June 16, 1953 A. L. SCHULTZ 2,641,761

KNEE BRACE OR STABILIZER

Filed April 6, 1951

Fig. 1.

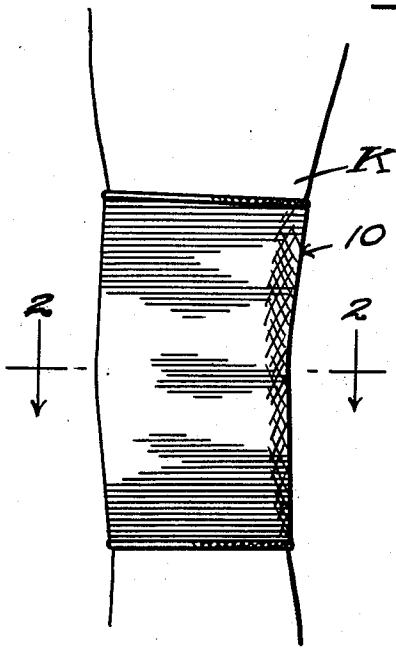


Fig. 2.

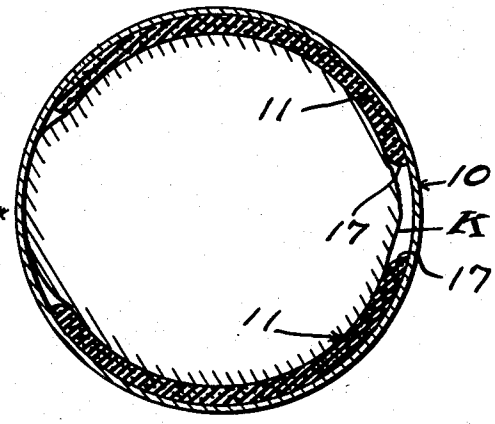


Fig. 3.

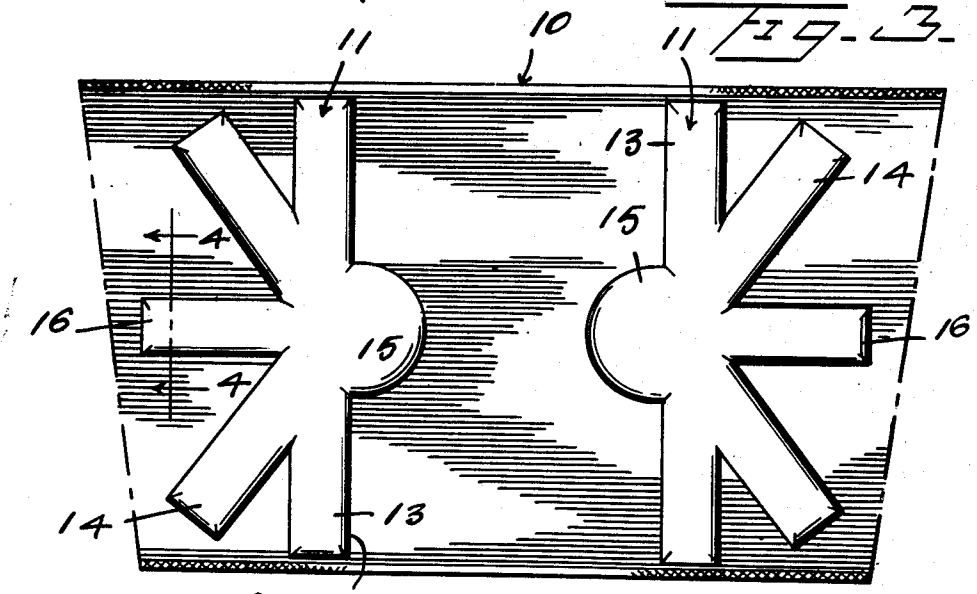
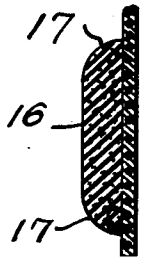


Fig. 4.



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KNEE BRACE OR STABILIZER

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4 Claims. (Cl. 2—24)

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This invention relates to a knee brace or support.

An object of this invention is to provide in an elastic sleeve or bandage adapted to engage about a knee, means fixed within the sleeve or bandage adapted to localize support and stability so as to aid in healing sprains, strains, torn muscles, tendons and ligaments, and to prevent a re-occurrence of such injuries.

Another object of this invention is to provide a knee supporter which will not interfere with the normal movement of the limbs and will support an unstable knee resulting from injuries and damage to the semi-lunar cartilages.

A further object of this invention is to provide a knee supporter which can be readily applied or removed.

With the above and other objects in view, my invention consists in the arrangement, combination and details of construction disclosed in the drawings and specification, and then more particularly pointed out in the appended claims.

In the drawings:

Figure 1 is a detailed side elevation of a new supporter constructed according to an embodiment of this invention.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a plan view laid out flat on the inner side of the supporter.

Figure 4 is a fragmentary sectional view taken on the line 4—4 of Figure 3.

Refering to the drawing the numeral 10 designates generally an elastic sleeve which is adapted to be disposed in encasing position about a knee K. The sleeve 10 is of such length as to extend above and below the knee joint, and the sleeve 10 has disposed therein a pair of confronting resilent or cushioned supporting members generally designated as 11.

The supporting members 11 are of substantially K shape, and each embodies an elongated longitudinal or vertical bar 13 extending substantially the full length of the sleeve 10, and the bar 13 has projecting from one edge thereof a pair of rearwardly divergent bars 14. The bar 13 has extending from the opposite or forward edge thereof an arcuate projection 15 which is disposed substantially midway between the ends of the bar 13.

A rearwardly projecting or lateral bar 16 projects right angularly from the edge of bar 13 opposite from arcuate projection 15 and projects from the inner angle formed by the divergent bars 14.

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The outer edges of the several bars including the projection 15 are rounded off as indicated at 17 so that the edges of the cushion members 11 will not cut or bind the skin of the wearer. Each of the cushion members 11 is preferably formed of sponge rubber or other inherently resilent material which will localize the pressure applied to the limb by the elastic sleeve 10. The arcuate projection 15 and the rearward projection 16 will normally be disposed at substantially the joint between the leg members and the divergent bars 13 and 14 projecting from opposite sides of the horizontal or lateral bar 16 are adapted to exert additional pressure on the ligaments and muscles and tendons disposed above and below the knee joint. Such arcuate projection 15 and the rearward projection 16 and the divergent bars 13 and 14 act as splints for the purpose of protecting and supporting specific muscles, ligaments and tendons involved in the knee joint and adjacent thereto.

The arcuate projection 15 is designed to apply localized pressure on the sides of the knee. This knee supporter is designed for the purpose of effecting an improved support for injured knees including strains, sprains, or other injuries to the knee of the individual.

While the brace or stabilizer is shown as being secured to the inside of an elastic sleeve with two braces disposed in opposed relation, it will be understood that in certain cases these K-shaped cushion members may be used independently of the elastic sleeve, by being taped or otherwise secured in desired position, and then wrapped or supported with an ordinary elastic bandage, or other means; and where the bracing effect is to be applied on only one side of the knee, only one of the K-shaped cushion members may be used.

What is claimed is:

1. A knee support comprising an elastic sleeve, and a pair of cushioned supporting members fixed in said sleeve in opposed relation, each member being formed of an elongated longitudinally disposed bar, and a pair of divergent bars extending from said first named bar, and a laterally projecting bar extending right angularly from said first-mentioned bar between said divergent bars.

2. A knee support comprising an elastic sleeve, and a pair of cushioned supporting members fixed in said sleeve in opposed relation, each member being formed of an elongated longitudinally disposed bar, a pair of divergent bars extending from one edge of said first named bar, and an arcuate projection extending from the opposite edge of

said first named bar at a point substantially midway of the length of the latter.

3. A knee support comprising an elastic sleeve, and a pair of cushioned supporting members fixed in said sleeve in opposed relation, each member being formed of an elongated longitudinally disposed bar, a pair of divergent bars extending from one edge of said first named bar, an arcuate projection extending from the opposite edge of said first named bar at a point substantially midway of the length of the latter, and a laterally projecting bar extending right angularly from said first named bar oppositely from said arcuate projection.

4. A knee support comprising a pair of cushioned supporting members in opposed relation, each member being formed of an elongated longitudinally disposed bar, a pair of divergent bars extending from one edge of said first-named bar, an arcuate projection extending from the opposite edge of said first-named bar at a point substantially midway of the length of the latter, and a laterally projecting bar extending right angularly from said first-named bar oppositely from said arcuate projection, and means for securing said supporting members on opposite sides of the knee.

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