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3,224,012
BOWLING DEVICE

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This invention relates generally to devices for enabling a bowler to maintain continuous effective control of the bowling ball until the completion of delivery. More particularly, in one aspect the invention provides means for controlling the positions of the outer or non-hole fingers, and in another aspect provides means for increasing the hold of the bowler on the ball, both for the purpose of providing the bowler with the most complete possible control of the bowling ball throughout the entirety of the approach and delivery portions of the throwing cycle.

A primary object of this invention is to provide a novel bowling device securable to the non-hole fingers of a bowler which maintains the spacing therebetween constant so that these fingers do not wander over the surface of the bowling ball during the throwing cycle.

Another object of this invention is to provide a novel bowling device which may be quickly slipped on and off of the bowling hand and which provides vastly improved traction between the hand and the bowling ball.

Still another object of this invention is to provide a novel bowling device which maintains the spacing between the non-hole fingers and simultaneously provides improved traction between the hand and bowling ball.

Yet another object of this invention is to provide a novel bowling device as aforesaid which is in the form of a glove having the two center fingers and thumb removed therefrom.

A further object of this invention is to provide a novel bowling device in the form of a glove which permits the bowler to impart a repeatable hook motion to the bowling ball without employing any wrist turning motion whatever but merely by using the normal palm-up delivery which usually results in straight line ball motion.

The foregoing and other objects of the invention will become clear from a reading of the following specification in conjunction with an examination of the appended drawing, wherein:

FIGURE 1 illustrates one embodiment of the bowling device according to the invention in the form of a special glove having a friction material surfaced palm and bridging member interconnecting the tips of the index and little finger sheaths of the glove;

FIGURE 2 illustrates a glove similar to that of FIGURE 1 except that the glove does not use any friction material;

FIGURE 3 shows a glove similar to that of FIGURE 1 except that the bridging member is not faced with friction material;

FIGURE 4 is again similar to the showing of FIGURE 1 except that the palm portion of the glove is held to the hand by elastic bands rather than by the back portion of a glove;

FIGURE 5 is similar to the embodiment of FIGURE 1 except that the friction material of the palm is of non-uniform thickness;

FIGURES 6 and 7 are cross-sections through the glove of FIGURE 5 as would be seen when viewed in the planes designated by lines 6—6 and 7—7 respectively, these cross-sections showing the thickness gradation of friction material;

FIGURE 8 illustrates a pair of finger sheaths interconnected by an adjustable length bridging element; and,

FIGURE 9 is an enlarged cross-sectional view through the adjustable bridging element securement of the finger sheaths of FIGURE 8 as would be seen when viewed along line 9—9 of FIGURE 8.

In the several figures, like elements are designated by like reference characters.

Considering first FIGURE 2, there is seen a modified glove having a palm side 20 and back side 21, each of which includes an index finger and little finger portion but no parts for forming sheaths for the thumb or two middle fingers. The palm side and back side are seamed together to provide a glove having only an index finger sheath 22 and little finger sheath 23, with openings 24 and 25 to allow the middle fingers and thumb respectively to be projected therethrough in the manner illustrated in phantom outline in the showing of FIGURE 1. Extending between and secured at opposite ends respectively to the inside tips of the index and little finger sheaths 22 and 23 is a flexible bridging member or strap 26. It is this bridging member 26 which is of great significance to the glove of FIGURE 2.

In use, the glove openings 24 and 25 allow the thumb and middle two fingers to project freely therethrough so that they may be inserted into the bowling ball holes in the usual manner. The index and little fingers will of course also be disposed in their usual locations on the surface of the ball outward of the finger holes. However, because they are encased in the finger sheaths 22 and 23 which are tied together by the bridging member 26 it is clear that the sheathed fingers cannot move about laterally outward of the hole fingers and the constrained to remain in fixed positions relative to the surface of the ball.

This finger position has been demonstrated to be of critical importance in maintaining control of the bowling ball during the throwing cycle. Most bowlers, and sometimes even professionals, have a tendency to unconsciously allow the index and little finger to wander during the approach and delivery. Such finger wandering imparts small erratic motions to the bowling ball which vary from one throw to the next and thus cause uncontrolled variations in the path of motion taken by the ball on successive throws. These uncontrolled variations have a marked effect upon the final score of the bowler. The bowling device according to the invention eliminates these uncontrolled variations and has resulted in radically improved bowling scores when used only a few times.

The embodiment of the invention shown in FIGURE 1 basically includes the entire structure of the glove illustrated in FIGURE 2, but in addition includes a facing of friction material 27 cemented, stitched or otherwise secured to the palm side of the glove covering the palm region 20a, index finger region 22a, little finger 23a and bridging member 26a. The friction facing may be of any suitable material, foamed plastic sheeting having been found to be quite satisfactory. The friction facing makes it possible to maintain a completely non-slip relationship between the bowling ball and the hand of the bowler, a matter of some difficulty for persons not possessed of substantial hand and finger strength. In some cases the use of the friction facing is sufficient to prevent the aforescribed finger wandering, and the bridging element 26 and facing 26a therefor may be dispensed with. In general, however, it has been determined that optimum results for most bowlers are achieved with the composite structure shown in FIGURE 1.

FIGURE 3 illustrates a variation of the gloves of FIGURES 1 and 2 in that it utilizes the friction facing of FIGURE 1 except on the bridging strap 26 as in FIGURE 2. FIGURE 4 shows another variation in that it includes only a palm side 28 consisting of a palm portion

29, index and little finger faces 30 and 31, bridging strap 32, all made of the friction material 27, and elasticized hand and finger straps 33 and 34 for holding the friction palm 28 to the hand.

The embodiment of FIGURE 5 is organizationally the same as the showing of FIGURE 1, differing from the latter in the physical structure of the friction facing 35 employed in the glove of FIGURE 5, as is made clear by the sections of FIGURES 6 and 7. The friction facing 35 is of non-constant thickness, being relatively thin over the little finger face 36, bridging strap 37 and ulnar palm region 38, and increasing gradually in thickness in the direction of thumb opening 25 to the relatively thick facing region 39 which extends outward along the index finger sheath as the ridge 40. This form of graded thickness friction facing causes a palm-up delivery to impart a hook to the bowling ball because of the greater frictional engagement of the index finger with the ball as compared to the little finger at the time of delivery. As in the case of FIGURE 3, the friction facing may be omitted if desired from the bridging elements of FIGURES 4 and 5, or the bridging elements may be entirely omitted.

FIGURES 8 and 9 illustrate a very simple form of device for preventing finger wander which consists of a pair of elastic tubular sheaths 41 faced with a layer of friction material 42 on one side of each sheath and joined together by a bridging strap 43 of adjustable length as determined by engagement of the teeth 45 of buckle 44 with the strap at the desired point. The device of FIGURE 8 is thus seen to be adapted for use with hands of greatly varying finger size and interdigital spacing while at the same time leaving the hand in a freer state than when the glove forms of the invention are used. However, the frictional engagement between ball and hand is not nearly as great, and where this is a factor to be considered, as with most women and children bowlers, the glove forms are probably to be preferred.

Having now described my invention in connection with particularly illustrated embodiments thereof, it will be understood that variations and modifications of the same may now naturally occur from time to time to those persons normally skilled in the art without departing from the essential scope or spirit of my invention, and accordingly it is intended to claim the same broadly as well as specifically as indicated by the appended claims.

What is claimed as new and useful is:

1. A bowling device, comprising in combination, means detachably securable to the index finger of the bowling hand of a bowler, means detachably securable to the little finger of the bowling hand of a bowler, and bridging means secured to and extending between said first two named means effective to maintain substantially constant the spacing between the ends of said index and little fingers when the bowling ball is grasped by the bowler.

2. A bowling device, comprising in combination, means detachably securable to the index finger of the bowling hand of a bowler, means detachably securable to the little finger of the bowling hand of a bowler, and substantially non-extensible flexible bridging means secured to and extending between said first two named means effective to maintain substantially constant the spacing between the ends of said index and little fingers when the bowling ball is grasped by the bowler.

3. A bowling device, comprising in combination, means detachably securable to the index finger of the bowling hand of a bowler, means detachably securable to the little finger of the bowling hand of a bowler, and bridging means of selectively adjustable length secured to and extending between said first two named means effective to maintain substantially constant the spacing between the ends of said index and little fingers when the bowling ball is grasped by the bowler.

4. A bowling device, comprising in combination, friction material faced flexible sheath means detachably securable to the index finger of the bowling hand of a bowler, friction material faced flexible sheath means detachably securable to the little finger of the bowling hand of a bowler, and bridging means secured to and extending between said first two named means effective to maintain substantially constant the spacing between the ends of said index and little fingers when the bowling ball is grasped by the bowler.

5. A bowling device in the form of a glove having the two center finger stalls and the thumb stall absent therefrom to provide openings through which the thumb and center fingers may freely protrude, a substantially non-extensible flexible bridging element secured to and extending between the index finger and little finger stalls proximate to the ends thereof, and a facing of friction material covering the palm side of the bridging element and the index and little finger stalls of the glove.

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