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E. A. DICKENSON

1,970,130

PROTECTIVE DEVICE

Filed March 18, 1933

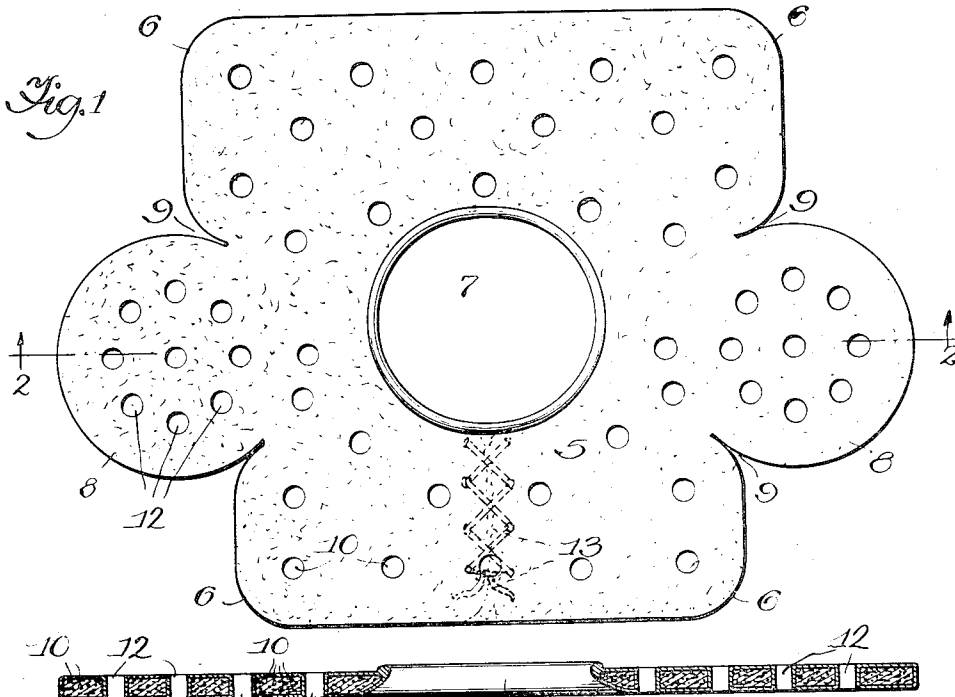


Fig. 2

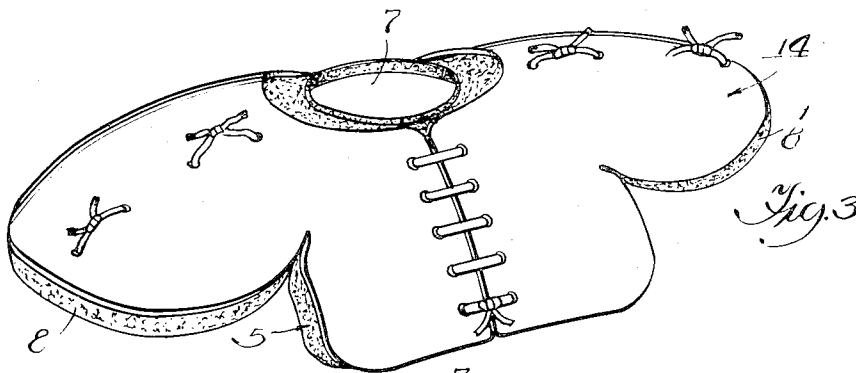


Fig. 3

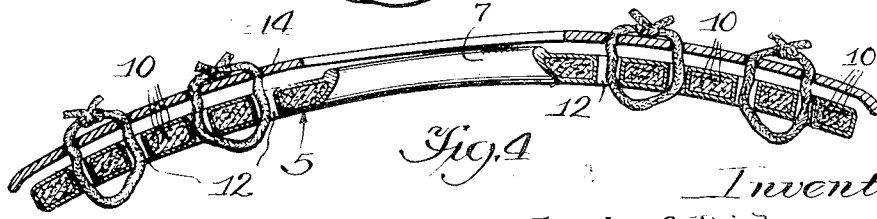


Fig. 4

Witness:
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UNITED STATES PATENT OFFICE

1,970,130

PROTECTIVE DEVICE

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1 Claim. (Cl. 2-2)

My present invention relates to protective devices for use in football and other athletic sports.

So far as I am at present aware the protective devices available for the shoulders of a football player consists of separate devices for the respective shoulders or of an armor formed from leather or tough fibrous material laced about the player, the armor being provided on its inner surface with a padding of felt for the purpose of cushioning such impacts as may be received upon the outer surface of the leather or fibre. Such felt is absorptive of perspiration and subject to compacting and constituting a portion or adjunct to the outlying stiff armor of leather or fibre rubs against the muscles as they move beneath it in the playing of the game.

My new protective device is preferably in the form of an integral pad of a soft and pliable material which will adapt itself readily to the contour of the player's body and move therewith as the underlaying muscles of the player's body move during the play. In this way friction between the protective device and the player's body will be largely, if not entirely, eliminated. Such a device in itself will afford a very large degree of protection but it may advantageously be employed with an outer armor of leather or fibre to prevent puncture from cleats or other sharp points or edges and to distribute the impact from such sharp points or edges. However, if my protective device is employed with a stiff, outer element, or armor, the attachment between my device and such outer stiff layer should be of such a nature as to permit of some degree of movement or flexing of the underlaying protective device with respect to the stiff covering.

I am aware that sponge rubber has been suggested as suitable for padding. I propose to form my protective device of gassed rubber, but it differs, as I employ it, from the ordinary sponge rubber in that the voids or interstices are so fine as to be hardly discernible by unaided vision, and I completely cover all surfaces of my device with an impervious rubber skin for the purpose of preventing any absorption of perspiration or moisture of any kind and for increasing the toughness without impairing the flexibility of the completed article.

As will hereafter be observed, I provide my protective device with a number of perforations or foramenations so located and proportioned as to preserve the strength of the device, and it will be found that these foramenations or perforations in movement during play secure an actual pumping of the air from opposite sides of

the device in accordance with the movement imparted to it by the motions of the player so as to considerably increase ventilation.

My device will be found to be readily washable and sterilizable and will last in service for several years, whereas the padding of felt, or other material, rigidly attached to an outer stiff covering or armor rarely remains in satisfactory condition through a single season of play.

I have illustrated an embodiment of my invention in a form of protective device particularly adapted for protecting the shoulders and the back and front upper portions of the torso of a football player.

Fig. 1 is a plan or development of such a protecting device,

Fig. 2 is a horizontal, central section on line 2-2 of Fig. 1,

Fig. 3 is a perspective view of my device in combination with the usual exterior stiff covering of leather or fibre, and

Fig. 4 is a section similar to Fig. 2 through the combined structure shown in Fig. 3.

Similar reference characters refer to similar parts throughout the respective views.

The central portion of my device 5 is generally rectangular with the corners thereof cut away on suitable curved lines 6. The sides of the portion 5 are sufficiently long to extend from substantially the lower edge of the shoulder blades in the back to about the sternum of the front of the wearer. In the center of the portion 5 is the neck aperture 7, the edges of the pad being beveled upwardly to conform to the curvature of the neck. Extending from the centers of the sides of the portion 5 are developments 8-8 of a rounded contour to extend over the upper ends of the arms of the wearer. It will be noted that the arm developments are cut back, as at 9, as the curvature over the top of the arms and over the torso is somewhat different and would develop a wrinkle on the under surface which would tend to rub and abrade the skin of the wearer.

As heretofore stated the device is made of gassed rubber, approximately one-half inch thick, preferably with very fine voids or interstices 10, and is covered on both sides with an impervious skin 11. Throughout the article are provided perforations or foramenations 12, the walls of which perforations or foramenations 12 are also covered with the impervious outer skin 11. Such a structure made of the materials described is quite flexible, easily conforming to the form of the wearer. Such a structure is also elastic which will permit the head of the wearer to be easily inserted

through the neck aperture 7, and when the player has inserted his head through the aperture 7 it will be found that the whole device is located with respect to the body without the necessity of additional means for securing it in place other than the usual outer jacket. However, the forward part of the central portion 5 between the neck aperture and the front of the device may be split and laced, as shown by dotted lines 13 in Fig. 1.

10 When my device is worn in connection with an exterior stiff armor 14 of leather or fibre, the armor may be laced over and about my device in the usual way without any specific means of attachment between the armor and my device, or, if

15 it is desired to attach my device to the armor, the attachment should be with loops, or in such other way as may be desired so as to permit relative movement between the armor 14 and my device, or otherwise a relative movement between the

20 armor and the wearer would drag my device over

the skin of the wearer and the armor would also prevent the pumping action induced by the change of the form of the perforations or foramenations 12 caused by the movement of the player.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

A protective device for players in athletic contests comprising an integral body shaped to conform with the portion of the wearer to be protected, said body being provided with spaced foramenations and formed of gassed rubber with a continuous, impervious, exterior skin in combination with a stiff outer covering associated with said body portion, tie pieces passing loosely through said foramenations in said body piece and attached to said outer covering so as to permit relative movement between said body portion and said outer covering.

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