Nov. 14, 1939. L. M. SPEARS 2,179,903

KNEE JOINT PROTECTOR

Filed July 19, 1938 2 Sheets-Sheet 1

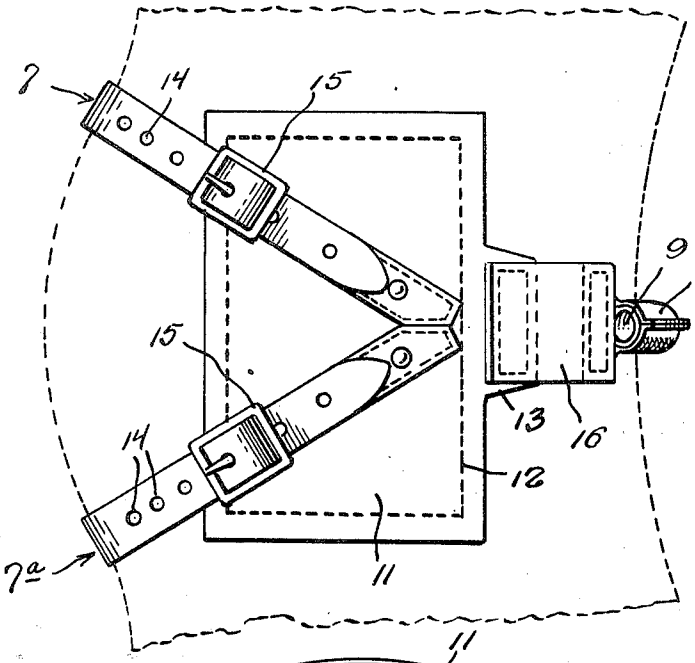


Fig. 1.

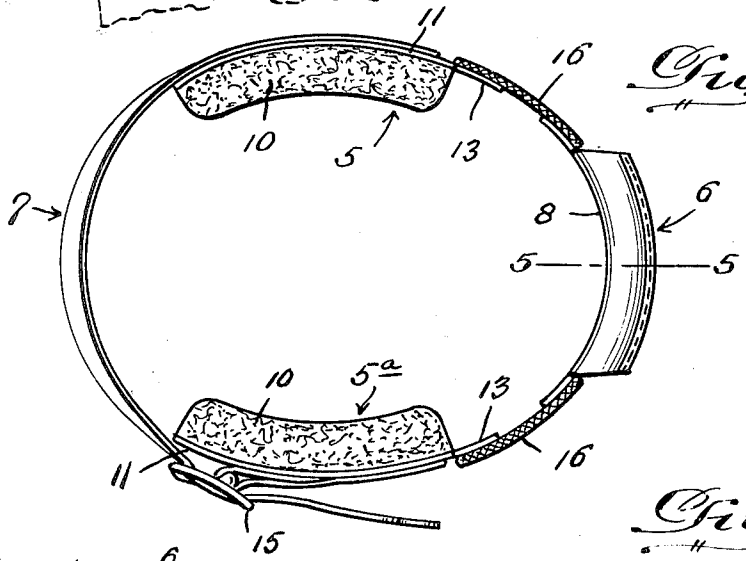


Fig. 2.

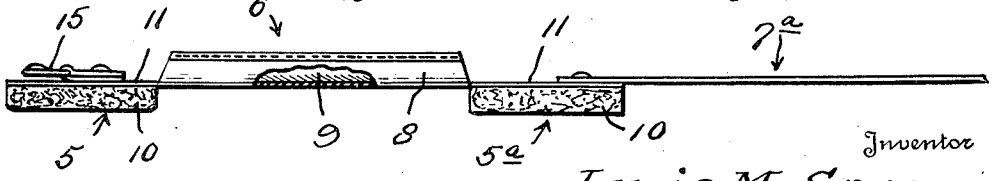


Fig. 3.

Inventor

Lewis M. Spears,

By J. Stanley Burch

Attorney

Nov. 14, 1939. L. M. SPEARS 2,179,903

KNEE JOINT PROTECTOR

Filed July 19, 1938 2 Sheets-Sheet 2

Fig. 3.

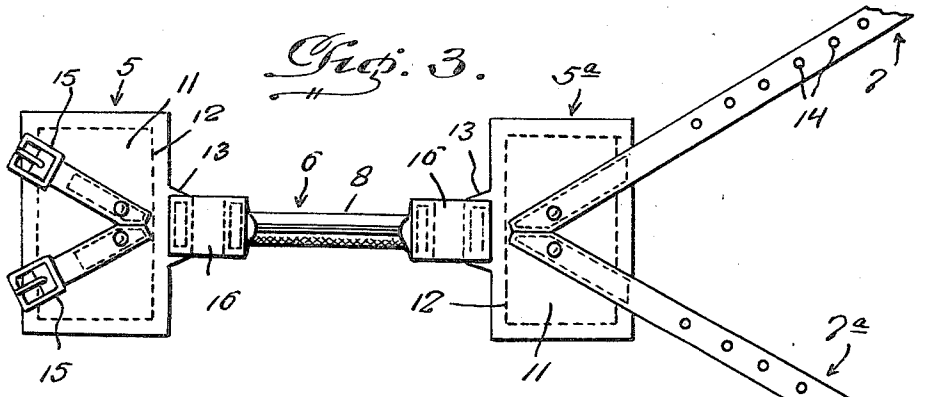


Fig. 4.

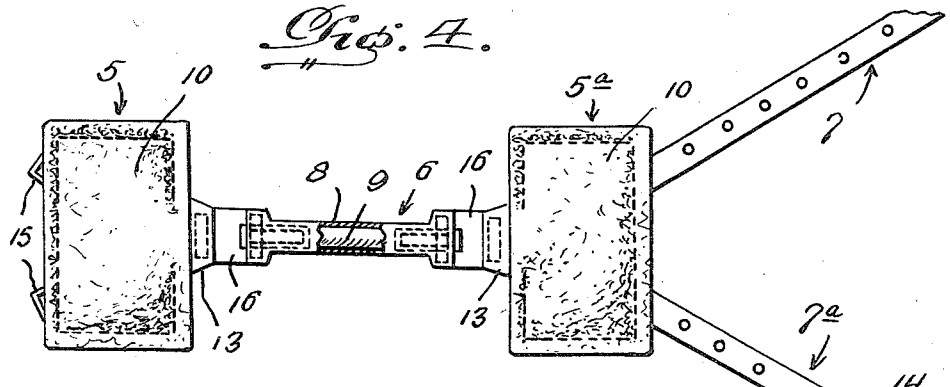


Fig. 6.

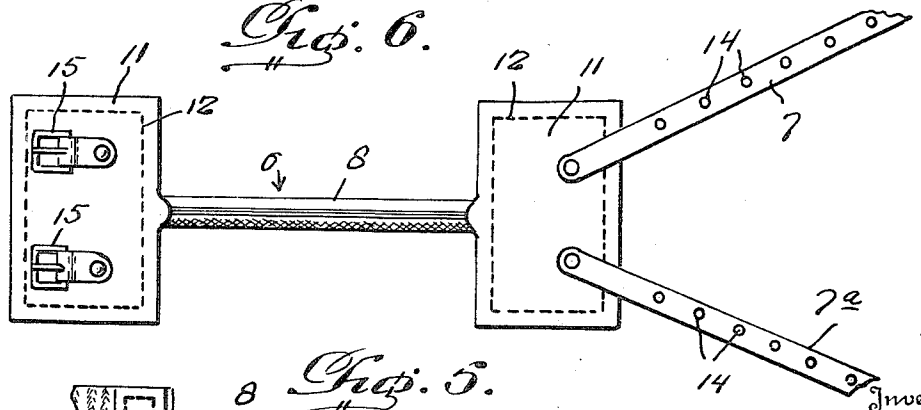
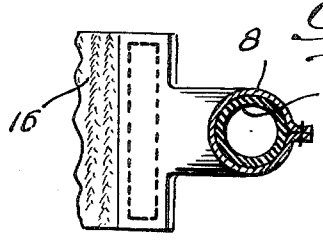


Fig. 5.



Inventor

Lewis M. Spears,

By J. Stanley Burch

Attorney

Patented Nov. 14, 1939 2,179,903

UNITED STATES PATENT OFFICE

2,179,903

KNEE JOINT PROTECTOR

Lewis M. Spears, Lubbock, Tex.

Application July 19, 1938, Serial No. 220,059

3 Claims. (Cl. 2—24)

This invention relates to a new and useful protector especially designed for use by athletes and including protecting pads arranged to engage opposite sides of the leg at the knee joint and protect the wearer against injuries to the cartilage in the knee.

An object of the present invention is to provide a protector of the above kind which is highly efficient in use, simple and durable in construction, capable of being worn without discomfort, and capable of being readily applied and secured in proper position upon the leg of the wearer.

The present invention consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings and claimed.

In the drawings:

Figure 1 is a side elevational view of a knee joint protector as it appears in use upon the leg of the wearer.

Figure 2 is a top plan view thereof.

Figure 3 is an outer elevational view of the protector of Figure 1 in straight or flat condition.

Figure 4 is an inner elevational view of the device as shown in Figure 3.

Figure 5 is a section on line 5—5 of Figure 2.

Figure 6 is a view similar to Figure 3 of a modified form of the invention; and

Figure 7 is a top plan view of the device as shown in Figure 6, partly broken away and in section.

Referring in detail to the drawings, the present knee joint protector broadly includes two knee joint pads 5 and 5*a* adapted to engage the leg of the wearer at opposite sides of the knee joint and connected by a strap 6 arranged to pass around the back of the leg in line with the knee joint to retain the pad in this position or against forward shifting materially from such position, suitable means being provided for securing the connected pads in place upon the leg of the wearer such as diverging straps 7 and 7*a* attached to one of the pads and adjustably connected with the other so as to snugly pass about the front of the leg above and below the knee cap, respectively. Thus constructed, the device is composed of a minimum number of parts and may be readily donned or taken off, as well as causing no discomfort and interfering in no way with bending of the leg at the knee joint when applied. The strap 6 includes a tubular leather member 8 having a hollow rubber or other resilient tube 9 snugly fitted and retained therein so that the strap member 8 is given sufficient body and rounded shape as to not cut into the leg of the wearer or otherwise cause discomfort.

Each of the pads 5 and 5*a* preferably consist of a sheet of molded sponge rubber 10 applied and secured to a strong flexible leather backing 11, attachment being effected by stitching 12 or other suitable means. The backing 11 of the pads are provided with rearward extensions 13 to which the ends of strap member 6 are connected, and the securing straps 7 and 7*a* are each composed of two sections one of which is attached to one of the pads 5 and provided at its free end with a series of apertures 14, and the other of which is attached to the pad 5*a* and equipped with a buckle 15 arranged to cooperate with the apertures 14 to permit adjustment of said straps 7 and 7*a* for properly securing the device upon the leg of the wearer.

As shown in Figures 6 and 7, the strap member 6 may have its leather part 8 directly attached at its ends to the extensions 13 of the backings 11 of the pads, or short elastic strap sections of elastic webbing or the like may be interposed as at 16 between the ends of the strap member 8 and the extensions 13 of the backings 11 to permit sufficient yielding as to avoid any interference to free movement of the leg involving bending at the knee joint. Otherwise, the construction of both forms of the invention illustrated is alike, and similar parts are indicated by corresponding reference characters in all of the views.

In applying the device to the leg, the strap member 6 is passed about the back of the leg at the knee joint and the pads 5 and 5*a* are brought against the leg at opposite sides of the knee joint. The straps 7 and 7*a* are then brought around the front of the leg above and below the knee cap and adjusted by engagement of the tongues of the buckles 15 in the openings 14 of the associated fastening strap members. The pads are thus effectively secured in place against the leg at opposite sides of the knee joint and will effectively protect the wearer against injury to the cartilage in the knee. It will be apparent that the device is extremely efficient, compact and durable, providing a valuable device of the kind in question which may be sold at a nominal price. While the devive is illustrated in its simplest aspects, it is to be understood that the invention is susceptible of modifications and changes in the specific details illustrated and described, without departing from the spirit and scope of the invention as claimed.

What I claim as new is:

1. A knee joint protector comprising two resilient pads adapted to respectively engage op-

posite sides of the leg at the knee joint, a strap member connecting said pads and arranged to pass around the back of the leg at the knee joint and retain the pads against forward shifting from proper position at opposite sides of the knee joint, and diverging adjustable strap members for connecting the pads arranged to pass around the front of the leg above and below the knee cap for securing the device upon the wearer.

2. A knee joint protector comprising two resilient pads adapted to respectively engage opposite sides of the leg at the knee joint, a strap member connecting said pads and arranged to pass around the back of the leg at the knee joint and retain the pads against forward shifting from proper position at opposite sides of the knee joint, diverging adjustable strap members for connecting the pads arranged to pass around the front of the leg above and below the knee cap for securing the device upon the wearer, said pads comprising leather backings and resilient pad members secured to the inner faces thereof, and short elastic strap sections connecting the rear edges of said backings with the ends of said first-named strap member.

3. A knee joint protector comprising two resilient pads adapted to respectively engage opposite sides of the leg at the knee joint, a strap member connecting said pads and arranged to pass around the back of the leg at the knee joint and retain the pads against forward shifting from proper position at opposite sides of the knee joint, and diverging adjustable strap members for connecting the pads arranged to pass around the front of the leg above and below the knee cap for securing the device upon the wearer, said first-named strap member comprising a tubular leather member and a tubular resilient member arranged therein to retain the same in expanded tubular form for comfortable engagement with the leg of the wearer.

LEWIS M. SPEARS.