Nov. 3, 1931. C. E. DORAIS 1,830,351

ATHLETIC GARMENT

Filed June 27, 1929

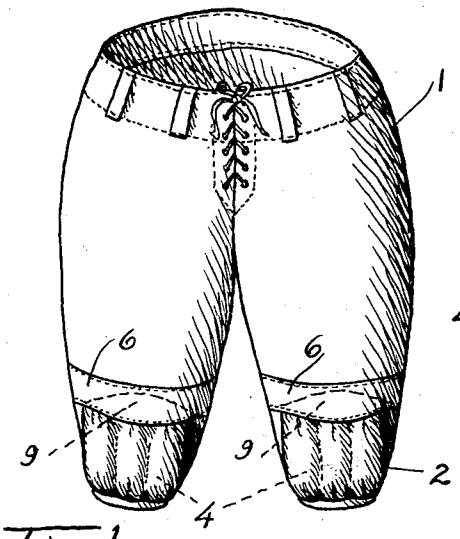


Fig. 1

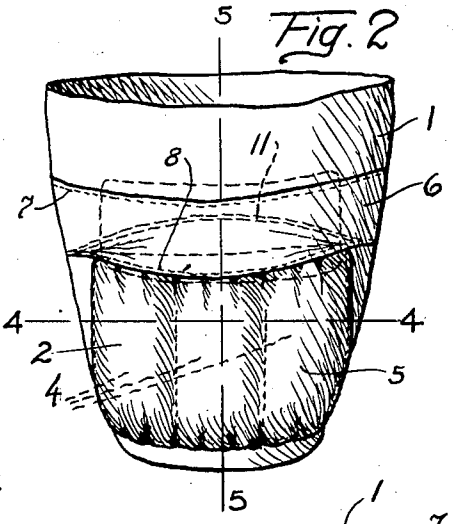


Fig. 2

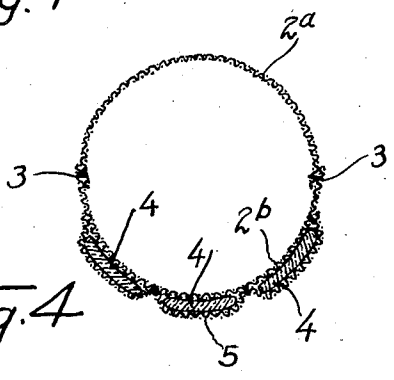


Fig. 4

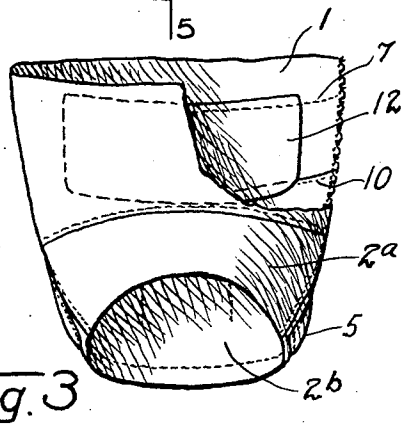


Fig. 3

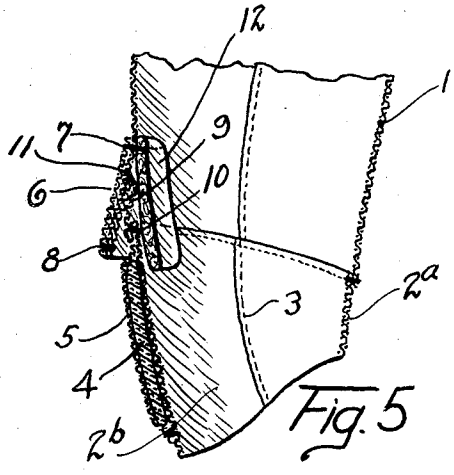


Fig. 5

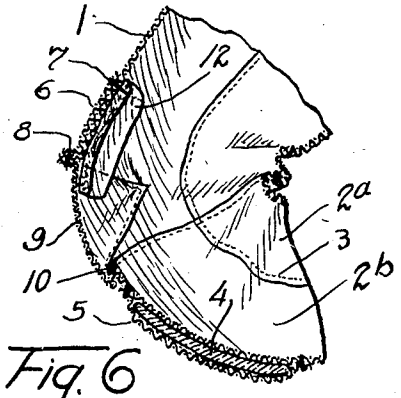


Fig. 6

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UNITED STATES PATENT OFFICE

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ATHLETIC GARMENT

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This invention relates to an athletic garment, and it has to do especially with the construction of a garment at a place in close proximity to a joint of a wearer, such as a knee or elbow.

The invention aims to provide, in an athletic garment, a construction which will give freedom of movement of the knee or other joint of the wearer, but in which the construction is such as to nicely fit the wearer at all times. In other words, the construction gives freedom of movement for the bending of the knee or other joint, but when the joint is straight, the garment is not unduly loose or baggy, but in contrast thereto, nicely fits the wearer. This is accomplished by providing a construction which involves an excess of material which is arranged to be folded up, and more or less concealed in one position, but which comes into play in another position of the knee. Furthermore, the invention provides for a nicety of fit in a padding or protector, adjacent the knee, in that this protector can be made so as to grip the leg of the wearer snugly and is not required to be shifted due to drawing of the material in the garment upon the bending of the knee. Still further, the invention contemplates the provision of a novel padding, or protector arrangement, which is useful wherever padding is required in such a garment.

The invention will be better understood by reference to the accompanying drawings, wherein:

Fig. 1 is a view of a garment constructed in accordance with the invention.

Fig. 2 is an enlarged view of the knee portion thereof.

Fig. 3 is a view similar to Fig. 2, but taken from the rear side of the garment with a part cut away to show the interior construction.

Fig. 4 is a section taken on line 4—4 of Fig. 2.

Fig. 5 is a section taken on line 5—5 of Fig. 2.

Fig. 6 is a sectional view similar to that of Fig. 5, illustrating the garment bent to its maximum, and illustrating the excess of material as it functions at this time.

While the invention is applicable to garments of all kinds, and particularly athletic garments, it is especially adapted for use with trousers or pants utilized in the game of football, or other similar games, and accordingly, for the purpose of illustration, it has been elected to show the invention in association with athletic pants, the same being illustrated at 1. The legs terminate slightly below the knee of the wearer in the form of a protector, or padding device for the knee.

The body of the garment may be made of the usual duck material, while the lower portion terminates in a leg gripping and pad member 2. This member is suitably stitched to the lower end of the leg portion, and it is made of elastic, or flexible webbing. This member 2 may advantageously entirely circle the leg, and it may be made in two parts; one part, 2*a* is at the rear, while another part, 2*b* is at the front of the garment. The two parts may be stitched together as at 3. The part 2*a* is cut in an upward curve, as illustrated in Fig. 3, so as to facilitate the bending of the knee in that there is less material to be folded at this time.

At the front of the garment, pad devices 4 are used, which are covered by suitable duck material 5 stitched to the member 2*b*, as shown. These pads are preferably of the well known rubber foam, or sponge rubber. Thus, the end of the leg portion of the garment is of novel construction and arranged to tightly grip the leg of the wearer, and at the same time, provide adequate protection through the pad members 4. The web member 2 and the protector members, or pad members 4 are both elastic, and accordingly, when one is distended, the other may move therewith. Accordingly, a very neat fitting arrangement is had, and there is no puckering or doubling up of material, nor excess of material provided. There is, of course, sufficient material in the cover member 5, to permit of stretching the web and pad.

The front portion of the leg of this garment, at or about the location of the knee, is provided with a construction involving excess material which comes into play upon the bending of the knee. The material of

the body of the leg terminates substantially flush with the upper edge of the padding 4, as clearly illustrated in Fig. 5. That is, it is flush when the garment is straight, as illustrated in Fig. 5. The lower edge of the front portion of the body of the leg is preferably reinforced, and rendered somewhat stiffened by the addition of a suitable duck strip 6, stitched thereto, as at 7 and 8. This lower edge of the leg is not secured directly to the bottom member 2 at the front of the leg, but is secured thereto through the means of an intermediate excess of material 9. This material 9 may be secured to the body of the leg by the stitches 8, and it is stitched to the member 2, as at 10.

As illustrated by the dotted lines in Figs. 1 and 2, the member 9 extends substantially across the front half of the leg of the pant, as shown, and normally it lies folded underneath the lower edge of the pant leg, as illustrated in Fig. 5. The line of fold may advantageously be somewhat arcuate, as illustrated at 11 (Fig. 2), although this shape will require some irregular folds in the material, which, however, does not interfere with the appearance of the garment. If desired, an additional felt pad, or the like, 12 may be secured to the inside of the garment, arranged to normally cover the flap member 9.

When the wearer bends his knee, the body of the garment 1 pulls upwardly, as illustrated in Fig. 6, tending to separate from the padding, which is permitted by the excess material, which, in its extreme extended position, appears similar to the showing in Fig. 6. Due to the fact that the lower edge of the pant leg is stiffened somewhat by the addition of the strip 6, the flap 9 is again caused to be folded underneath the lower edge of the pant leg upon the straightening of the knee. No material stiffening of the lower edge of the leg is required but the additional strip gives the lower edge a degree of stiffness, or rather renders it less flexible, than the single strip 9, and accordingly, the lower edge of the pant leg tends to lie relatively flat, causing folding of the member 9 underneath the same, upon the straightening of the leg of the wearer.

It will be observed that when the wearer of such a garment is standing erect, that the same fits snugly to the wearer. The snugness of the member 2 around the leg is such that no material slippage relative to the leg occurs. In other words, the lower edge of the garment stays fixed as regards the leg of the wearer, which is permitted by the use of the flap of excess material. Heretofore, garments of this nature were made relatively loose fitting at their extreme lower edge, to permit the same to draw up when the wearer was in a crouching position, or with the knee bent. This, however, caused the garment to be loose fitting so that it would flap around somewhat, for instance, when the wearer was running; but in the garment of this invention, a neat tight fit is had at all times, yet provision is made for freedom of movement of the knee or other joint.

In some of the claims appended hereto use is made of the term "distended". By such use it is not intended that the strip is drawn taut when the leg is bent substantially to the maximum as there may be sufficient material in the strip to unfold under a maximum bend and yet not draw or become taut.

Claims:

1. In an athletic trouser, a trouser leg comprising, a main leg portion, a terminating leg portion adapted to snugly grip the leg of the wearer on the side of the wearer's knee opposite the main leg portion, said portions being secured together at the back and sides of the leg, and an additional relatively flexible strip connecting said portions at the front of the leg and arranged to be folded up when the trouser leg is substantially straight and distended when the trouser leg is bent, the lower edge of the main portion of the trouser leg at the front of the trouser terminating normally below the upper edge of the said terminating portion, and the said strip being adapted to fold underneath the said edge of the main trouser portion and to be concealed thereby.

2. In an athletic trouser, a trouser leg comprising, a main leg portion, an elastic terminating portion arranged to snugly grip the leg of the wearer, said portions being directly secured together at the back and sides of the leg, a reinforcing stiffening strip at the front lower edge of the main leg portion, which front lower edge terminates substantially flush with the elastic web portion, a relatively flexible strip of material connecting the lower edge of the main leg portion at the front with the upper edge of the elastic web portion at the front and arranged to be folded underneath the reinforced lower edge when the trouser leg is substantially straight, and to be distended when the trouser leg is bent.

3. In an athletic trouser, a trouser leg comprising, a main leg portion, a terminating portion comprising an elastic web for snugly gripping the leg of the wearer, said portions being secured together at the back and front of the leg, said terminating portion having a protecting padding thereon, the front lower edge of the main leg portion terminating substantially flush with said padding, and a strip of excess material lying in a folded position underneath the front lower edge of the main leg portion and being more flexible than the said front lower edge, and connecting the said main portion and terminating portion of the leg and adapted to be distended when the leg is bent.

4. In an athletic trouser, a trouser leg comprising a main leg portion, a terminating leg

portion adapted to relatively snugly fit the leg of the wearer on the side of the wearer's knee opposite the main leg portion, means securing said portions together at the back of the leg, and an additional relatively flexible strip connecting said portions at the front of the leg with said strip and said securing means substantially coinciding at the sides of the leg, said strip being arranged to be folded up when the trouser leg is substantially straight and unfolded when the trouser leg is bent, the lower edge of the main portion of the trouser leg at the front terminating adjacent the upper edge of said terminating portion, and the said strip being adapted to fold underneath said edge of the main trouser portion and to be concealed thereby.

5. In an athletic trouser, a trouser leg comprising a main leg portion, a terminating leg portion adapted to fit a leg of the wearer on the side of the wearer's knee opposite the main leg portion, said portions at the back of the leg being substantially continuous, said portions at the front being divided, excess material connecting the portions at the front, the lower edge of the main leg portion and the upper edge of the terminating leg portion substantially coinciding when the leg is substantially straight, at least one of said leg portions at the front adjacent the division between the portions being relatively stiff as compared to the excess material, said excess material being arranged with a normally inwardly extending fold whereby to lie within the divided edges of the leg portions when the leg is substantially straight to be concealed thereby, said excess material being adapted to be distended when the trouser leg is bent.

In testimony whereof I affix my signature.

CHARLES E. DORAIS.