Dec. 23, 1941. A. M. McCOY 2,266,886

PROTECTIVE BODY PAD

Filed Aug. 5, 1940

Fig-1

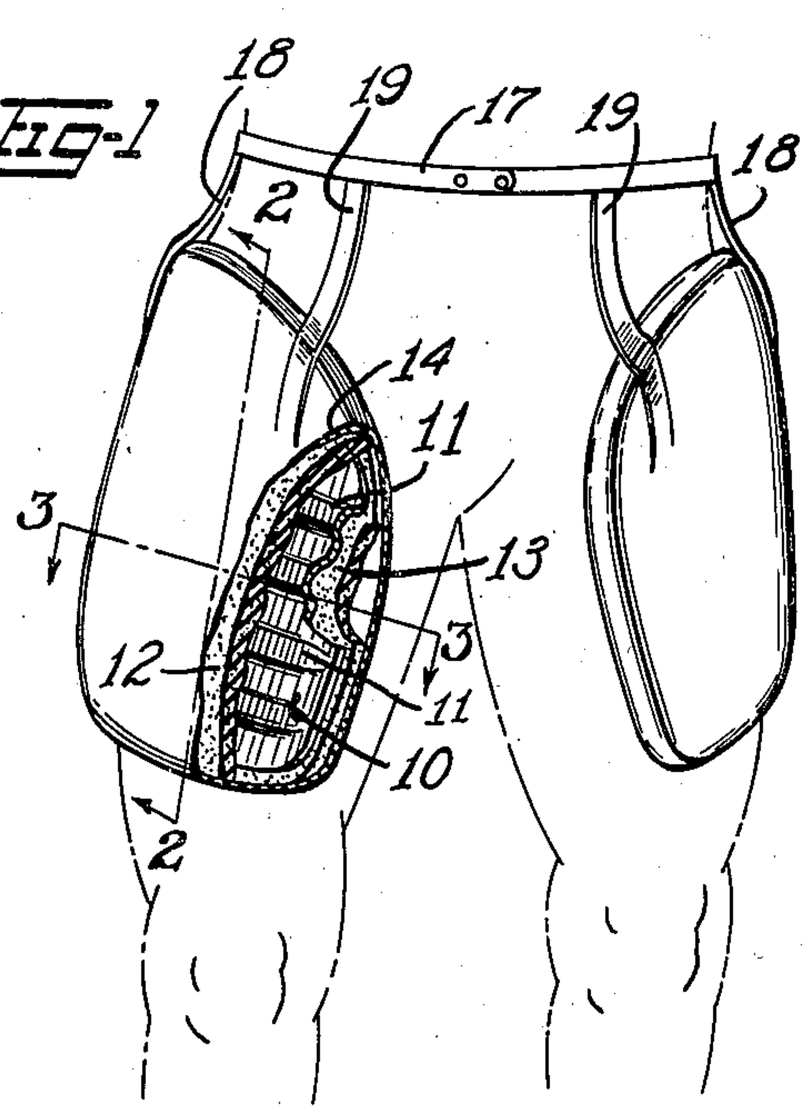


Fig-2

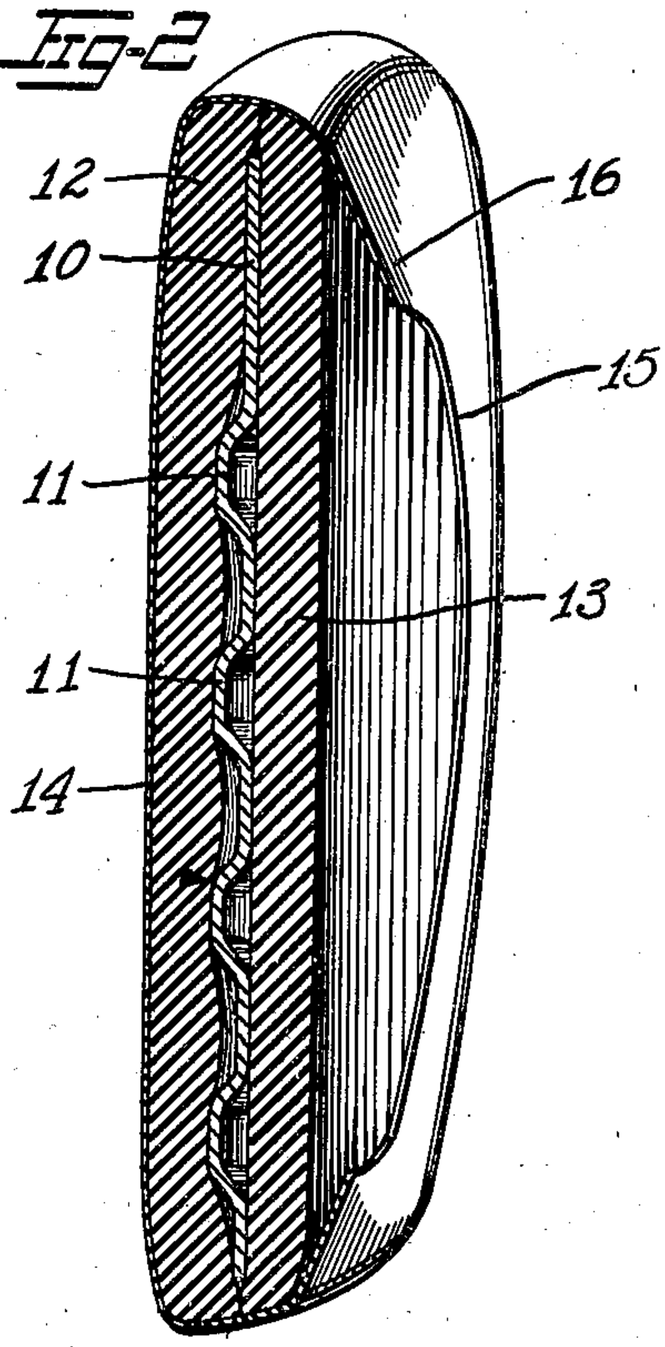


Fig-3

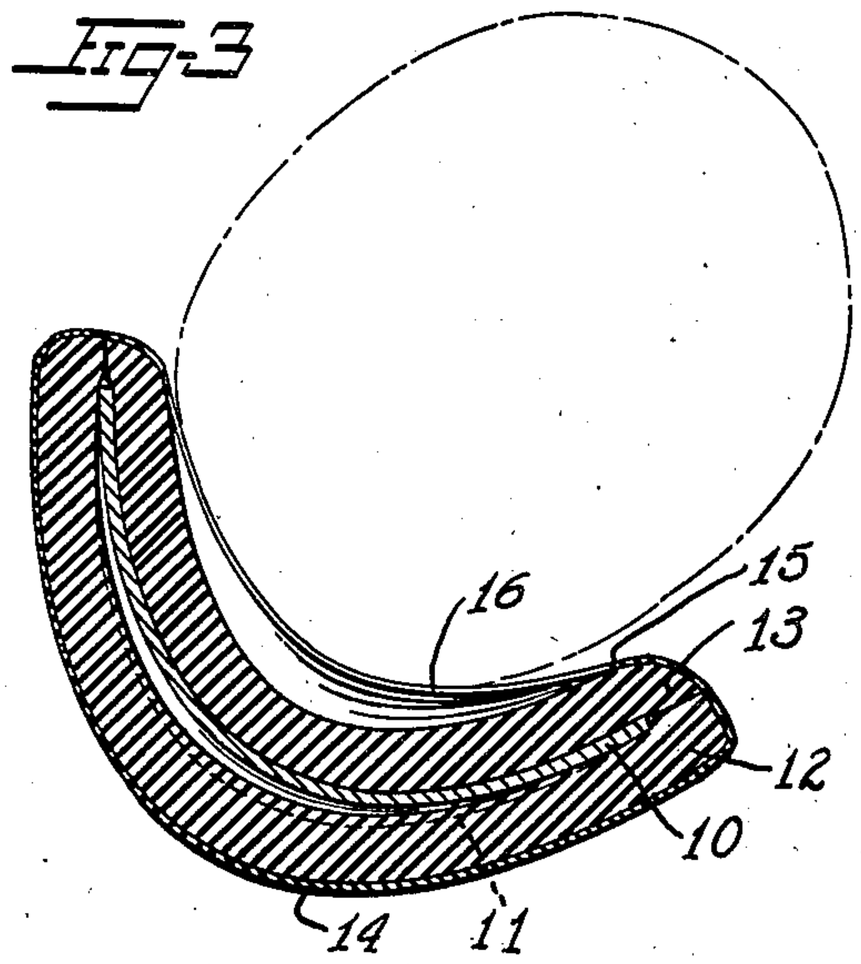
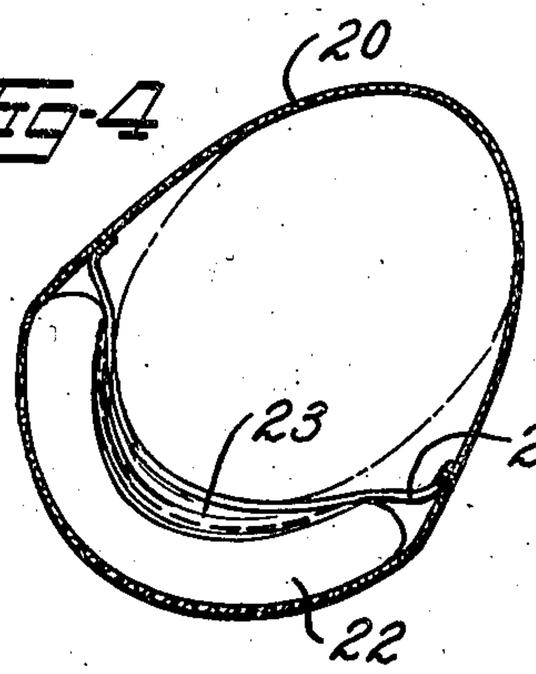


Fig-4



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PROTECTIVE BODY PAD

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8 Claims. (Cl. 2—2)

This invention relates to protective body pads such for example as are worn by players in football or other games, to protect the player and his opponent from injury.

Protective pads used heretofore, especially those for football, have not been entirely satisfactory owing to disadvantages and inconveniences, especially in that the pads have been subjected to soiling and deterioration as a result of perspiration and have not been adapted for convenient disassembly for cleaning, repairing, or changing. Also, because of wide variations in body contour the prior pads have not always provided a comfortable or effective fit, especially in constructions in which the parts have been sewn or otherwise directly secured together. A further objection has been that difficulty has been encountered in some cases in keeping the prior pads, especially thigh and leg pads, in the desired place on the wearer under conditions of running and of physical contact.

The chief objects of the invention are to provide a pad construction that overcomes or avoids these and other difficulties; to provide a pad assembly that can be conveniently disassembled for cleaning, repair, replacement or alteration; to provide for conveniently fitting the pad structure to various body contours; to provide for effective protection together with comfort to the wearer and light weight; and to make possible a secure and comfortable attachment.

These and further objects will be apparent from the following description, reference being had to the accompanying drawing, in which:

Fig. 1 is an elevation of a pair of thigh pads suspended in place from a belt upon a wearer, the pads being constructed according to and embodying the invention, parts being broken away and sectioned in one of the pads.

Fig. 2 is a section taken along the line 2—2 of Fig. 1.

Fig. 3 is a section taken along the line 3—3 of Fig. 1.

Fig. 4 is a view like Fig. 3 but showing a modified attachment of the pad.

In accordance with the invention I provide a pad, preferably in four parts, held together in a manner making for convenient disassembly for cleaning, repair or change, and in a manner in which any one or more of the parts can be easily replaced so that variations in overall dimensions, thickness, shape, and cushioning properties, may be conveniently made to suit individual wearers.

There is provided a central, stiff board-like element 10, which may be of thin metal, wood veneer, fiber board, or other suitable material that will withstand hard blows and be of light weight. If desired, this element may be corrugated as shown at 11, 11 for added stiffness and strength. The element 10 preferably is curved as shown to provide a concave face conforming approximately to the body contour.

Loosely associated with the member 10 at the faces thereof is a pair of cushioning elements 12, 13 preferably of sponge rubber or other cellular rubber, but which may be of felt or other suitable cushioning material. The cushion elements 12 and 13 preferably are somewhat larger in overall dimensions than the element 10 so that the edges of the latter will be effectively cushioned. The cushioning elements 12 and 13 may vary greatly in thickness or shape or both to suit individual requirements as to contour and cushioning properties.

The three elements 10, 12 and 13 preferably are not secured together in any manner, so as to be easily disassembled for cleaning, repairing or changing. Provision is made for effectively holding these elements in their properly assembled relation. For this purpose an enclosing sheath 14 of elastic material is provided, preferably of highly stretchable rubber, such as is obtained by the depositing of the rubber upon a form of suitable shape from an aqueous dispersion of the rubber. This sheath is hollow and its walls may be continuous throughout its extent, there being provided, however, an opening at one face thereof, the edge of which is indicated at 15, through which opening the elements 10, 12 and 13 may be inserted and removed by stretching the sheath over such elements.

When the parts are thus assembled, the sheath 14 holds the elements 10, 12 and 13 in their assembled relation, and protects the same, and at the concave face of the assembly the marginal portion 16 has the effect of standing out from the concave face of the underlying cushioning element. As a result of this construction and the elasticity of the sheath the underlying cushioning element is normally held away from the body of the wearer, as is shown for example in Fig. 3, the contact of the margin 15 against the thigh being a light resilient contact, and the initial deflection of such margin 16 upon compression of the assembly against the body affording additional cushioning to protect the wearer. As a further result of this construction good ventilation is provided, and also the margin 16 is effective to resist slippage of the pad from its desired

position, even though a relatively loose attachment is used.

The pad may be worn in any desired manner. In Fig. 1 the two hip pads are suspended from a belt 17 by means of straps 18, 19 secured to the outer sheath 14 in any suitable manner preferably by vulcanized adhesion.

The pad assembly of this invention may be mounted advantageously also by inserting it in a pocket in the clothing of the wearer, such for example as in a pocket of a pants leg as shown in Fig. 4. Here the pants leg is indicated at 20 in which is attached an inner pocket element 21, the pad 22, which may be of the construction of Fig. 2, being inserted within the pocket from which it can be quickly and conveniently removed for disassembly in the manner hereinbefore described. In this association also, the elastic margin 23 of the sheath corresponding to the margin 16 of Fig. 2 has the effect of bearing lightly and comfortably against the leg of the wearer and serving to retain the pad in its proper position and also to contribute to the cushioning action in the manner hereinbefore described.

If desired, elastic bands, adhesive tape, attaching strings, or other means may be used to secure the pad in position in its desired location.

While the invention has been illustrated as applied to a thigh pad for football players, it will be understood that features thereof are applicable to pads for other locations, such as shoulder pads, kidney pads, knee pads, shin pads, elbow pads, etc.

Variations may be made without departing from the scope of the invention as it is hereinafter claimed.

I claim:

1. A protective pad assembly comprising a stiff board-like element, cushioning elements at the faces thereof, and a sheath of elastic material stretched over said elements and enclosing them in assembled relation.

2. A protective pad assembly comprising a stiff board-like element, cushioning elements at the faces thereof, and a sheath of elastic material stretched over said elements, the respective elements and sheath being unattached one to another for convenient disassembly and being held in the assembled relation by the elasticity of the sheath.

3. A protective body pad assembly comprising a board-like element curved to conform approximately to the body contour, cushioning elements of sponge rubber at the faces thereof, and an enclosing sheath of highly elastic rubber stretched over said elements and enclosing them in assembled relation.

4. A protective body pad assembly comprising a pad structure having a concave face for approximate conformation to the body contour, and an elastic element extending across at least a portion of said concave face and standing out therefrom in a position for initial deflection upon compression of the assembly against the body.

5. A protective body pad assembly comprising a pad structure having a concave face for approximate conformation to the body contour, and an elastic sheath stretched over said pad structure and having a portion standing out from said concave face in a position for initial deflection upon compression of the assembly against the body.

6. A sheath for a protective body pad assembly, said sheath comprising a hollow body of elastic rubber material substantially closed and having an opening in a face thereof, said sheath being adapted to be stretched over a pad structure of larger size than said opening.

7. A protective body pad assembly comprising a board-like element curved to present a concave face for approximate conformation to the body contour, cushioning elements at the faces thereof, and an elastic sheath stretched over said elements and enclosing them in the assembled relation, a portion of said sheath at said concave face standing out from the underlying cushioning material in a position for initial deflection upon compression of the assembly against the body.

8. A protective body pad assembly comprising a board-like element curved to present a concave face for approximate conformation to the body contour, cushioning elements at the faces thereof, and an elastic sheath stretched over said elements and enclosing them in the assembled relation, said sheath being open at said concave face with the peripheral margin at the opening standing out from the underlying structure in a position for initial deflection against the body.

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