

May 7, 1963

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3,088,461

SURGICAL PAD WITH DIGIT LOOP

Filed April 3, 1961

2 Sheets-Sheet 1

FIG. 1

FIG. 2

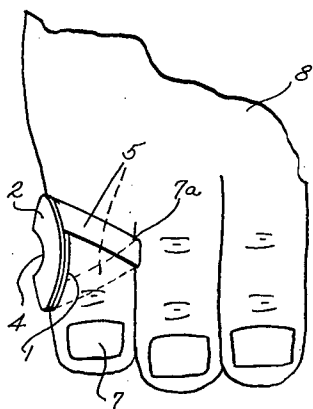


FIG. 3

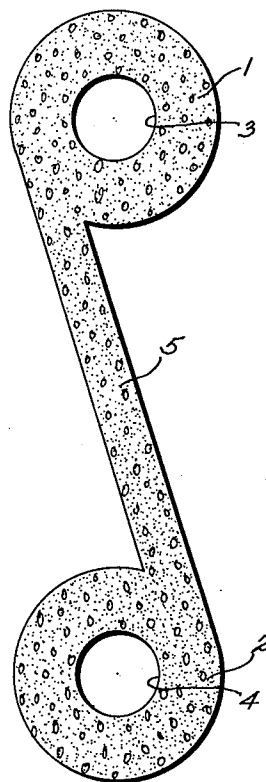
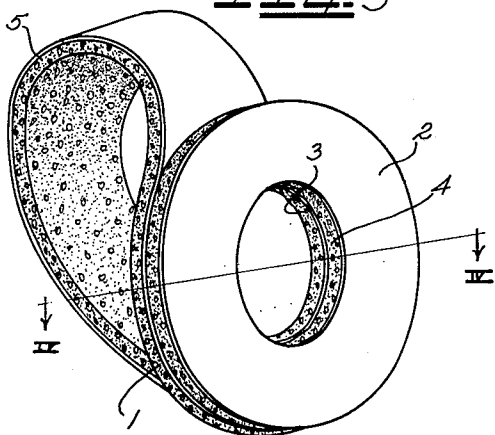


FIG. 4

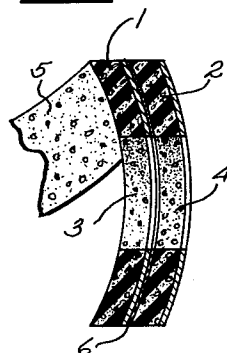
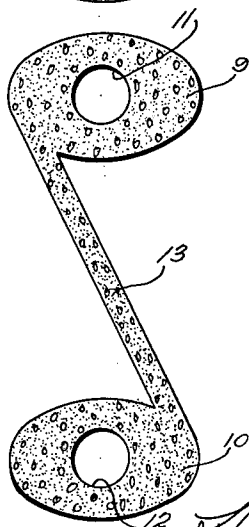


FIG. 5



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FIG. 6

FIG. 7

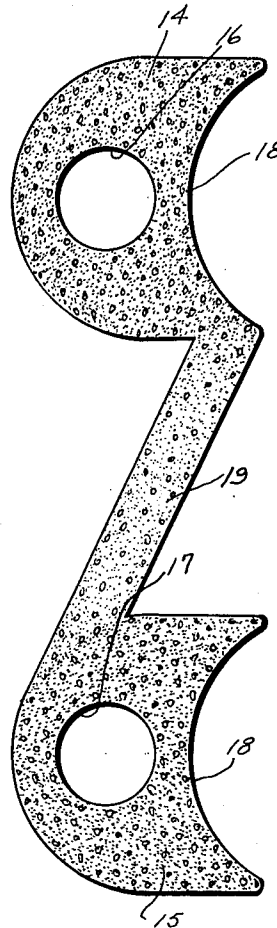
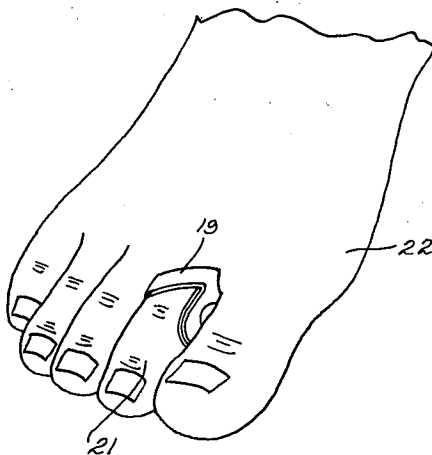


FIG. 8

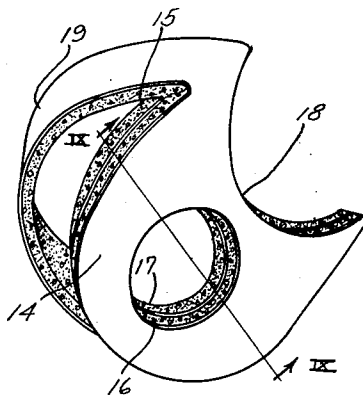
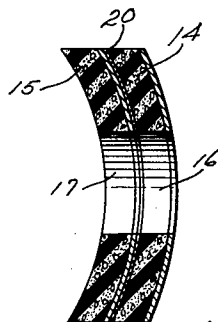


FIG. 9



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SURGICAL PAD WITH DIGIT LOOP

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7 Claims. (Cl. 128—153)

This invention relates to improvements in a surgical pad with a digit loop by means of which the pad is retained upon a finger or toe of the user in a position to relieve an affliction of friction and pressure from articles of wearing apparel, accidental bumps against objects, and otherwise protect the affliction from aggravation during the healing or alleviating process, the invention being highly desirable for use in connection with corns, bunions, calluses, and similar afflictions of the toes and feet, although it will have other uses and purposes as will be apparent to one skilled in the art.

In the past, many and various types of surgical pads having digit loops have been developed. In some instances, these surgical pads were formed from a blank of dumbbell shape, comprising two body portions connected by a straight neck therebetween and the body portions were superposed so that the neck formed the digit loop. Such pads, however, frequently were provided with a seam in some portion of the toe embracing part of the pad, and oftentimes that seam was reinforced with a thin strip of rubber or the like, thus causing a stiffer portion of the pad at the seam than anywhere else, and that seam was most frequently disposed adjacent the digit in a position that could least be tolerated by the user. Obviously the seam provided a potentially weak spot, and if the pad was entirely preformed, the seam required an expensive manufacturing operation. Surgical pads of this general type heretofore known were perhaps most objectionable when used for soft corns occurring between adjacent toes or used for a corn on the outside of the fifth or little toe, since the pads were not constructed to compensate for the interdigital web occurring between adjacent toes. As is well known, the interdigital web between adjacent toes slopes forwardly, that is, the web is farther forward adjacent the plantar surface of the foot than it is at the dorsal surface of the foot. Thus, a pad having a digit loop that encircles the toe or finger at right angles to the body of the pad, the pad cannot be accurately located because of the interdigital web since the entire digit looping portion of the structure would have to be in front of the farthest extremity of that web. Furthermore, pads of this general type heretofore known did not accommodate soft corns between the toes immediately adjacent the interdigital web because the pad could not accurately be disposed in that position, and when used between the toes the digit loop frequently passed directly over a joint in the digit rendering the pad unstable as to position, and causing discomfort to the user.

With the foregoing in mind, it is an important object of the instant invention to provide a surgical pad with a digit loop that is seamless, soft and cushioning, may be economically manufactured, and which may be accurately positioned immediately adjacent or laterally opposite an interdigital web.

Another object of the instant invention is the provision of a surgical pad with a digit loop made from one integral blank and so formed that the digit loop extends slantwise with respect to the body of the pad so that regardless if the pad is positioned on the outer side of the fifth toe or between adjacent toes to accommodate soft corns, the digit loop will compensate for the interdigital web and hold the pad accurately in position, and the digit loop will not pass over a joint of the digit.

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A further feature of the invention resides in the provision of a surgical pad comprising a pair of spaced body portions connected by a neck or strap disposed diagonally between the body portions so that with the body portions superposed and secured together in face to face relationship the neck or strap forms a digit loop slantwise to the superposed body parts.

Another desideratum of the instant invention is the provision of a surgical pad highly desirable for use to protect a corn or callus on the outside of the fifth to and which comprises a pair of superposed body parts connected by a neck or strap forming a digit loop which slopes forwardly of the pad body.

It is also a feature of this invention to provide a surgical pad highly desirable for disposition between adjacent toes to alleviate soft corns or the like and wherein there are two superposed body portions connected by a neck disposed slantwise to the body parts, and the body parts themselves are shaped to accommodate the interdigital web.

Still another object of this invention is the provision of a surgical pad with a digit loop, comprising a pair of superposed body portions having a loop forming strap or neck extending diagonally therebetween from one end or side of one body part to the opposite end or side of the other body part, whereby the resultant loop is slantwise to the superposed body parts.

While some of the more salient features, characteristics and advantages of the instant invention have been above pointed out, others will become apparent from the following disclosures, taken in conjunction with the accompanying drawings, in which:

FIGURE 1 is a fragmentary pictorial or perspective view showing a surgical pad embodying principles of the instant invention in operative position on a human foot;

FIGURE 2 is a greatly enlarged inside plan view of a blank from which the pad is formed;

FIGURE 3 is a perspective view of the completed pad itself;

FIGURE 4 is a transverse sectional view through the body part of the pad taken substantially as indicated by the line IV—IV of FIGURE 3, looking in the direction of the arrows;

FIGURE 5 is a plan view of a blank for a pad of slightly different shape;

FIGURE 6 is a fragmentary view similar in character to FIGURE 1 showing a pad of modified structure but also embodying principles of the instant invention in operative position upon a human foot;

FIGURE 7 is a greatly enlarged inside plan view of the blank from which the pad of FIGURE 6 is made;

FIGURE 8 is a perspective view of the pad itself; and

FIGURE 9 is a transverse vertical sectional view through the body part of the pad taken substantially as indicated by the line IX—IX of FIGURE 8.

As shown on the drawings:

While pads embodying principles of the instant invention may be made of any material deemed suitable for a particular purpose, it is preferable to have the pad made of stretchable and elastic cushioning material. To this end, a satisfactory material for the pad is a laminated structure consisting of a relatively thick sheet of foam cushioning material such as foam latex, polyurethane foam, polyvinyl chloride foam, or a similar substance that is somewhat stretchable and elastic, and this sheet of foam material is preferably covered with a thin sheet or film of material having a smooth surface so as to permit the ready passage of wearing apparel over the applied pad. This smooth covering might well be a thin sheet of rubber of the type generally used for dental dams, this material having a relatively slick surface and also being elastic. For purposes of convenience, the various forms of the

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pad illustrated have been shown made of the same material, namely a laminated structure as above mentioned.

Blanks for forming the pads may readily be die stamped or equivalently cut from stock sheets. In FIGURE 2 there is illustrated a blank from which the pad seen in FIGURES 1, 3 and 4 is completed. This blank comprises a pair of body parts 1 and 2 either or both of which may be provided with an affliction receiving aperture as indicated at 3 and 4 respectively, if so desired. The body parts may have any desired shape, and in the illustrated instance they are shown as round. These body parts are connected by an integral neck or strap 5 which extends diagonally between the body parts. That is, the strap connects adjacent one end of the diameter of the body part 2, but adjacent the opposite end of a parallel diameter on the body part 1. When the blank is folded, so that the outside face of one body part is brought into superposition with the inside face of the other body part and they are secured together in face to face relationship as seen in FIGURE 3, by means of a flexible adhesive as indicated at 6 in FIGURE 4, or in any other suitable manner, the strap 5 forms a toe loop which is disposed at an inclination to the superposed body parts, that is, substantially diagonally there across as is apparent from the showing in FIGURES 1 and 3.

In FIGURE 1 I have illustrated the application of the pad just above described to a corn on the outside of the fifth toe 7 of a human foot 8. The area where such a corn is usually located or develops is the joint forming the articulation of the proximal and medial phalanges. This joint lies opposite the interdigital web between the fifth and fourth toes. As stated above, that web slants upwardly and rearwardly so that the portion thereof adjacent the plantar surface of the foot is further forward than the portion adjacent the dorsal surface of the foot. Thus, the web actually extends even with or further forwardly than the joint where a corn most frequently occurs, substantially to the point 7a.

However, when a pad embodying principles of the instant invention is stretched over the fifth toe, so that the double thickness pad body overlies the corn, which may be received within the affliction receiving apertures, the forward and slantwise loop 5 will neatly embrace the toe, gripping the same with sufficient force to hold the pad properly in position, and the loop will be anterior of the interdigital web. With this structure, the body part of the pad may be disposed in proper proximity to the affliction, and the interdigital web offers no restriction to the positioning of the digit loop. Accordingly, the pad may be applied comfortably, with no aggravation caused by an attempt to force the pad loop into the interdigital web as would be the case with a pad formed from a perfect dumbbell blank, but the pad fits the situation much better, the possibility of displacement is substantially nullified, provides a single thickness around the toe and a double thickness adjacent the affliction, and there are no seams or stiffer portion of the structure that can possibly contact the flesh of the user. Only the soft interior face of the pad contacts the flesh. The pad is simple in construction, economical to manufacture, may be laundered at will, readily removed and replaced, and is extremely durable.

In FIGURE 5 I have illustrated a blank from which a pad is formed in the manner above described, for the purpose of indicating that the body parts of the blank may be of substantially any desirable shape. In this instance the blank comprises body parts 9 and 10 which are substantially oval in shape and each may be provided with an affliction receiving opening, if the same is desired, and of any desirable size, as indicated at 11 and 12 respectively. The body portions have their respective long axes parallel and are connected by an obliquely extending neck or strap 13 ultimately forming the digit loop. The loop 13 will extend slantwise forwardly of the superposed body parts in the same manner as the loop 5 previ-

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ously described. This is because this strap or loop 13 connects with the body part 9 at one end of the longer axis, and with the body part 10 adjacent the opposite end of the longer axis.

From the foregoing it will be noted that the pad body may have any suitable shape for a particular affliction, such as a tailor's bunion, whereupon the body parts would be longer than those illustrated. It should likewise be understood that the body portions need not of necessity be of the same size, the affliction receiving openings need not be of the same size, and there need be no openings or an opening may be provided in only one body part, as may be deemed most desirable for a particular affliction.

The modification of the instant invention illustrated in FIGURES 6 to 9 inclusive is a pad of a character highly desirable for disposition between adjacent digits, and is quite effective for the alleviation of soft corns occurring between toes. Usually such soft corns will be in the vicinity of the articulation between the proximal and medial phalanges, and it is therefore desirable to have the body part of the pad accommodate the interdigital web.

In this instance, the pad is made from a blank shown in FIGURE 7 which comprises a pair of substantially crescent shaped body parts 14 and 15 having affliction receiving openings therein if desired as indicated at 16 and 17 respectively. It is not essential that the body parts be shaped precisely as shown, but it is highly desirable to have a relatively deep notch as indicated at 18 in one end of each body part. These body parts are connected by a neck or strap 19 which extends from the inner apex on the notched side of the body part 15 to the opposite end or rounded side of the body part 14.

When the blank is folded as above described to bring the body parts 14 and 15 into superposed face to face relationship where they may be secured together by a stretchable adhesive indicated at 20 in FIGURE 9 or in any other suitable manner, the strap 19 will form a digit loop which, in this instance, is slantwise to the composite pad body but extends toward the body notch 18.

In FIGURE 6 I have illustrated the pad just described mounted on a toe 21 of a human foot 22 so as to alleviate a soft corn on the side of the toe 21 or confronting soft corns one on that toe and one on the adjacent toe. It will be noted that the pad body may be disposed in proper position to relieve a soft corn adjacent the joint between the proximal and medial phalanges of the toe, the notch 18 receiving therein the interdigital web so that the pad may be disposed sufficiently rearwardly for its purpose. It will further be noted that the digit loop or strap 19 slopes rearwardly of the foot and engages the toe behind the joint between the proximal and medial phalanges so that there is no strap portion extending over the lateral side of the joint to add more bulk in that location. This same pad might be mounted on the fifth toe so as to alleviate a soft corn or two between the fifth and fourth toes, and again the strap would engage around the fifth toe to the rear of the joint between the proximal and medial phalanges and actually relieve that joint from shoe pressure and friction.

From the foregoing it is apparent that I have provided a surgical pad with a digit loop that is simple in construction, embodies no seams to come in contact with the flesh, which may be engaged around a digit with the pad positioned in the proper location and the pad is held in proper position notwithstanding the proximity of an interdigital web.

It will be understood that modifications and variations may be effected without departing from the scope of the novel concepts of the present invention.

I claim as my invention:

1. A digit embracing surgical pad structure comprising a pair of body parts each having a rounded end and a notched end, and a strap connecting said body parts

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between a corner of the notch on one body part and the rounded end of the other body part, said body parts being adapted to be superposed and secured together.

2. A digit embracing surgical pad structure comprising a pair of body parts each having an axis parallel to the other, and a strap connecting said body parts adjacent opposite ends of said parallel axes, said body parts being adapted to be secured together in superposed relationship with said strap forming a substantially diagonally disposed digit loop.

3. A digit embracing surgical pad structure comprising a pair of body parts and digit embracing means extending diagonally between said body parts and connecting the same and means for securing, said body parts together in superposed relation.

4. A surgical pad having a digit loop, comprising a pair of body parts secured together in face to face relationship, and an elongated strap connected to one side of one body part and to the opposite side of the other body part, said strap providing a digit loop extending substantially diagonally across the body parts.

5. A blank for forming a surgical pad having superposed body parts secured together and a digit loop, said blank comprising a pair of body parts, and a strap ex-

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tending diagonally between said body parts and connecting opposite points of the body parts.

6. A digit embracing surgical pad, comprising a pair of superposed body parts secured together in face to face relationship, and a strap forming a digit loop with one end connected to a point on one body part and the other end connected to an opposite point on the other body part, said loop extending generally diagonally over the secured body parts.

7. A surgical pad having a digit loop, comprising a pair of similar body parts superposed and secured together in face to face relationship, and a strap forming a digit loop with one end connected to a point on one body part and to a dissimilar point on the other body part, so that the strap extends substantially diagonally across the secured body parts.

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