the bowler's arm outwardly and away from the bowler's torso during the ball delivery swing is prevented.

8. A bowler's arm guiding device comprising: an outer plate and an inner plate; joining means securing said plates together in substantially parallel alignment and in spaced apart relationship, said joining means having a length slightly greater than the width of the bowler's arm to permit the arm to swing freely between said plates; means connected to said inner plate to attach and secure the guiding device to the bowler; said inner plate extending from a point above the bowler's shoulder downwardly opposite the inner side of the bowler's arm to a point below the elbow and slightly above the hip; said outer plate extending downwardly along the outer side of the bowler's arm to a point opposite from and slightly below the underarm; said inner and outer plates projecting forwardly of the bowler's chest and rearwardly of the bowler's back; mean for said inner plate to receive the bowler's arm therethrough whereby excessive movement of the bowler's arm inwardly and across the front of the bowler's torso during the ball delivery swing is prevented.

References Cited in the file of this patent

UNITED STATES PATENTS

7,626	Welch	Sept. 3, 1850
819,607	Shafer	May 1, 1906
1,591,523	Fuller	July 6, 1926