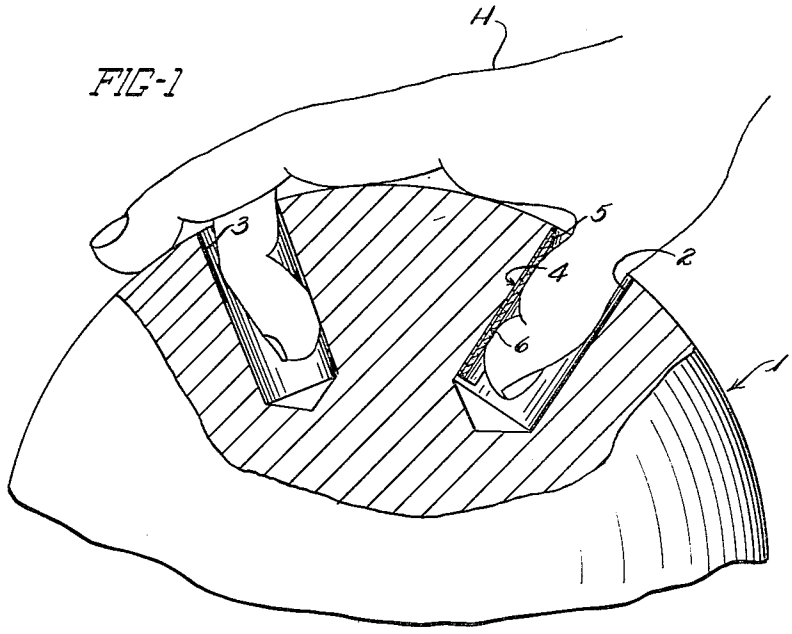
Jan. 15, 1957 C. F. MITCHELL 2,777,693

BOWLING BALL INSERT PAD

Filed Aug. 8, 1955

FIG-1



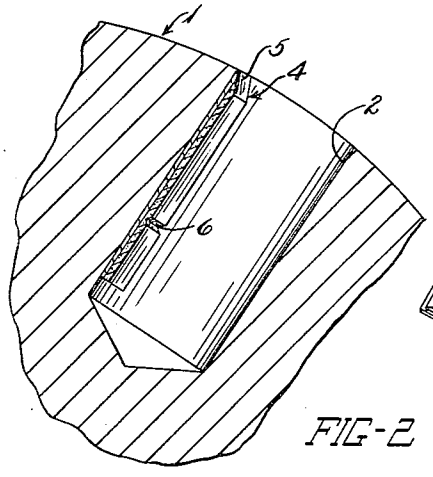


FIG-2

FIG-3

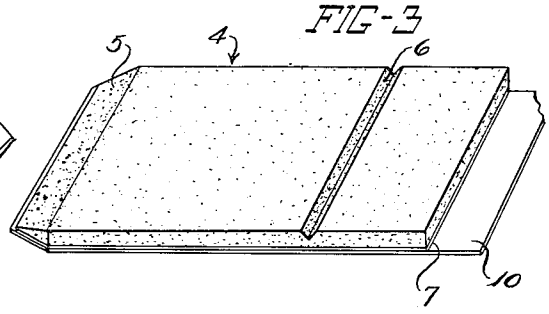
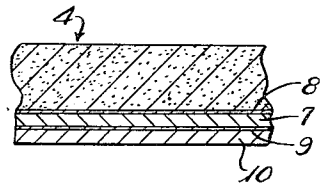


FIG-4



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BOWLING BALL INSERT PAD

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1 Claim. (Cl. 273—63)

The invention relates to bowling, and especially to insert pads provided for use in the thumb hole of a bowling ball.

It is well known and recognized that bowling as a sport is one wherein very small differences in the throwing and control of a bowling ball may make very noticeable differences in the results secured. Thus most bowlers are very careful in their selection of bowling balls and normally have these balls made to individual specifications in weight, size, and the positioning and number of the thumb and finger holes used in the bowling ball. Even though the balls are made to special order, still the bowler may not have the desired tight grip and/or extremely accurate control over the ball when grasping and throwing the ball and he still may let the ball drop or slip. Thus many bowlers heretofore have used some type of pads positioned in the thumb and/or finger holes of the ball to facilitate obtaining an especially secure grip on the ball so as to have maximum control over the ball at the instant of release of the ball for passage down the alley for the bowling action but even then some slippage may occur. Some of such insert pads have been of the type shown and described in my own prior U. S. Letters Patent No. 2,708,578, and I now have found that for some uses and/or people, the bowling ball insert pads may have a slightly different construction from that shown in my prior patent, and still give very desirable results.

One important object of the present invention is to provide a bowling ball insert pad characterized by the substantially smooth surface thereof broken only by one irregularity in the surface of the pad at the region thereof normally contacting the ball of the thumb engaging the pad.

Another object of the invention is to provide an insert for the thumb hole of a bowling ball to insure against the ball slipping from the grasp of a bowler in the act of rolling the ball.

Another object of the invention is to provide an insert pad for use in the thumb hole of a bowling ball for aiding in preventing any suction developing between a thumb and the pad.

Another object of the invention is to make a sturdy, durable pad of the class described of low cost to aid in accurately controlling a bowling ball when such insert pad is positioned in a thumb hole of the bowling ball.

The foregoing and other objects and advantages of the invention will be made more apparent as the specification proceeds.

Reference now should be had to the accompanying drawings, wherein:

Fig. 1 is an elevation, partially broken away and shown in section, of a bowling ball having an insert pad embodying the principles of the invention inserted therein, which ball is shown being grasped by a bowler;

Fig. 2 is an enlarged longitudinal sectional view through the insert pad of Fig. 1 and associated portions of the bowling ball;

Fig. 3 is a perspective view of the insert pad of Figs. 1 and 2; and

Fig. 4 is a fragmentary enlarged section of the thumb patch with a backing strip thereon.

When referring to corresponding parts shown in the drawings and described in the specification, corresponding numerals are used to facilitate comparison between such parts.

The present invention in general relates to a grip means for use with a bowling ball having a thumb hole therein, and wherein the grip means comprises a finger patch of resilient material having about 60% cork and about 40% rubber therein, and an adhesive member including a base with a pressure sensitive adhesive coating on both sides thereof adhesively secured by one coating to the patch and being adapted to be secured by the other coating to the side of a hole in a bowling ball. The patch is of a size to extend substantially the full length of a hole in which it is positioned and has a body portion of uniform thickness except for a transversely extending recess extending completely across the patch adjacent the lower end of the patch when inserted in a bowling ball hole.

Now referring in detail to the structure shown in the drawings, a bowling ball is illustrated as a whole by the numeral 1. This bowling ball has a thumb hole 2 provided therein and a similar finger receiving hole 3 provided in another portion of the periphery of the bowling ball. Fig. 1 best shows how the thumb and finger of a person's hand indicated at H is engaged with these holes provided in the bowling ball to the specifications and/or size requirement of the person using such bowling ball 1. These holes 2 and 3 are usually cylindrical in shape and extend approximately two inches into the bowling ball from the sufrace thereof and may have tapered lower ends for convenience in drilling such holes in the ball.

As many finger holes as desired may be provided in this bowling ball and one or more patches as shown and described in may previously mentioned patent may be provided in one or more of the finger holes 3. Such patches give particularly good results in the finger holes for engaging a bowler's finger.

The insert pad of the invention is indicated as a whole by the numeral 4 and it preferably is made from a uniform mixture of cork and rubber or rubber-like materials. Preferably the cork is present in about 60% proportion by weight and the rubber or rubber-like material is present in about 40% by weight. One rubber material which is particularly useful in making up the insert pads 4 is the synthetic rubber neoprene and the finished rubber-cork composition has a Shore durometer hardness of between about 45 and 65. This insert pad 4 is of uniform thickness throughout and preferably is less than 1/16 of an inch thick and usually closer to about 1/32 of an inch thick. Usually the outer end of the insert pad 4 is tapered to a feather edge as indicated at 5. The particular composition mentioned herein has very desirable properties in that it provides sufficient cork for absorbing moisture of the player's hand when in contact therewith but yet it provides sufficient flexibility or resilience in the pad as to help the person to obtain a firm grasp on the bowling ball.

As an important feature of the insert pad 4, it is provided with a transversely extending recess 6 adjacent the lower, or inner end thereof. This recess 6 is provided in spaced relationship to the lower or bottom end of the insert pad 4 in the portion thereof adapted to be engaged with the ball of the thumb in such thumb hole 2. One important function of the recess 6 is to prevent the formation of any suction between the player's thumb and the insert pad 4 so that no difficulty is encountered in releasing the ball at the exact instant and in the exact manner desired by the bowling player.

Ususally the insert pad 4 is of such size as to extend substantially one third around the circumference of the bowling ball hole in which it is positioned.

In order to secure the insert pad in position, it is provided with an adhesive member 7 that preferably has a coating of a pressure-sensitive adhesive 8 and 9 on each face thereof. The layer of adhesive 8 is used for securing the adhesive member 7 to the remainder of the insert pad 4, while the layer 9 is provided on the opposite face of such adhesive member for use in securing the insert pad 4 to the wall of the bowling ball thumb hole 2, as shown in the drawing. Normally this insert pad would be secured to the thumb hole on the side thereof toward the adjacent finger holes in the bowling ball. The pressure sensitive member may comprise a strip of paper or fabric which is coated on both sides with the adhesive material to provide the binder means as stated herein. A strip of cover paper 10 is provided over the layer 9 of adhesive material so that such protective cover can be removed when it is desired to secure the insert pad into a bowling ball hole and be retained permanently therein by pressing the insert pad into the desired position.

The cork used in the insert pad 4 is in the form of cork granules and is intimately mixed with the rubber material to provide a homogeneous mass from which the insert pads can be produced in continuous strip form and easily be cut to the desired individual insert pad size and shape.

The insert pad is especially well suited for use in the thumb hole of a ball as the thumb provides a relatively straight member for engaging the wall of a hole in a bowling ball.

From the foregoing, it will be seen that a relatively inexpensive but desirable type of an insert pad has been provided by the invention and that this pad can be used for aiding the bowler in providing the desired exact or precise control of a bowling ball as is required by expert

bowlers. Hence it is considered that the objects of the invention have been achieved.

While one complete embodiment of the invention has been disclosed herein, it will be appreciated that modification of this particular embodiment of the invention may be resorted to without departing from the scope of the invention as defined in the appended claim.

What I claim is:

A grip means for use with a bowling ball having a thumb hole therein, which grip means comprises a patch of resilient material having about 60% cork and about 40% of a rubber-like material therein and with the cork being present in small particles distributed uniformly throughout the patch, and an adhesive member including a base with a pressure-sensitive adhesive coating on both sides thereof adhesively secured by one coating of the pressure-sensitive adhesive to the patch and being adapted to be secured by the other coating to a side of a hole in a ball, said patch being of a size to extend substantially the full length of and about one third of the circumference of the hole in which it is positioned, the patch being of uniform thickness throughout except for a portion tapering substantially to a feather edge at the top of the patch and a transversely extending recess extending completely across the patch adjacent but spaced from the lower end thereof to aid in preventing suctional engagement of a bowler's thumb and said patch because of the plurality of foraminous cork areas exposed for suction and gripping action on the surface of the patch.

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