

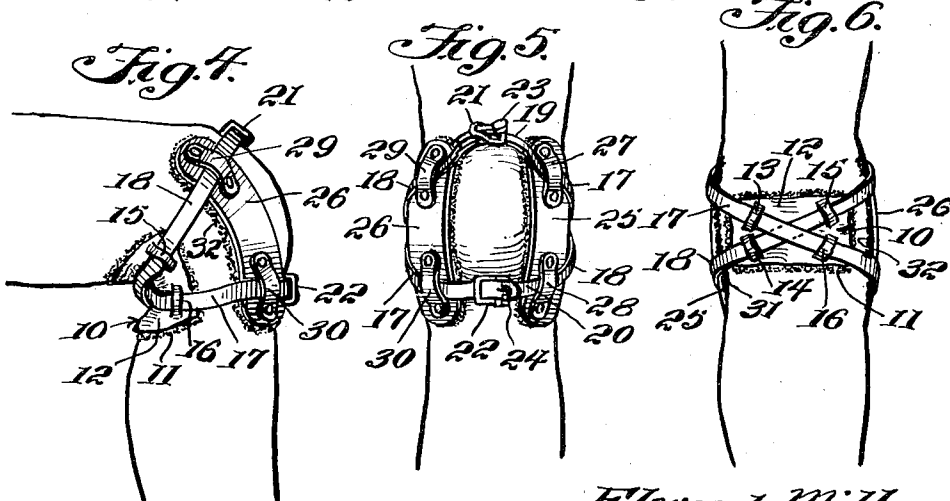
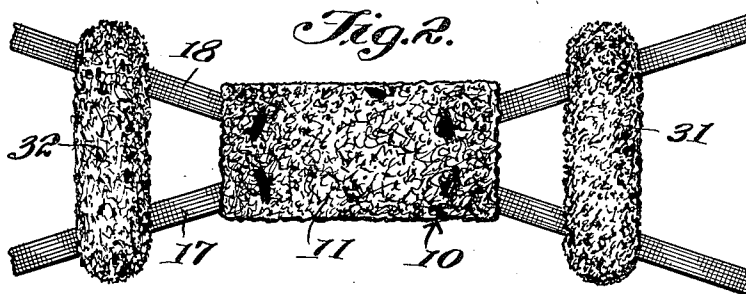
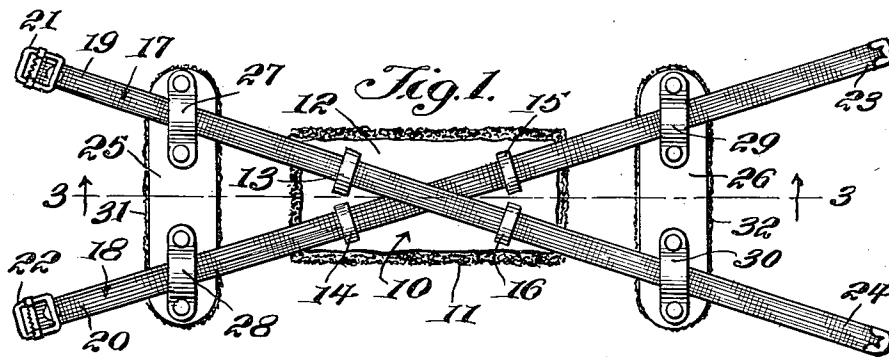
Jan. 20, 1942.

E. MILLER

2,270,685

KNEE BRACE

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WITNESS

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2,270,685

KNEE BRACE

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Application November 20, 1939, Serial No. 305,347

1 Claim. (Cl. 2—24)

My invention relates to new and useful improvements in knee braces.

An important object of my invention is the provision of a knee brace that will permit a free bending movement of the leg at the knee joint and that will substantially support and sustain an injured knee during violent physical activity.

Another object of my invention is to provide a knee brace that is adjustable to exert pressure at either side of the knee thus affording support for a person suffering from a floating cartilage at the knee joint.

Still another object of my invention is the provision of a knee brace that is constructed in a manner to permit the same to snugly fit the knee joint.

Yet another object of my invention is the provision of a knee brace wherein all parts contacting the leg of the wearer are padded to prevent the same from rubbing or chafing the skin.

A further object of my invention is to provide a knee brace that is simple in construction, inexpensive to manufacture and efficient and efficacious in the performance of its duties.

Other objects and advantages of my invention will be apparent during the course of the following description.

In the drawing, forming a part of this specification, and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a rear elevation of a device embodying my invention, and showing the same in an extended position,

Figure 2 is a front elevation of the same,

Figure 3 is a transverse sectional view, taken on the line 3—3 of Figure 1,

Figure 4 is a side elevation of my device as applied to an injured knee,

Figure 5 is a front elevation of the same, and

Figure 6 is a rear elevation thereof.

In the accompanying drawing, wherein for the purpose of illustration, is shown a preferred embodiment of my invention, the numeral 10 designates a substantially rectangular pad the inner face of which is provided with a suitably soft material 11, such as sheep skin, sponge rubber, or the like. The back surface 12 of the pad is provided with diametrically opposed loops 13, 14 and 15. An elastic band 17 is positioned diagonally of the pad 10 and is received by the loops 13 and 16, and the elastic band 18 is positioned diagonally of the pad athwart the band 17 and is received by the loops 14 and 15. The ends 19 and 20 of the bands 17 and 18 are provided with buckles 21, and 22, respectively. As

shown in Figure 1, the buckles 21 and 22 are each positioned at the same side of the pad 10 so that the end 23 of the band 18 may be connected to the buckle 21 of the strap 17, and the end 24 of the strap 17 may be connected to the buckle 22 of the strap 18.

The rigid support members 25 and 26 are formed with elongated backing strips, preferably of sole leather or other substantially stiff and unyielding material, are provided adjacent the ends thereof with loops 27, 28 and 29, 30, respectively, which slidably receive the bands 17 and 18, and the inner faces thereof are provided with a soft padding material 31 and 32 to prevent the same from rubbing or chafing the leg of the wearer.

The bands 17 and 18 are of sufficient length to encompass the leg above and below the knee as illustrated in Figures 4, 5 and 6. The pad 10 is positioned at the back of the knee joint and is sufficiently pliant to permit the same to have a snug and intimate contact therewith. The bands 17 and 18 extend around the leg to position the support members 25 and 26 at opposite sides of the knee cap of the wearer. The buckles 21 and 22 are normally positioned intermediate the members 25 and 26 at the front of the leg and the free ends 23 and 24 of the bands engage the buckles 21 and 22, respectively, to hold the pads and support members securely in position. The bands will resiliently hold the support members firmly pressed against the leg at either side of the knee and are connected above and below the knee to effectively and efficaciously brace and support the same. The crisscross positioning of the bands will cause the upper band to press downwardly on the knee cap and the lower band to press upwardly to substantially aid the members 25 and 26 in supporting the same. The loops 27 and 28 on the member 25 and the loops 29 and 30 on the member 26 permit the same to be adjusted relative to the knee and placed in any position necessary to give the maximum support where it is most needed. The device is particularly adapted to be applied to a person who has sustained a wrenched knee or is suffering from a floating cartilage, and in either event the apparatus, when applied to the knee in the manner hereinbefore described, will be effective to aid in the proper use of the injured member.

The bands 17 and 18 are here described as being elastic in their nature, however, it is not necessary that the bands be either resilient or elastic; entirely satisfactory results are obtained

by using inextensible straps inasmuch as the same may be tightly drawn around the leg of the wearer by means of the buckles 21 and 22.

It is to be understood that the form of my invention, herewith shown and described, is to be taken as a preferred example of the same and that various changes in the size, shape and arrangement of parts may be resorted to without departing from the spirit of my invention, or the scope of the appended claim.

Having thus described my invention, I claim:

A knee brace comprising a pair of elongated, substantially rigid support members adapted to be positioned at opposite sides of the knee, a flexible pad positioned at the back of the knee, a band positioned diagonally of the said pad and with the ends extending to encompass the knee, a band positioned athwart the first-mentioned

band and with the ends extending to encompass the knee in a manner whereby the upper end of the second-mentioned band may be secured to the upper end of the first-mentioned band, and the lower end of the second-mentioned band may be secured to the lower end of the first-mentioned band, the arrangement being such that association of the straps in the above manner will permit the pads to be shifted along the straps to positions at opposite sides of the knee cap and dispose the straps above and below the knee cap with the resultant effect that the adjacent edges of the pads will press against the opposite vertical sides of the knee cap and the said straps will bear against the horizontal edges of the knee cap to efficaciously prevent the said knee cap from shifting in any direction.

ELWOOD MILLER.