

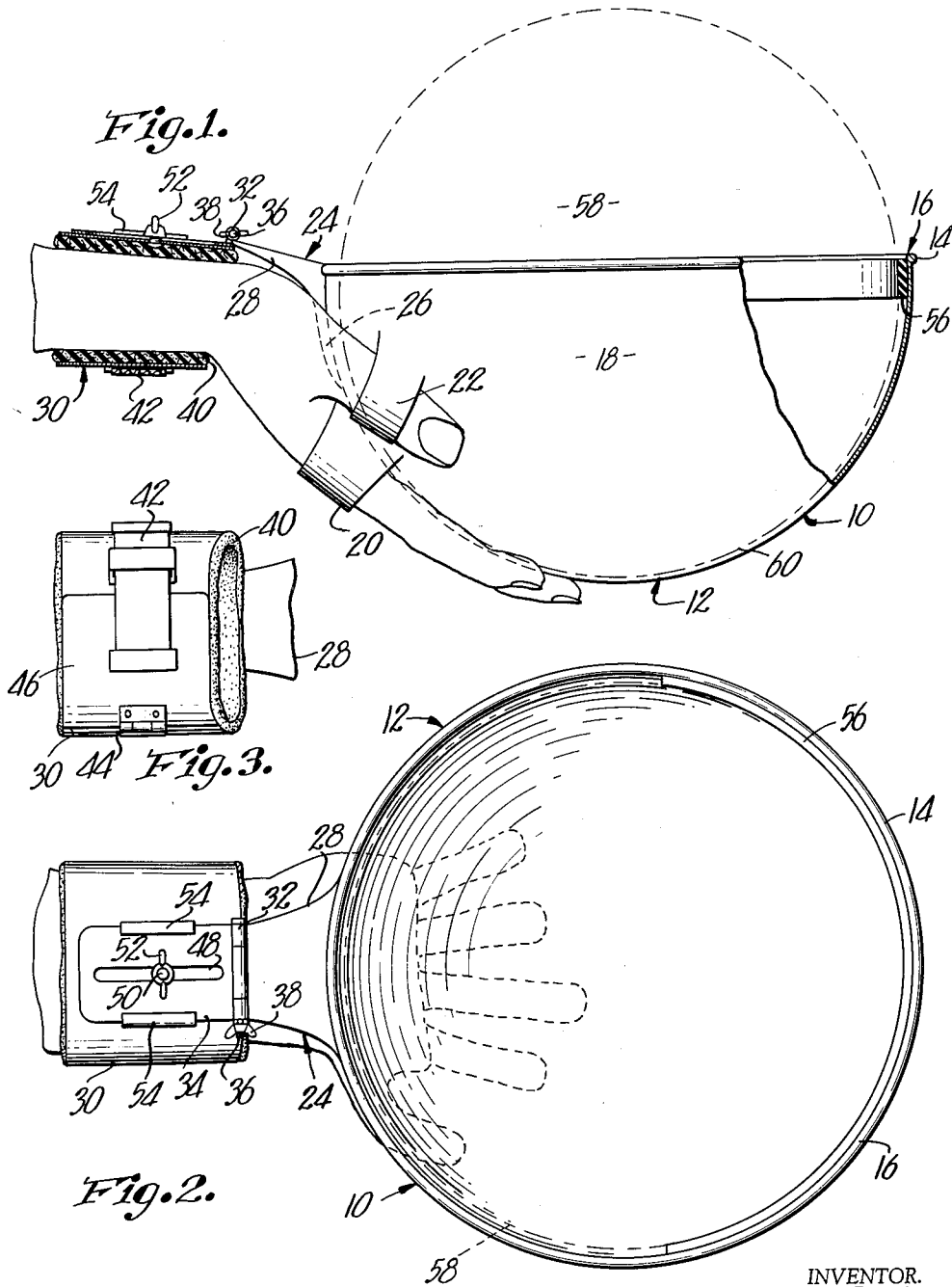
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BOWLING BALL ROLLING DEVICE

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## BOWLING BALL ROLLING DEVICE

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This invention relates to a device for manually rolling a bowling ball and more particularly to a cup-shaped receptacle which receives the bowling ball whereby controlled movement may be imparted to the ball as it is thrown from the device.

It is the primary object of this invention to utilize the desirable characteristics of a perfectly balanced bowling ball, that is, one without holes or other means which would throw the ball out of perfect balance, whereby upon elimination of the holes or other handles or gripping means for the ball the bowling ball may be thrown or rolled with controlled motion and accuracy through the use of the subject invention.

A yet further object of this invention is to provide a bowling ball rolling device which may be used by handicapped persons who have suffered a loss of a thumb or fingers, which device will enable them to actively participate in the sport of bowling.

A yet further aim of the present invention is to provide a semi-spherical, cup-shaped receptacle which receives the balanced bowling ball, which receptacle has means associated therewith for receiving the hand of the user, the receptacle and ball carried thereby thus being controlled by the user of the device.

Other objects of this invention include the provision of a strip of frictional material on the inner surface of the receptacle, means for securing the receptacle to the wrist of the user thereof and other details of construction which will become apparent from the following specification and accompanying drawing, wherein:

FIG. 1 is a side elevational view of the bowling ball rolling device showing the same as carried by a hand of the user thereof, parts being broken away and in section to reveal details of construction;

FIG. 2 is a top plan view of the device showing the same as carried by the hand of the user; and

FIG. 3 is a fragmentary view showing the wrist band which is hingedly connected to the device.

The bowling ball rolling device forming the subject matter of the present invention is broadly designated by the number 10 and includes a semi-spherical, cup-shaped receptacle 12, which receptacle has a bead 14 formed at the upper rim 16 thereof. The rim 16 describes a circle and, as is apparent from FIG. 1 of the drawing, the receptacle 12 is of sufficient size to substantially encase one half of a conventional bowling ball.

The receptacle 12 may be made from a lightweight material such as aluminum or other suitable material. Formed on the outer surface 18 of receptacle 12 is a finger-receiving sleeve 20 and a thumb-receiving sleeve 22, the same being disposed at suitable angles on what may be considered as the normally rearmost arcuate surface portion of receptacle 12 whereby the thumb of the user may be comfortably inserted within sleeve 22 and the remaining fingers of the hand comfortably inserted within sleeve 20. As is apparent from the drawing, when the hand of the user is inserted within sleeves 20 and 22 as above described the palm of the hand substantially underlies the receptacle 12 and more particularly the portion thereof between sleeve 20 and 22 and the rim 16 disposed above said sleeves 20 and 22.

A connecting link 24 is secured to bead 14 and the outer surface 18 of receptacle 12 above sleeves 20 and 22, the connecting link 24 being substantially L-shaped and having a first leg 26 secured to the outer surface 18

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of receptacle 12 and a second leg 28 extending outwardly from rim 16.

A wrist band 30 has a hinge 32 secured thereto by means of a hinge plate 34, the hinge 32 serving to pivotally interconnect wrist band 30 with the second leg 28 of connecting link 24. Hinge 32 is provided with a lockable hinge pin 36 whereby the link 24 and receptacle 12 may be fixed in the desired position with respect to wrist band 30 and hinge plate 34 by tightening a wing nut 38 carried by the end of pin 36.

Wrist band 30 is of a metal material such as aluminum or the like and is provided with an inner layer of cushioning material 40 which lies beneath the outer metallic portion of the wrist band 30 and next to the wrist of the user.

An adjustable fastening strap 42 serves to interconnect the ends of wrist band 30 whereby the same may be tightly secured about the wrist of the user of bowling ball rolling device 10. Wrist band 30 is provided with a hinge 44 intermediate the ends thereof whereby, when strap 42 is undone the band 30 may be quickly and easily removed from the wrist of the wearer by swinging the hinged end portion 46 away from the wearer's wrist.

To allow adjustment of receptacle 12 with respect to band 30 and insure that the receptacle 12 may be comfortably carried within the hand of the user thereof, hinge plate 34 is provided with a slot 48 extending longitudinally thereof which receives an upstanding bolt 50 carried by band 30 whereby plate 34 and its associated parts may be moved into the desired position of use and fastened therein by a nut 52 threaded upon bolt 50. To aid in and guide the movement of plate 34 with respect to wrist band 30 and to hold the same in the desired fixed position and against movement about bolt 50, band 30 is provided with a pair of upstanding flange members 54 which engage the longitudinal edges of plate 34 and overlie positions of the upper marginal edges thereof, as clearly illustrated in FIG. 2.

Carried on the inner surface of receptacle 12 is an arcuate strip of frictional material 56, which strip of material is mounted adjacent the rim 16 of receptacle 12 and which strip 56 has its center point substantially opposite the point of interconnection of connecting link 24 with receptacle 12. Strip 56 extends substantially halfway around the circle defined by rim 16 and is of a sufficient thickness to engage a portion of the bowling ball 58 placed within receptacle 12, all as best seen in FIG. 1.

Thus when the bowling ball 58 is carried within receptacle 12 there is a slight space 60 between the lowermost surface of ball 58 and the interior surface of receptacle 12. Additionally, the rim 16 circumscribes ball 58, when the ball is carried within receptacle 12, at a point substantially above the horizontal center line of gravity of ball 58 when so disposed.

As is apparent from the foregoing, a perfectly balanced bowling ball such as 58 may be utilized in connection with device 10, and may be thrown or rolled therefrom, controlled movement or rotation of the bowling ball being imparted thereto as a result of the engagement of the surface of the ball by strip 56 as the ball 58 moves from the receptacle 12. It will be further recognized that the sport of bowling may be enjoyed by persons who have lost their fingers and are handicapped so far as the utilization of a conventional bowling ball with finger holes therein may be concerned as a result of device 10 being usable by a person who does not have all of the fingers present on a hand. Thus less than four fingers may be inserted within sleeve 20 and effective use still may be made of device 10. It will be also recognized that freedom of swinging movement of receptacle 12 is permitted by interconnecting hinge 32 whereby the

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receptacle portion 12 may be swung by the hand of the user about hinge 32 in such a manner as to impart many and varied controlled motions to ball 58 as it leaves receptacle 12. Further the receptacle 12, may, if desired, be locked in a relatively fixed position with respect to the band 30 and wrist of the user of device 10 through the use of lockable hinge pin 36, bolt 50 and nut 52 whereby the hand of the user and device 10 become virtually an integral unit for the purpose of rolling a bowling ball.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A device for rolling a bowling ball comprising a cup-shaped receptacle for receiving the ball; means mounted on the receptacle for receiving the hand of the user of the device; a band adapted to encircle the wrist of the user of the device; hinge means interconnecting said band and said receptacle for permitting the latter to be shifted relative to the band and thereby said wrist when said hand is received by said means mounted on said receptacle; and a strip of frictional material carried by said receptacle on the inner face thereof.

2. A device for rolling a bowling ball as set forth in claim 1, wherein said band is hingedly interconnected to the receptacle at a point on the latter spaced from said hand-receiving means.

3. A device for rolling a bowling ball as set forth in claim 1, wherein said strip of frictional material is carried on the inner face of the receptacle at a point adjacent the rim of the receptacle.

4. A device for rolling a bowling ball as set forth in claim 3 wherein said strip is of arcuate configuration and

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lies adjacent the rim of the receptacle opposite to the point of interconnection of said band.

5. A device for rolling a bowling ball comprising a cup-shaped receptacle for receiving the bowling ball; a finger-receiving sleeve mounted on the outer surface of the receptacle; a thumb-receiving sleeve mounted on the outer surface of the receptacle adjacent said finger-receiving sleeve whereby the hand of the user of the device may be inserted within said sleeves to a position substantially underlying said receptacle; a band spaced from and above said finger-receiving sleeve, said band being adapted to adjustably encircle the wrist of the user of the device when the hand is inserted in said sleeves; hinge means interconnecting said band and said receptacle for permitting the latter to be shifted relative to the band and thereby said wrist when said hand is inserted in said sleeves; and an arcuate strip of frictional material mounted on the inner surface of the receptacle adjacent the upper, normally forwardmost rim thereof, said strip being of sufficient thickness to engage a portion of a bowling ball carried within the receptacle whereby controlled motion may be imparted to the ball as it is thrown from the device.

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