

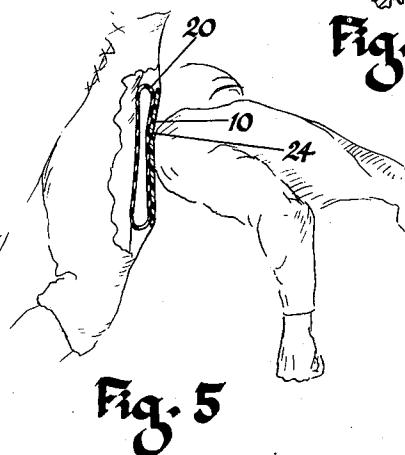
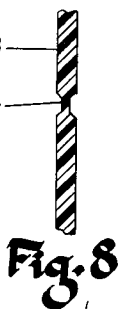
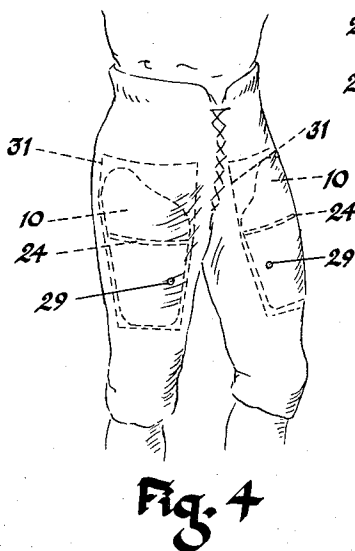
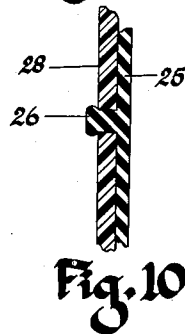
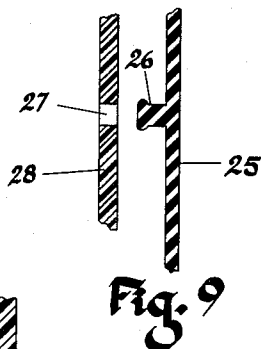
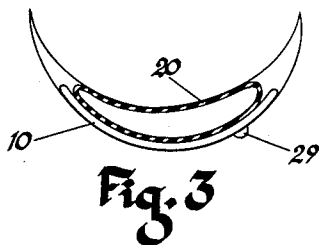
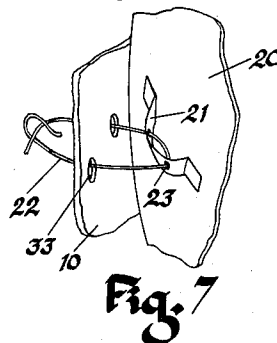
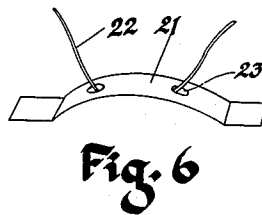
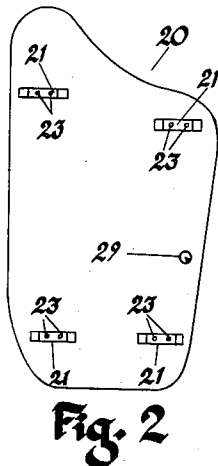
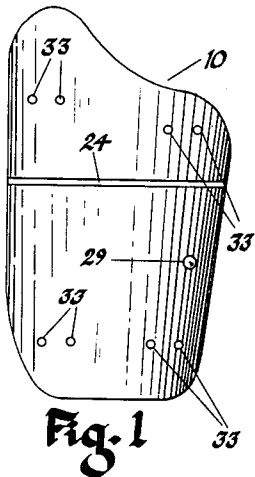
Sept. 9, 1952

B. A. PFAFF

2,609,537

BODY PROTECTIVE PAD FOR USE IN CONTACT SPORTS

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UNITED STATES PATENT OFFICE

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BODY PROTECTIVE PAD FOR USE IN CONTACT SPORTS

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Application April 23, 1949, Serial No. 90,096

2 Claims. (Cl. 2-2)

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My invention relates to athletic equipment and relates more particularly to thigh pads used in football equipment.

In football pants, an inner pocket is generally provided in the forward thigh portions thereof in which fabric and fibre board shaped pads are inserted to protect the player against injury in play.

It is an object of my invention to provide an improved thigh pad structure for insertion within football pants, said structures being simple in construction, economical to manufacture and highly efficient in use.

Another object of my invention is to provide an improved thigh pad which will be of considerably lighter weight than prior existing pads and which will afford greater protection to the player using the same.

A still further object of my invention is to adapt the principle of my invention in protective body pads, such as hip pads, shoulder pads, etc., used in contact sports.

Other objects of my invention and the invention itself will become more readily apparent by reference to the following description in which description reference will be made to the accompanying drawings, in which drawings:

Fig. 1 is a front elevational view of the shell used in the thigh pad of my invention.

Fig. 2 is a front elevational view of the bladder used in the thigh pad of my invention.

Fig. 3 is a top view of the shell, bladder and pocket in cross section shown in relation to the curve of the leg.

Fig. 4 is a perspective view of lower portions of a player in football pants showing the position of the shell, bladder and pocket in relation to the pants.

Fig. 5 is a view showing action of the thigh pad upon impact as by engagement with an opponent's shoulder.

Fig. 6 is a perspective view of a tab of the bladder showing lacing thereto.

Fig. 7 is a perspective view of the tab securing means and lacing connecting both shell and bladder.

Fig. 8 is a sectional view of a portion of the shell showing the weakened hinge portion thereof.

Fig. 9 is an exploded, enlarged view of a modification of my invention showing a variation of the securing means and the shell and bladder.

Fig. 10 is a view of the embodiment of Fig. 9 showing the locked engagement of bladder and shell.

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ings, the improved thigh pad of my invention comprises a body portion 10, preferably formed of plastic or like semi-rigid material, as sole leather or the like, and an inflatable bladder 20. The body portion 10 and the bladder 20 are of substantially similar form, each being of generally elongated rectangular form. The bladder 20 is secured to the shell as by a plurality of tabs 21, integrally formed in the bladder and projecting outwardly therefrom, as best shown in Figs. 6 and 7, lacing 22 being drawn through pairs of apertures 23 in said tabs and through corresponding pairs of eyelet apertures 23 in said shell.

The shell 10 is preferably provided with a longitudinally extending weakened portion 24 which acts as a hinge when said pad is in use, as hereinafter described.

In the form of my invention shown in Figs. 9 and 10, the bladder element 25 is provided with integrally formed protuberances 26 which are adapted to be wedgingly projected into apertures 27 provided in the shell 28 to rigidly secure said bladder to the outermost body portion 28.

Valve means 29 are provided in the bladder in the forms of my invention shown in Figs. 1 to 7 and Figs. 9 and 10 respectively, whereby said bladder element may be inflated at the will of the player to a desired low pressure. Low pressures are preferable in a thigh pad construction and the semi-rigidity of the shell portion attached to the bladder prevents the collapse, crumbling or shifting of the bladder and maintains the bladder in its intended molded shape when said bladder is secured to the shell as shown herein.

It will be noted that when the thigh pad of my invention is inserted within the pockets 31 provided for that purpose in a football player's pants, and placed under the proper low pressure, that that pressure is directed against the leg of the player and absorbs any shock of impact by distributing said impact over the area covered by the pad. Hence, a blow is not localized but absorbed and decelerated over a considerable area and injury to a player's upper leg is avoided.

By providing a hinge in the shell 10, when the force of a blow tends to force the pad against the groin, the pad by hinging prevents the pad from getting caught between the groin and the leg.

The improved thigh pad of my invention further remains in position within the pocket by displacement of space therein upon inflation of the bladder so that the pad does not slip or slide within the pocket.

Referring now more particularly to the draw-

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The bladder elements, as shown in my invention, may be removed from their association with the body portion, as for replacement, repair, etc., if desired.

I am aware that shell portions and secured inflatable bladder portions, as shown and described herein, might be adapted for use for protecting other portions of a player's body in contact sports, as for example, in shoulder pads, rib pads, hip pads, head covering, and the like without departing from the invention herein shown and described.

I am further aware that numerous and extensive departures may be made from the forms of my invention as illustrated herein but without, however, departing from the spirit of my invention and the scope of the appended claims.

I claim:

1. In a thigh pad adapted for insertion within pockets provided in football pants, an arcuate in cross-section substantially rectangular body portion, an inflatable bladder element of substantially similar form, said bladder element having means integrally formed therewith whereby said bladder element is removably secured to the inner face of said body portion, valve means for inflating said bladder element to a desired pressure, said body portion having an integrally formed horizontally longitudinally extending hinge portion wherefor said body portion is adapt-

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ed to be bent in a horizontal direction at an intermediate portion thereof.

2. In a thigh pad adapted for insertion within pockets provided in softball pants, an arcuate in cross-section substantially rectangular plastic shell portion, an inflatable bladder element of substantially similar form, said shell portion being provided with a weakened horizontally extending portion intermediately of said shell adapted to function as a hinge, said shell having the bladder element secured to the inner face thereof, said bladder being adapted to be inflated to low pressures, said shell sustaining said bladder in predetermined shape, external impact upon said shell being distributed in effect by said bladder over the complete area covered by the bladder.

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The following references are of record in the file of this patent:

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