

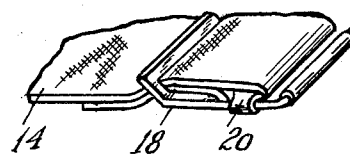
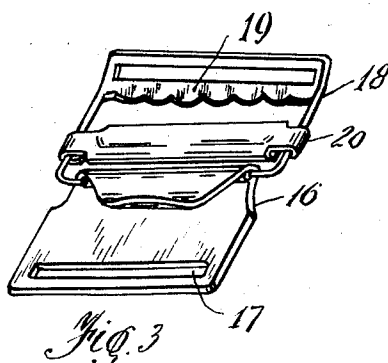
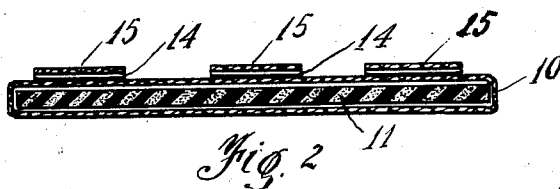
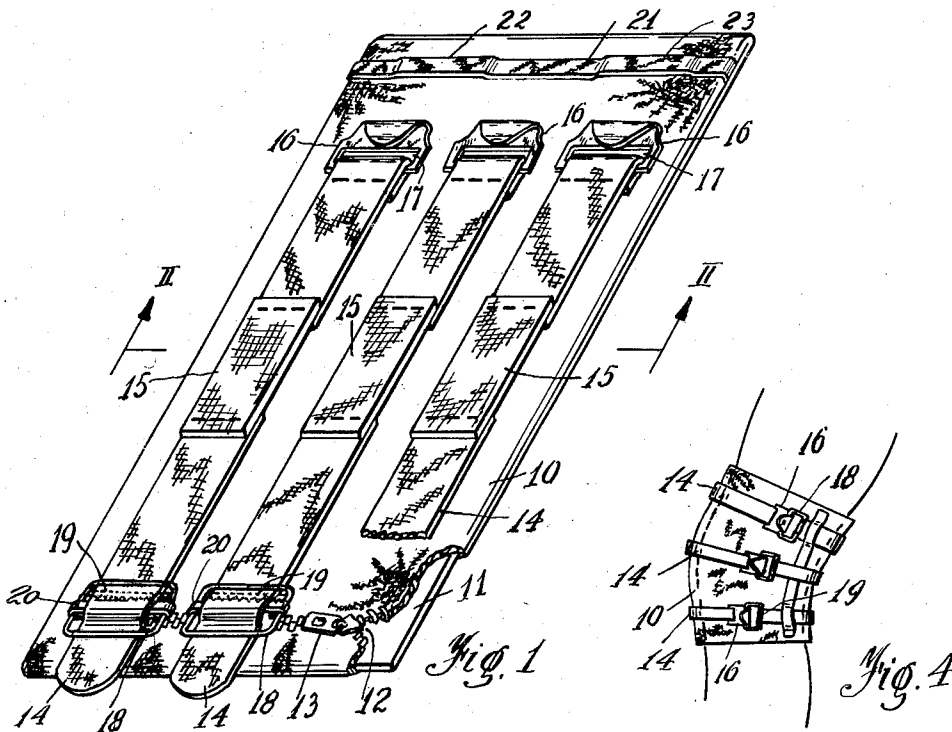
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2,858,540

LIMB AND KNEE PROTECTOR

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1

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## LIMB AND KNEE PROTECTOR

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2 Claims. (Cl. 2—24)

This invention relates to joint protectors and particularly to a joint protector for the knee of persons which protects the entire joint.

Many types of joint protectors have been heretofore proposed. They have, however not been completely satisfactory for various reasons. Generally, they are not sufficiently resilient to permit surrounding the entire joint and as a result protect only a small portion of the joint area. Again there has been no completely satisfactory method of fixing the protector pads to the knee joint.

The present invention overcomes these difficulties and provides a simple, economical and effective knee joint protector pad.

It is accordingly an object of the present invention to provide a limb and knee joint protector pad capable of properly surrounding the entire joint to be protected with a resilient shield.

It is another object of this invention to provide a protector pad having spaced resilient fastening means encircling the limb and pad.

A further object of the invention is to provide an inner removable resilient pad within an outer and separate resilient cover therefor.

Another object of the invention is to provide a knee pad with spaced resilient fastening means which are quickly released from the limb.

Other objects, advantages and purposes of this invention will be apparent from a consideration of the following description of a specific embodiment of this invention and the accompanying drawings in which:

Figure 1 is an isometric view of the exterior of the pad of this invention.

Figure 2 is a section on the line II—II of Figure 1.

Figure 3 is an enlarged isometric view of the connector forming a part of the pad shown in Figure 1.

Figure 4 is a side elevation of the pad of this invention in place on a knee joint.

Figure 5 shows method of attachment of band to loop member, with parts broken away.

Referring to the drawings there is illustrated an elongated hollow fabric cover 10 having a pocket therein adapted to receive a similarly shaped foam rubber pad 11 through an access opening 12 adjacent one end. Preferably the access opening 12 is provided with a slide fastener 13 of conventional design. Three fabric bands 14 are spaced apart and extend longitudinally on the cover 10. Each band 14 has a section removed intermediate its ends and replaced by a rubber or similar resilient member 15. One end of each band 14 is provided with a wide hook shaped member 16 formed from flat metal stock and having a rectangular opening 17 through which the end of the band 14 is passed and fastened to itself. The opposite end of each band 14 is provided with an adjustably positioned loop member 18. Each such loop 18 has an irregular or serrated edge

2

19 and a sliding locking member 20 between which the end of the band 14 is slidably engaged. A hold-down member 21 extends along one edge and is provided with hold-down loops 22 and 23 engaging the outer of the fabric bands 14 to hold the ends of the bands 14 and the ends of the pad 10 in proper alignment.

The protector of the invention is used as follows. The foam rubber pad 11 is inserted through the access opening 12 and the slide fastener 13 is closed after which the pad is wrapped about the joint to be protected. Each of the outer bands 14 are passed through the hold down loops 22 and 23 and through between the serrated edge 19 and the sliding locking member 20 and adjusted to fit the limb of the wearer. The loop member 18 is then hooked over the hook shaped member 16 on the opposite end of the band. The intermediate or center band 14 passes over the hold down member 21 and is fastened by a loop member 18 to a hook shaped member 16. When the joint (knee) of the wearer is bent, the outer cover 10 and inner pad 11 follow the contour of the joint. At the same time the intermediate section 15 of the bands 14 stretches around the limb and holds the pad firmly in place with complete protection around the entire joint.

While a preferred embodiment of this invention has been illustrated and described, it will be understood that the invention may be otherwise embodied within the scope of the following claims.

I claim:

1. A knee protector pad for supporting an injured knee joint comprising a resilient outer cover containing a thin uniform resilient pad therein; said outer cover and said pad possessing sufficient resiliency, so that when applied to a joint, they will cooperatively stretch and resiliently follow the contour of the injured joint, and thus provide a combination of support and freedom of movement while permitting the joint to be bent; a plurality of bands having a resilient central section positioned on said cover, at least one of said bands being positioned on said cover so as to lie above, and at least one of said bands being positioned so as to lie below the injured joint, hook means on one end of said bands and quickly adjustable loop means on the other end of said bands; and said quickly adjustable loop means cooperating with said resilient central section, whereby the amount of supporting tension within the resilient central section and imparted to the supporting protector pad, may be quickly adjusted after the protector pad has been positioned over the injured knee and the ends of the bands have been hooked together.

2. A limb and knee joint protector capable of properly surrounding the entire joint to be protected with a resilient shield comprising, an elongated hollow resilient cover having a pocket therein, said pocket having an opening at one end of said cover, said pocket extending the full length and width of said cover, a uniform foam rubber pad within said pocket, said pad extending the full length and width of said pocket, closing means to positively close and lock the opening of said pocket and for opening the same, three fabric bands spaced transversely apart on and extending longitudinally of said cover, each said fabric band having a resilient central section intermediate its ends; said bands being positioned on said cover, so that at least one band will lie above and at least one band will lie below said joint; and hook means on one end of each said band and easily adjustable loop means on the other end of each said band, whereby said bands, while holding the shield over the joint to be protected, can be easily hooked together and quickly adjusted to provide a firm supporting fit, said

3

loop means comprising a rectangular-shaped continuous ring member having a rounded forward eye edge, an irregular serrated backward edge and two parallel side edges connecting said forward and backward edges; a locking member slidably positioned on said parallel side edges for movement between said forward and backward edges, a flanged portion extending backwardly and upwardly from said backward edge, said upwardly extending flanged portion being provided with a longitudinal slit parallel to said locking member and to said forward and backward edges; and a band passed through said slit over said backward edge and said locking member, down between said locking member and said forward edge, back under said locking member and up between said locking member and said irregular serrated backward edge, over said backward edge, and back through said

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slit, to provide a loop member which is locked on the band when under tension and is easily adjustable on the band when tension is removed.

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