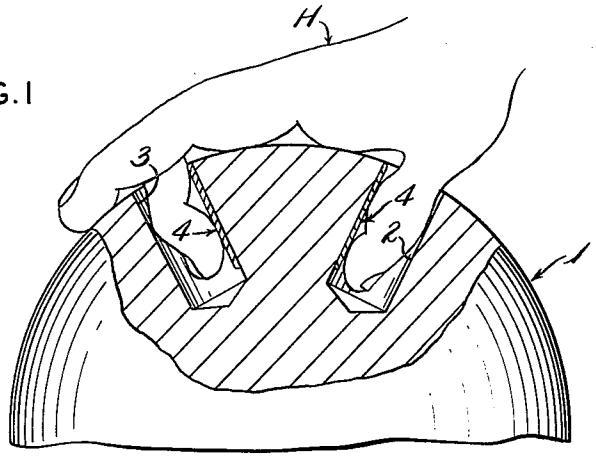
Feb. 28, 1961 C. F. MITCHELL 2,973,205

BOWLING BALL PAD WITH SPECIAL RIBS THEREIN

Filed July 20, 1959

FIG. 1



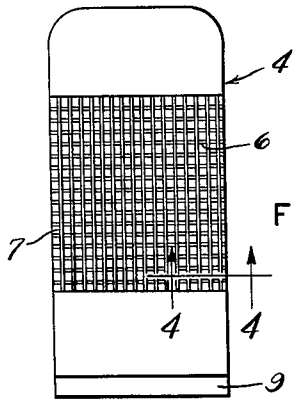
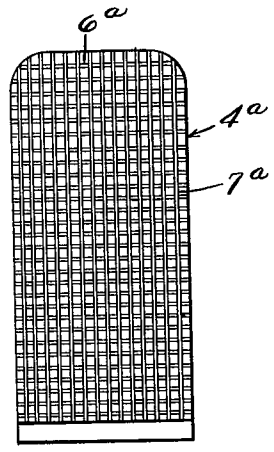


FIG. 2

FIG. 3



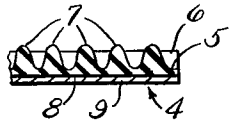


FIG. 4

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BOWLING BALL PAD WITH SPECIAL RIBS THEREIN

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3 Claims. (Cl. 273—63)

The present invention relates to bowling ball finger or thumb hole insert pads or patches, and especially to such patches or pads for positioning in the finger and/or thumb holes in a bowling ball to improve the gripping action between the bowler's hand and the bowling ball.

Heretofore there have been various different types of bowling ball finger patches or pads provided and these pads are provided to be secured in a finger or thumb hole in a bowling ball to improve the grip between a bowler's hand and the bowling ball. One of such grips that has been very effective is shown in my prior United States Letters Patent No. 2,708,578. Such pads or patches have been particularly useful in the holes in bowling balls engaged by a player's finger, or fingers. When a bowler's thumb is engaging a bowling ball, it seems to have more of a direct axial slide pull-out effected than has the finger, or fingers. Thus, the provision of ribs and other positive engagement means protruding from the patch for the thumb hole of the bowling ball has not been real satisfactory in the past. Therefore thumb patches have, in many instances, been of different design than the patches to be used in finger engaging holes of the ball and may have a relatively smooth surface thereon.

While such previous types of pads have been very satisfactory in operation, bowlers are constantly seeking the best possible means for extremely accurate control of the ball by the bowler at the instant that the ball is being released by the bowler. Any improvement in the finger or thumb engaging pads used in the bowling ball holes is very desirable, as sportsmen demand the best possible equipment so as to obtain best results in the sport.

The general object of the present invention is to provide a novel and improved type of a bowling ball insert pad particularly characterized by the provision of a plurality of closely spaced intersecting sets of parallel longitudinally and transversely extending ribs therein.

Another object of the invention is to provide a novel type of a bowling ball insert pad which is inexpensive but yet which will give effective control action for a thumb or finger engaged therewith, and will have an effective service life with a minimum of abrasive action on a bowler's finger or thumb.

A further object of the invention is to provide a bowling ball insert pad wherein it has effective engaging action with the thumb of a bowler even though the thumb or finger is inserted into the hole in the bowling ball in which the patch is positioned varying distances.

Another object of the invention is to provide a novel type of a bowling ball insert pad which can be molded from a suitable plastic material, and which has particularly effective gripping action to hold a bowler's finger or thumb against lateral sliding action when engaging a bowling ball hole.

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 structure shown in the drawings, and wherein:

Fig. 1 is an elevation, partially broken away and shown in section, of a bowler's hand engaging a bowling ball having an insert pad embodying the principles of the invention positioned therein;

Figs. 2 and 3 are plan views of bowling ball insert pads embodying the principles of the invention and having ribs therein of slightly different shapes or lengths; and

Fig. 4 is a fragmentary enlarged vertical section taken on line 4—4 of Fig. 2.

When referring to corresponding members shown in the drawings and referred to in the specification, corresponding numerals are used to facilitate comparison therebetween.

With reference now to the details shown in the drawings, a bowling ball is indicated by the number 1 and it is shown as having a thumb hole 2 and a finger receiving hole 3 provided therein. A bowler's hand at H is shown engaged with these holes 2 and 3 for bowling engagement with the bowling ball 1. A novel and improved insert pad or patch of the invention is indicated as a whole by the numeral 4. One of each of these pads or patches 4 is positioned in each of the holes 2 and 3, as indicated in the drawings.

Specifically, the bowling ball pad 4 comprises a layer 5 which is made from a suitable resilient, flexible material, such as natural rubber, latex rubber, synthetic rubbers and rubber-like materials, or similar substances. In all events, the layer 5 is flexible and resilient and is usually made by molding operations so that large numbers of these pads can be made at relatively low cost. As an important feature of the layer 5, it is provided with a plurality of transversely extending, closely spaced, parallel ribs 6 while a plurality of similar longitudinally extending ribs 7 are also formed in or provided by the layer 5 on the upper surface thereof. It is specially important to note that the longitudinally extending ribs 7 are of greater vertical height and protrude slightly above the transversely extending ribs 6 appreciably, as best shown in Fig. 4 of the drawings. For example, the ribs 6 may be about three to five times the thickness of the continuous base of the layer 5 in height, and the ribs 7 then would be about three and one-half to five and one-half or six times the thickness of the layer 5 base in height. The entire layer 5 may still be only about .05 to .07" in thickness. As the ribs 6 and 7 are formed by molding operation, these ribs are integrally connected to each other and with the continuous base portion of the layer 5.

So as to secure the layer 5 in operative engagement with a bowling ball and insert hole therein, a suitable type of a backing strip 8 is provided for the layer 5. This backing strip 8 normally has a layer of pressure sensitive adhesive of known composition provided on both the front and back surfaces thereof and with one of such adhesive surfaces, the front surface, normally being tightly bonded to the back of the layer 5. Initially when the bowling ball pad 4 is made, a cover strip 9, usually made from paper, is normally provided in the pad and is adhesively secured to the back surface of the backing strip 8. Usually the backing strip 8 also may be made from a paper, or very lightweight flexible fabric material and it is quite thin so that the provision of the backing strip 8 does not impair the resilience or flexibility of the layer 5 and its contouring to the shape of a wall of the hole in the bowling ball.

When the pad 4 is to be used, the cover strip 9 is carefully removed therefrom, and the pad 4 is inserted into either the thumb or finger hole in the bowling ball and is carefully pressed into engagement with the wall of such hole when positioned in a desired location extending along

the hole in the bowling ball. Other backing or temporary mounting means may be used in place of the backing 8, or cover strip 9, as desired.

Normally the pad or patch 4 is of such a size as it would extend between one-quarter to one-third of the circumference of a hole about approximately two-thirds to three-quarters of the surface of the pad or patch 4. It will be seen that quite a few parallel ribs 6 and 7 are provided in the pad or patch so that a bowler's finger will engage five to seven, for example, of the longitudinally extending ribs, and will likewise engage six or eight, for example, of the transversely extending ribs in the pad or patch 4. Inasmuch as the longitudinally extending ribs 7 are slightly higher than the transversely extending ribs, these longitudinally extending ribs provide very nice flexible ribs and anchor means for the bowler's finger when engaging a bowling ball so as to prevent any undesired lateral slipping or sliding of the finger with relation to the bowling ball so that a more accurate and improved control action is provided. The ribs 6 are of uniform height, as are the ribs 7.

In order to facilitate removal of the cover strip 9, usually one end thereof extends beyond the end of the resilient or flexible layer 5, as shown in Fig. 2. It will be realized that these ribs 6 and 7 can extend any desired length of the layer 5 and are shown as being formed only on the center section thereof in the pad 4 shown in Fig. 2. However, Fig. 3 shows a modified pad 4*a* of the invention wherein the longitudinally extending ribs 7*a* and the transversely extending ribs 6*a* are formed over the entire surface of the pad 4. Otherwise, the construction of the pad 4 is the same as the pad shown in Figs. 2 and 4. The transversely extending ribs 6 extend the width of the pads 4 and 4*a*.

It will be seen that this pad can be made at relatively low cost in large quantities and can be made from substantially conventional materials. The pad will give improved grip action between the bowler's finger or thumb and the ball and will have a good service life. Thus it is believed that the objects of the invention have been achieved.

While two complete embodiments of the invention have been disclosed herein, it will be appreciated that modification of these particular embodiments of the invention may be resorted to without departing from the scope of the invention as defined in the appended claims.

What is claimed is:

1. A bowling ball hole pad comprising a flexible backing sheet means for engaging a surface in a bowling ball hole, said backing sheet means having a pressure sensitive adhesive on both surfaces thereof, a flexible layer of resilient material secured to and extending the length of said backing layer, said layer having a plurality of closely spaced, parallel longitudinally extending narrow flexible ribs and a plurality of closely spaced, parallel transversely extending narrow flexible ribs formed thereon, said longitudinally extending ribs intersecting said transversely extending ribs and being of greater height to prevent lateral movement of a bowler's finger when operatively engaged therewith, said longitudinal ribs tapering inwardly in width towards the top edges thereof, and a cover sheet secured to the other surface of said backing sheet means whereby a flexible easily handled pad is provided which can readily be secured in a hole in a bowling ball by the pressure sensitive adhesive on said backing sheet means when said cover sheet is removed.

2. A bowling ball hole pad comprising a flexible backing sheet means for engaging a surface in a bowling ball hole, said backing sheet means having a pressure sensitive adhesive on both surfaces thereof, a flexible layer of resilient material secured to and extending the length of said backing layer, said layer having a plurality of closely spaced, parallel, longitudinally extending ribs and a plurality of closely spaced, parallel, transversely extending ribs formed thereon, said longitudinally extending ribs intersecting said transversely extending ribs and being of greater height to prevent lateral movement of a bowler's finger when operatively engaged therewith, said ribs extending over the width of said layer at a center section thereof, and a cover sheet secured to the other surfaces of said backing sheet means whereby a flexible easily handled pad is provided which can readily be secured in a hole in a bowling ball by the pressure sensitive adhesive on said backing sheet means when said cover sheet is removed.

3. A bowling ball pad comprising a flexible backing sheet means for engaging a surface in a bowling ball hole, said backing sheet means having a pressure sensitive adhesive on both surfaces thereof, and a continuous flexible layer of resilient material secured to and extending the length of said backing layer, said layer having a plurality of closely spaced, narrow, flexible, parallel longitudinally extending ribs and a plurality of closely spaced, parallel, narrow, flexible, transversely extending ribs formed thereon, said longitudinally extending ribs intersecting said transversely extending ribs and being of greater height to prevent lateral movement of a bowler's finger when operatively engaged therewith, said ribs being about three to six times the thickness of the non-ribbed portion of said continuous layer, said ribs being spaced so that a bowler's finger will engage about five to seven of said longitudinally extending ribs and about six to eight of said transversely extending ribs when the pad is operatively positioned in a bowling ball hole.

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