Sept. 28, 1965 S. J. SKUSE 3,208,749

BOWLING AID WITH BALL ENGAGING DETENT MEANS

Filed April 16, 1963

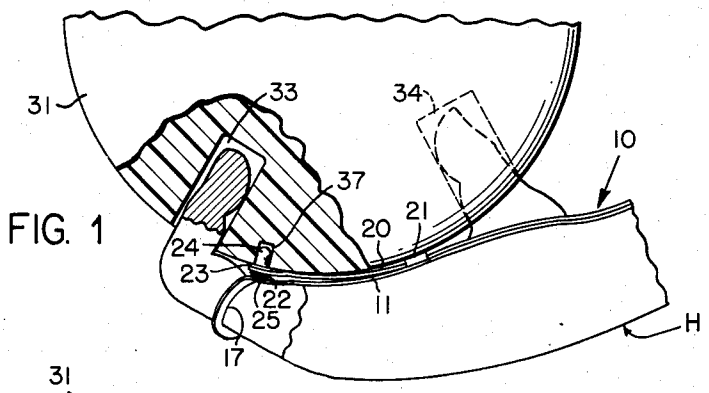

FIG. 1

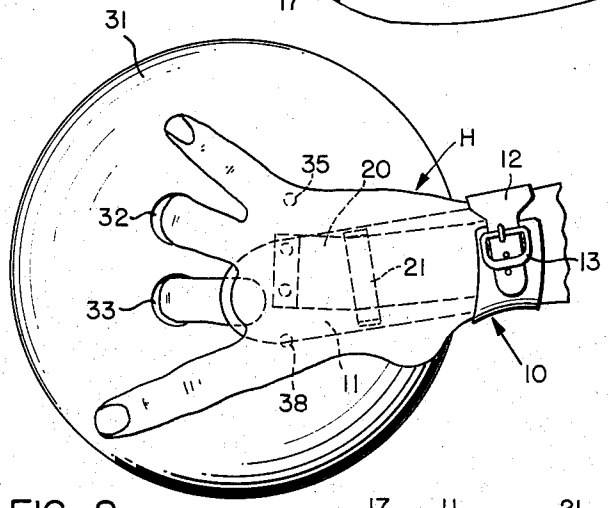

FIG. 2

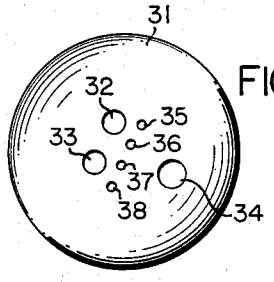

FIG. 5

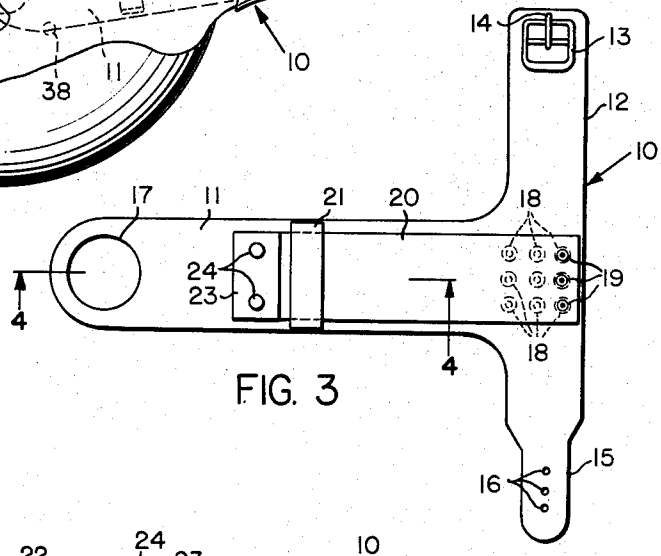

FIG. 3

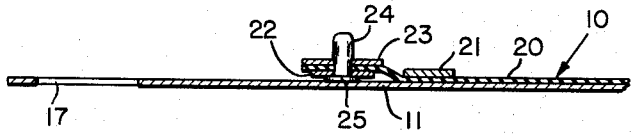

FIG. 4

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BOWLING AID WITH BALL ENGAGING DETENT MEANS

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This invention relates to a device for imparting a spin to a bowling ball. More particularly, the invention relates to a bowling aid having thereon means for imparting a spin to a bowling ball as it is thrown from the hand of a bowler.

Most accomplished bowlers have found that they can retain more control over a bowling ball by imparting thereto a slight spin. Usually such spins are produced by a twist of the bowler's wrist just prior to the release of the bowling ball. Generally it is difficult for a given bowler always to impart the same amount of spin to a bowling ball. Moreover, the constant twisting of the bowler's wrist prior to releasing the bowling ball tends to strain and irritate his wrist and arm muscles.

An object of this invention is to provide a device for automatically imparting a spin to a bowling ball as the latter is thrown from the hand of a bowler.

Another object of this invention is to provide a bowling aid by means of which a bowler may impart a spin to a bowling ball without twisting his wrist.

A further object of this invention is to provide an improved bowling ball to which a spin may be readily imparted by an instrumentality worn on the hand of the bowler.

Other objects of the invention will be apparent hereinafter from the specification, and from the recital of the appended claims, particularly when read in conjunction with the accompanying drawing.

In the drawing:

FIG. 1 is a fragmentary elevational view of a hand having thereon a bowling aid made in accordance with one embodiment of this invention, and showing the aid disposed in operative relation to a bowling ball carried in the hand;

FIG. 2 is a plan view of this hand showing how the aid straps onto the wrist of a bowler, and illustrating the extensible flap which connects the aid to a bowling ball carried in the bowler's hand;

FIG. 3 is a plan view of the novel bowling aid as it looks when it is spread out in its natural shape;

FIG. 4 is an enlarged fragmentary sectional view of the aid taken along the line 4—4 in FIG. 3 and looking in the direction of the arrows; and

FIG. 5 shows the novel bowling ball with which the aid is adapted to be used.

Referring now to the drawing by numerals of reference, the aid **10** is generally T-shaped in configuration and comprises an elongate, trunk or body portion **11** having an integral, transverse strap portion **12** at one end thereof. The portions **11** and **12** are made of leather or a similar, tough, flexible material. A conventional buckle **13** having a pivotal buckle tongue **14** is secured to the face of strap **12** adjacent one end thereof. At its opposite end the strap **12** narrows slightly as at **15**, and is provided with a plurality of longitudinally spaced holes **16**. The end of the trunk portion **11** remote from the strap portion **12** has therethrough a relatively large, circular opening **17** for accommodating the finger of a bowler as described below.

Secured in longitudinally spaced rows to the face of the trunk portion **11** in the area of the strap portion **12** are a plurality of receptacles **18** for conventional snap fasteners. Removably secured by a row of snap fasteners **19** to the receptacles **18** in one of said rows thereof is one end of a flexible, longitudinally resident flap or belt **20**. In its relaxed state, the flap **20** extends centrally along the body portion **11** from the strap portion **12** toward the opening **17**. Intermediate its ends the flap **20** passes beneath a flexible loop **21** which is secured to the body portion **11**.

Secured to the free end of the flap **20** on the side thereof confronting the body portion **11** is a rigid, rectangular reinforcing strip **22** of metal or the like. A further rectangular strip **23** of flexible leather or the like is secured to the opposite side of the flap **20** in alignment with the strip **22**. Secured in the free end of the flap **20**, and passing through both of the strips **22** and **23** in laterally spaced, parallel relation to one another are two pins or detents **24**. Each pin **24** has a reduced diameter inner end, which extends through aligned openings in the flap **20** and the strips **22** and **23**. The inner end of each pin **24** is peened over as at **25** (FIG. 4) to secure the pins against the inner face of the rigid flap **22**. At its opposite end each pin **24** projects axially beyond the strip **23**.

The aid **10** is adapted to be employed in conjunction with a bowling ball **31** of the type having a pair of finger holes **32** and **33**, and a thumb hole **34**. These holes **32** to **34** permit the ball **31** to be gripped in the conventional manner. In the space between the two finger holes **32** and **33** and the thumb hole **34**, respectively, the ball **31** is provided with four further circular openings, **35**, **36**, **37** and **38**, which extend radially inwardly of the ball **31** toward its center. The holes **35** to **38**, inclusive, are equal in diameter; and such diameter is less than the diameter of the smallest of the finger and thumb holes **32** to **34**, and slightly larger than the outside diameter of the pins **24**. The openings **35** to **38**, inclusive, are positioned closer to the finger holes **32** and **33** than they are to the thumb hole **34**; and the space between adjacent ones of the holes **35** to **38** is equal to the space between the two pins **24** carried by the flap **20**.

In operation, the middle finger on the hand H (either right or left) of a bowler is inserted through the opening **17** in the body or strap portion **11** of the aid **10**, and the body or strap **11** is secured in confronting relation to the palm of the hand H by buckling the strap **12** about the person's wrist (FIG. 2), so that the flap **20** faces outwardly. The bowling ball **31** is then grasped as shown in FIGS. 1 and 2; and the resilient flap **20** is stretched longitudinally until the pins **24** carried thereby slide into any two of the holes **35** to **38**, inclusive. If the flap **20** is not long enough to permit the pins **24** to reach the holes **35** to **38**, the flap **20** may be adjusted by transferring the snaps **19** to one of the other two rows of receptacles **18** shown in FIG. 3. As shown by way of example in FIG. 2, the pins **24** have been placed in the holes **36** and **37**, but it is to be understood they could be disposed in a second position in which they are inserted in the holes **35** and **36**, or in a third position in which they are inserted in the holes **37** and **38**.

As the fingers on the bowler's hand H release the bowling ball **31**, the extended, elastic flap **20** tends to snap back to its normal, untensioned position, and in so doing causes the pins **24** to exert a sudden moment or tangential force along the outer surface of the bowling ball **31** just before they become disengaged from the ball, thereby imparting a spin to the ball. The direction of the spin axis relative to the linear movement of the ball toward the bowling pins will differ, depending upon in which pair of openings **35** and **36**, **36** and **37**, or **37** and **38**, the pins **24** have been seated. The individual bowler will have to determine which of the three settings of the pins **24** are most desirable for his or her game. Also, the amount of spin imparted to the ball will differ depending upon the extent to which the longitudinally resilient flap **20** must

be stretched in order to permit its pins **24** to be inserted into a pair of the openings in the bowling ball. It is essential, however, in all instances, that the flap **20** be of such length that it need be stretched in a longitudinal direction in order to insert its pins **24** into a pair of the holes **35** to **38** in the bowling ball.

While the bowling aid illustrated herein is designed so that the flap **20** extends between the bowling ball and the palm of the bowler's hand, the extensible flap **20** may be designed to extend over the outside of the bowler's hand. In such instance holes of the type illustrated at **35** to **38** would be drilled in the ball on the sides of the finger holes **32** and **33** remote from the thumb hole **34**, and the flap extending over the outside of the bowler's hand would carry pins, similar to the pins **24**, which could be removably positioned in a pair of the holes drilled in the ball beyond the finger holes **32** and **33**. Moreover, instead of drilling such holes adjacent the finger holes **32** and **33**, a pair of pin-receiving holes may be drilled in a ball on the side of the thumb hole **34** remote from the finger holes **32** and **33**. In such instance the flap (similar to flap **20**) would extend over the outside of the thumb and carry pins engageable in the pin-receiving holes drilled adjacent the thumb hole **34**. Also, while the bowling ball shown herein comprises two finger holes and one thumb hole, it is anticipated that the instant invention could be used in conjunction with a bowling ball of the type having a single finger hole, and a single thumb hole.

With the holes **35** to **38** positioned as shown in the drawing, the pins **24** automatically impart a "lift" or top spin to the bowling ball. This "lifting" of the bowling ball is a term employed by bowlers to describe a desirable type of top spin, as distinguished from the act of elevating the ball.

While the invention has been described in connection with specific embodiments thereof, it will be understood that it is capable of further modification, and this application is intended to cover any variations, uses, or adaptations of the invention following, in general, the principles of the invention and including such departures from the present disclosure as come within known or customary practice in the art to which the invention pertains and as may be applied to the essential features hereinbefore set forth, and as fall within the scope of the invention or the limits of the appended claims.

Having thus described my invention, what I claim is:

1. A device for imparting spin to a bowling ball, which has finger holes therein by which the ball may be gripped, comprising

(a) a generally T-shaped element adapted to be worn on a person's hand, and having an elongate body portion and an elongate strap portion connected intermediate its ends with one end of said body portion and extending transversely of said body portion,

(b) said body portion having an opening therethrough adjacent the opposite end thereof through which the bowler may insert one finger for gripping the ball, and

(c) means on said strap portion for buckling said strap portion about a person's wrist,

(d) a strip of longitudinally resilent material secured at one end to said strap portion and extending therefrom loosely along said body portion in parallelism with and contiguous thereto,

(e) a pair of laterally spaced detents secured to the opposite end of said strip and projecting transversely from the side thereof remote from said body portion and adapted to engage releasably in cooperating holes in a bowling ball, when said ball is held in the hand of a person wearing said element.

2. A device for imparting spin to a bowling ball of the type having therein at least one finger hole and one thumb hole for grasping the ball, comprising

(a) an elongate, flexible strip of material which is longitudinally resilient,

(b) a strap adapted to be worn across the palm of a person's hand and having a hole in one end thereof to accommodate the middle finger of a person's hand, and having an integral strap portion at the opposite end thereof for removably securing the opposite end of said element to a person's wrist, and

(c) releasable snap means connecting said one end of said strip to said strap adjacent the strap portion thereof,

(d) at least one detent secured to and projecting from the opposite end of said strip, and slidably engageable in a radial hole in said bowling ball between said finger hole and said thumb hole, when said ball is held in the bowler's hand.

3. A device as defined in claim **2** wherein

(a) a pair of said detents project from said opposite end of said strip to engage releasably in a pair of holes in said bowling ball between said finger hole and said thumb hole, and wherein

(b) said strip is stretched longitudinally, when said ball is held in a bowler's hand and said detents are engaged in said pair of holes.

4. A device for imparting spin to a bowling ball, which has finger holes therein by which the ball may be gripped, comprising

(a) a strap,

(b) a longitudinally resilient strip free at one end and fixed at its opposite end to said strap,

(c) means for removably securing said strap at one end to a bowler's wrist to extend across the palm of the bowler's hand, means for securing said strip to said strap so that the fixed end of said strip is located adjacent the bowler's wrist, and the free end thereof extends loosely over the outside of said strap in parallelism thereto toward the fingers of the bowler's hand, and

(d) at least one pin secured to and projecting from said free end of said strip to engage removably in a hole in a bowling ball, when the latter is held in the bowler's hand, said resilient strip being operative to apply a turning moment to said ball as it is thrown from the person's hand.

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