

[54] **ADJUSTABLE WRIST SUPPORT FOR BOWLING**

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[51] Int. Cl. **A63b 71/14**

[58] Field of Search **273/54 B, 189 A; 2/161 A; 128/87 R, 87 A, 87 C, 88, 89 R**

[56] **References Cited**

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[57] **ABSTRACT**

A strap device for supporting the bowler's wrist in any desired angle to the back of his hand while bowling includes an elongated strip of flexible material strapped about both the bowler's hand and wrist on opposite sides of the wrist joint. A lever arrangement is provided for tightening the wrist strap in place. A resilient plate assembly is secured along the length of the strip for transversely bending the strap device at the wrist joint and over lapping ends of the plate are capable of being selectively clamped in place at any desired angle.

4 Claims, 5 Drawing Figures

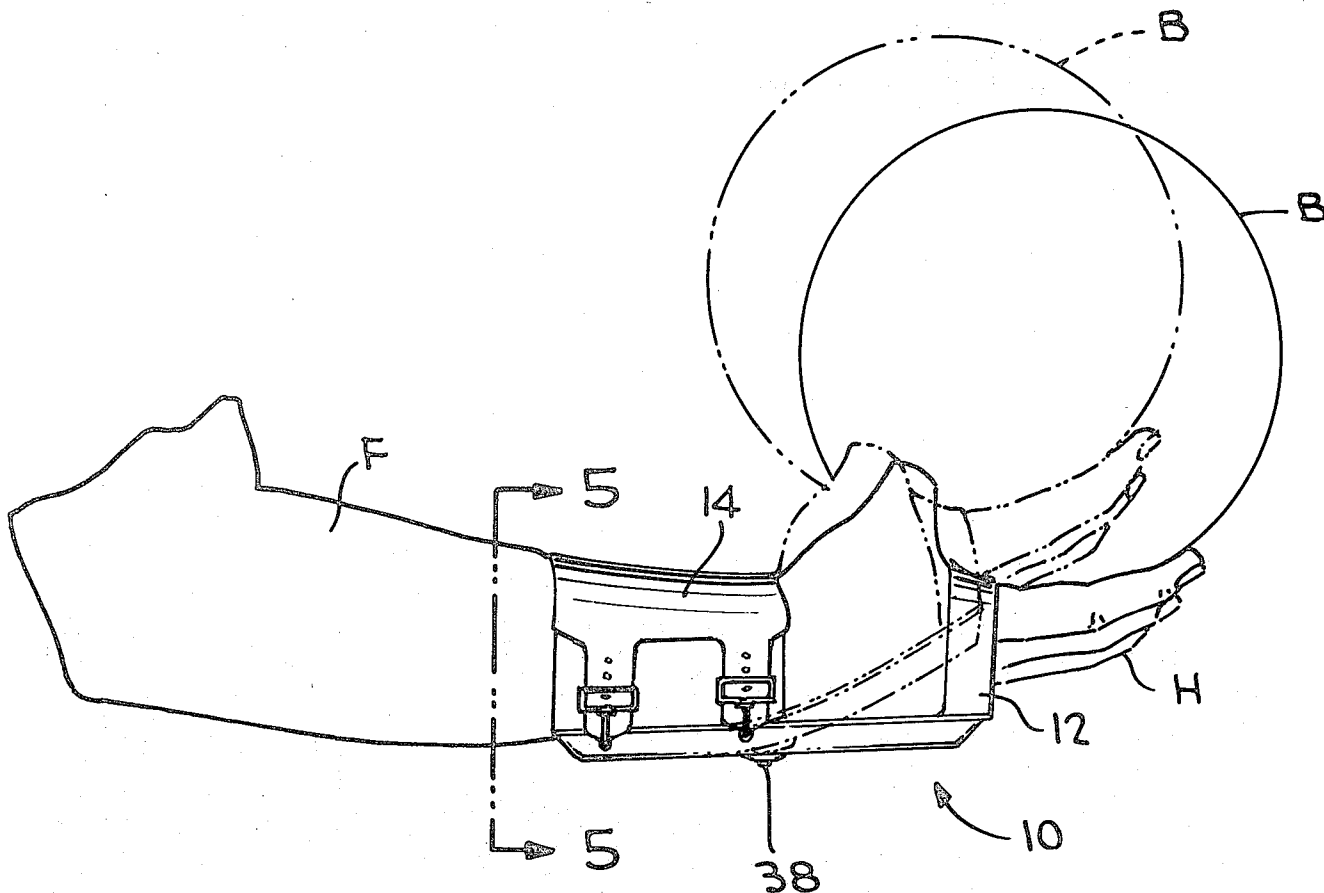


FIG. 1

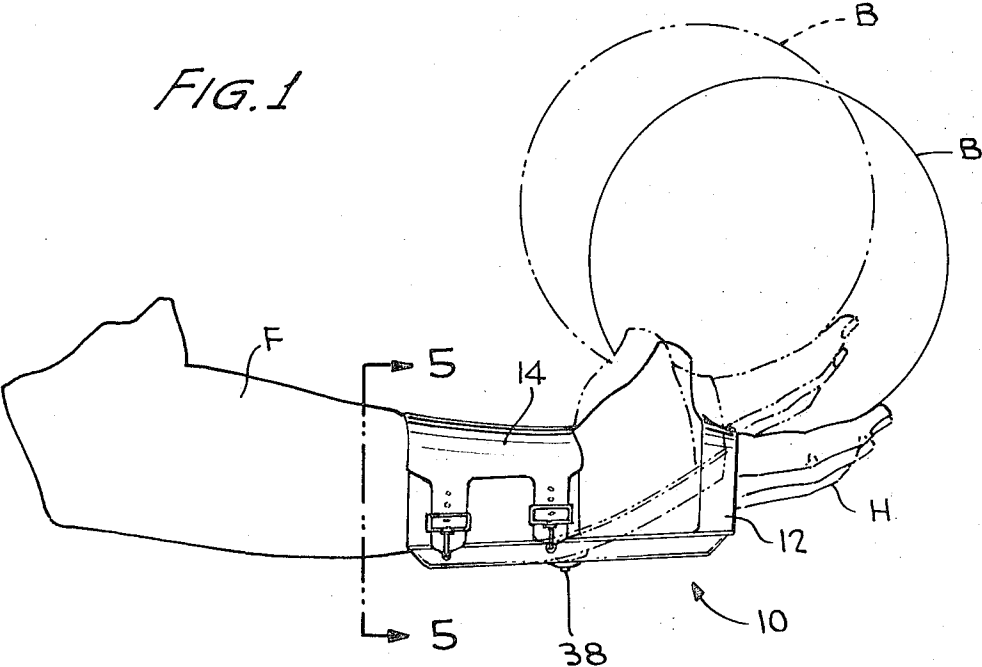


FIG. 2

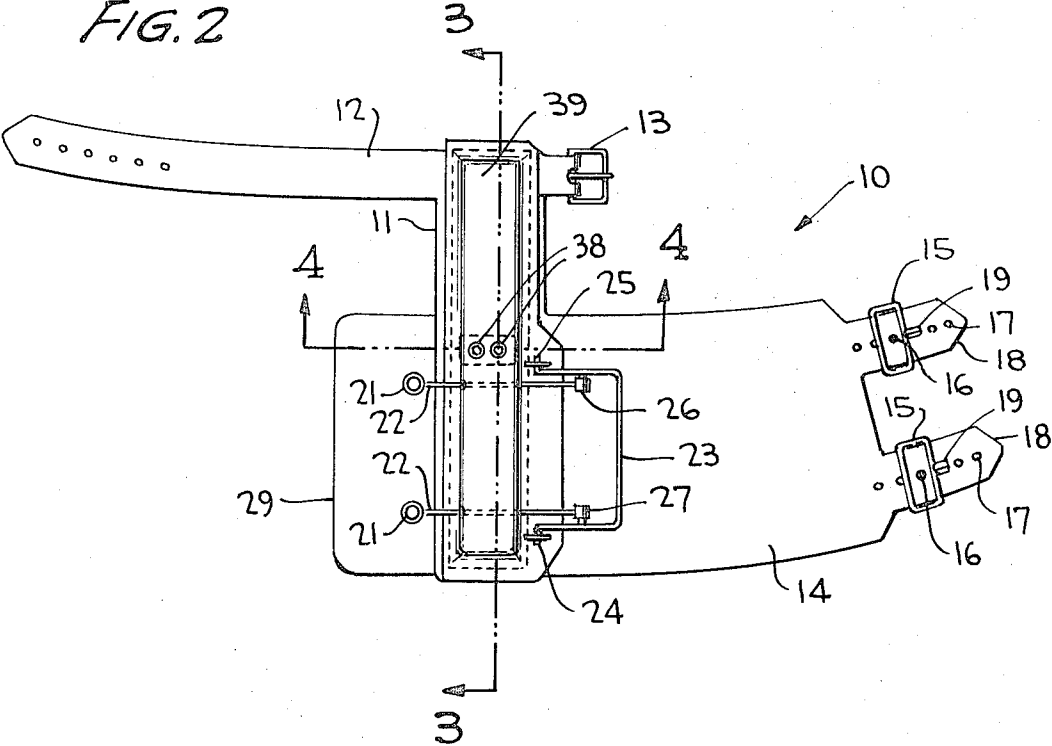


FIG. 3

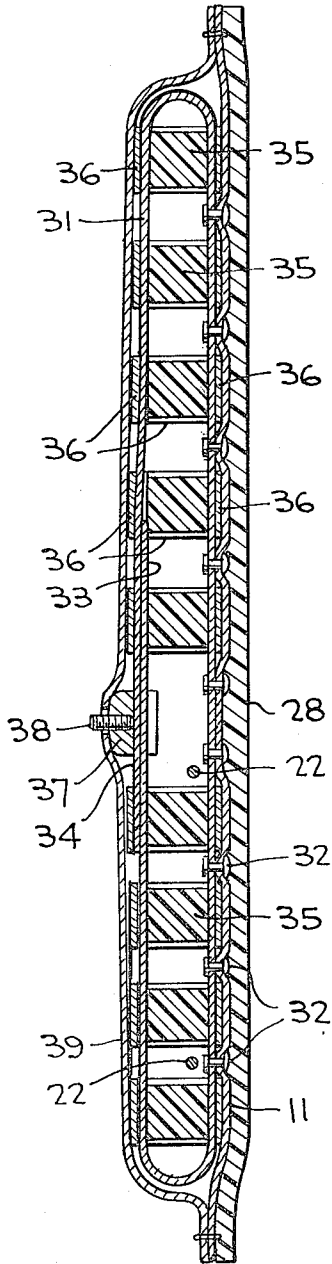


FIG. 4

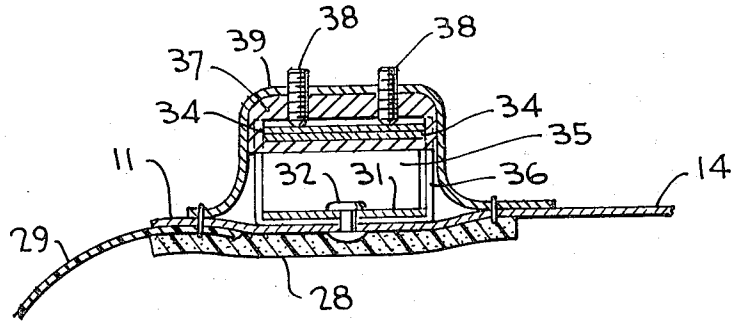
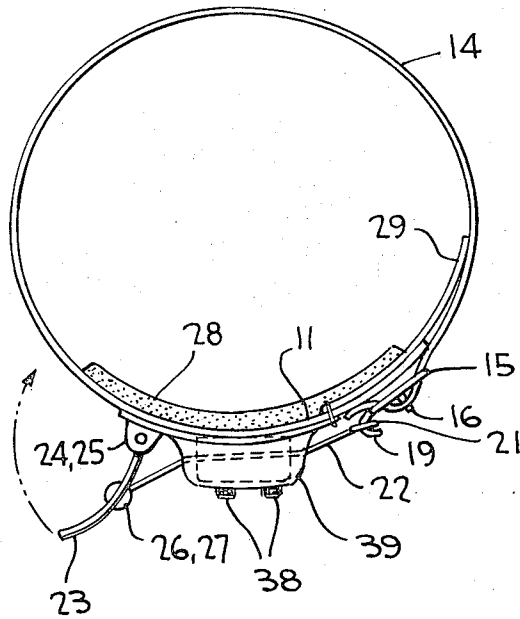


FIG. 5



ADJUSTABLE WRIST SUPPORT FOR BOWLING

This invention relates generally to an athlete's wrist support, and more particularly to such a support capable of being tightened in place so as to maintain the back of the hand at any desired angle to the wrist while bowling.

Depending on the bowler's particular style and/or bowling condition of the alley, the bowling ball is grasped differently so as to alter the release suitable for such particular conditions. For example, bowling alley conditions can vary day-to-day from "dry" to "slick." Under the former condition, only a small amount of "top spin" or "English" is required to hook or curve the ball in its desired path. Under the latter or "wet" condition, a greater amount of "English" is needed to effect the same results. In order to impart "top spin" to the bowling ball, the hand is positioned under the ball and the wrist is rotated toward the body. The wrist is therefore bent so the back of the hand is at an angle to the wrist with the wrist slightly rotated toward the body. Conversely, if less "top spin" is required, the ball is grasped with the wrist bent slightly outwardly of the body. At times, it is also desirable to maintain the wrist rigid without bending it either toward or away from the body.

In the prior art, wrist supports of the general type herein are known to have a rigid stiffening member bridging the wrist joint and anchored to both the hand and the wrist of the bowler on opposite sides of the wrist joint to maintain the back of the hand parallel to the wrist at all times while bowling. However, no provision has been heretofore made for such supports for rigidly maintaining the wrist in a position whereby the back of the hand may be maintained in an adjusted and rigid position bent either toward or away from the body.

It is therefore an object of the present invention to provide an adjustable wrist support for bowlers by means of which the wrist may be rigidly supported at some desired angle to the back of the hand.

Another object of this invention is to provide such a support as including an elongated strip strapped to both the hand and the wrist on opposite sides of the bowler's wrist joint, the wrist strap capable of being quickly tightened in place, and the strip capable of being bent and locked into any desired bend suitable to the bowler.

A further object of the present invention is to provide such a support wherein resilient plate means are mounted along the length of the strip, the plate having overlapping ends and a clamp being provided for maintaining such ends in any desired overlapping position to thereby maintain any desired bend of the strip for the bowler.

A still further object is to provide such a support wherein the free end of the wrist strap is interconnected by means of a cord to a pivotal lever located on the strip which, when rotated away from such free end, serves to tighten the wrist strap in place.

Other objects, advantages and novel features of the invention will become apparent from the following detailed description of the invention when considered in conjunction with the accompanying drawings wherein:

FIG. 1 is a side elevational view of the wrist support strapped in place on the wrist and hand of the bowler

and illustrating at least two positions in which the bowling ball may be grasped;

FIG. 2 is a top plan view of the wrist support in accordance with the invention;

FIGS. 3 and 4 are sectional views of the wrist support taken respectively along line 3—3 and 4—4 of FIG. 2; and

FIG. 5 is an end view of the wrist support strapped in place as viewed in the direction of line 5—5 of FIG. 1.

Turning now to the drawings wherein like reference characters refer to like and corresponding parts throughout the several views, the adjustable wrist support 10 for bowlers is shown strapped in place in FIG. 1 and is shown in plan view in FIG. 2. The support comprises an elongated strip 11 of flexible material such as soft leather of the like strapped in place on both the hand H and the forearm F at opposite sides of the wrist joint of the bowler as shown in FIG. 1. A strap 12 extending outwardly of one side of the strip is provided for cooperation with a conventional buckle 13 extending outwardly of the opposite side of the strip. Another strap 14 also extends outwardly of this opposite side of the strip for securing it to the wrist of the bowler as in FIG. 1. Strap 14 is provided with hook elements 15 each having a pin 16 cooperating with one of the openings 17 on ears 18 of the strap for adjustably securing the buckles along the length of these ears. Each of the buckles 15 has a hook 19 for cooperation with an eyelet 21 provided at the respective free ends of cables 22 extending through a cover 39 to be hereinafter more fully described. A U-shaped lever 23 is pivotally mounted as at 24, 25 to strip 11, and the free ends of each cable 22 are pivotally mounted to the lever outwardly of its pivot points 24, 25 as at 26, 27. Accordingly, strap 14 may simply be wrapped about the wrist near the wrist joint of the bowler as hook elements 19 are hooked onto their respective eyelets 21. Buckles 15 are adjusted along the length of ears 18 to effect a slightly loose fit for the wearer so that, when lever 23 is pivoted outwardly, strap 14 is tightened in place as buckles 15 are moved toward strip 11.

The support is cushioned while in place along the top of the hand and wrist by means of a pad 28 of foam plastic material or the like (see FIGS. 3 to 5) adhesively secured along the inner surface of strip 11. Also, in order to shield the wrist against contact by either buckles 15 or eyelets 21 while strap 14 is being secured in place and tightened, a curved shield plate 29 of flexible polyethylene or the like is sandwiched at one end between strip 11 and pad 28 (see FIGS. 4 and 5).

Strip 11 may be bent transversely at line 4—4 of FIG. 2 and may be maintained in some desired angle for the bowler by means of the assembly shown in FIG. 3. An elongated resilient steel plate 31 is secured along the length of strip 11 as by rivets 32 and is bent on itself at its opposite ends to form overlapping ends 33 and 34. Spacers 35 are provided along the length of the bent plate for maintaining its bent portions at a spaced distance from that portion of the plate secured to strip 11. Each of the spacers is maintained separated from one another by means or straps or clips 36 surrounding each spacer as seen in both FIGS. 3 and 4. The plate is capable of being easily bent transversely during which time overlapping ends 33 and 34 are moved toward and away from one another. In order to main-

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tain some desired degree of bend for the plate, a clamp 37 is provided in clamping engagement with the overlapping ends as shown in FIGS. 3 and 4. The angularity of the plate and consequently of the strip 11 after the plate is bent may be maintained and locked in place by means of threaded studs 38 which threadedly engage with the top portion of clamp 37 and bear down against the top of overlapping end 34 so as to clamp both overlapping ends of the plate against the lower portion of the clamp piece. Also, it should be noted that a cover 39 of flexible material such as leather or the like encloses clamp 37 and plate 31 and is secured along its periphery to strip 11.

In operation, the wrist support as described above is first strapped to the hand of the bowler by means of strap 12 after which it is loosely strapped to his wrist in the position shown in FIG. 1 as hooks 19 are hooked into eyelets 21. After assessing the condition of the alley, or depending upon the style used in grasping the bowling ball, the bowler will adjust the angularity of strip 11 by either maintaining the back of the hand parallel to the wrist, as shown in solid outline in FIG. 1, or by bending the hand inwardly toward the body as shown in phantom in this FIG. Of course, the hand may also be bent outwardly away from the body (not shown) if desired. Strip 11 is locked into this adjusted position by simply tightening studs 38 with the use of, for example, an Allen wrench assuming that hexagonal head openings are provided for each stud. Just prior to grasping the ball for delivering it toward the pins, the bowler simply moves lever 23 in the direction of the arrow shown in FIG. 5 to thereby tighten strap 14 about his wrist. The angularity between the back of his hand and his wrist, as for example 180° shown in solid outline and approximately 45° shown in phantom in FIG. 1, is locked in place. While awaiting his next turn, the bowler may loosen strap 14 by moving lever 23 in the direction opposite the arrow of FIG. 5. The wrist support therefore remains strapped in place in a loose condition while the bowler is awaiting his turn, and the support may be simply and effectively tightened and its an-

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gularity adjusted at any time suitable to the bowler's style or condition of the alley.

Obviously, many modifications and variations of the invention are possible in the light of the above teachings. It is therefore to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

What is claimed is:

1. A strap device for supporting the bowler's wrist in a desired angle, comprising an elongated strip of flexible material, a first strap for securing said strip to the bowler's hand, a second strap connected at one end to said strip for securing said strip to the bowler's wrist, lever means on said strip in engagement with the free end of said second strap for tightening said second strap in place, an elongated flexible plate having overlapping ends and capable of bending about its transverse axis being secured along the length of said strip, and a clamp for clamping said overlapping ends together for locking same in a transversely bent position.

2. The device according to claim 1 wherein said lever means comprises a lever mounted for pivotal movement inwardly and outwardly of said strip, at least one strand interconnecting said free end of said second strap with a portion of said lever spaced from its pivotal mounting, so that movement of said lever outwardly of said strip serves to tighten said second strap about the bowler's wrist as said free end is moved toward said lever.

3. The device according to claim 2 wherein at least one ear element extends outwardly of said second strap free end, one of a hook and an eye element respectively being located on said ear element and on said strand.

4. The device according to claim 1 wherein said clamp includes a clamp surrounding said overlapping ends, and means provided for tightening said clamp plate in place.

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