Feb. 6, 1951

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2,540,952

SHOULDER PROTECTOR

Filed Aug. 6, 1948

2 Sheets-Sheet 1

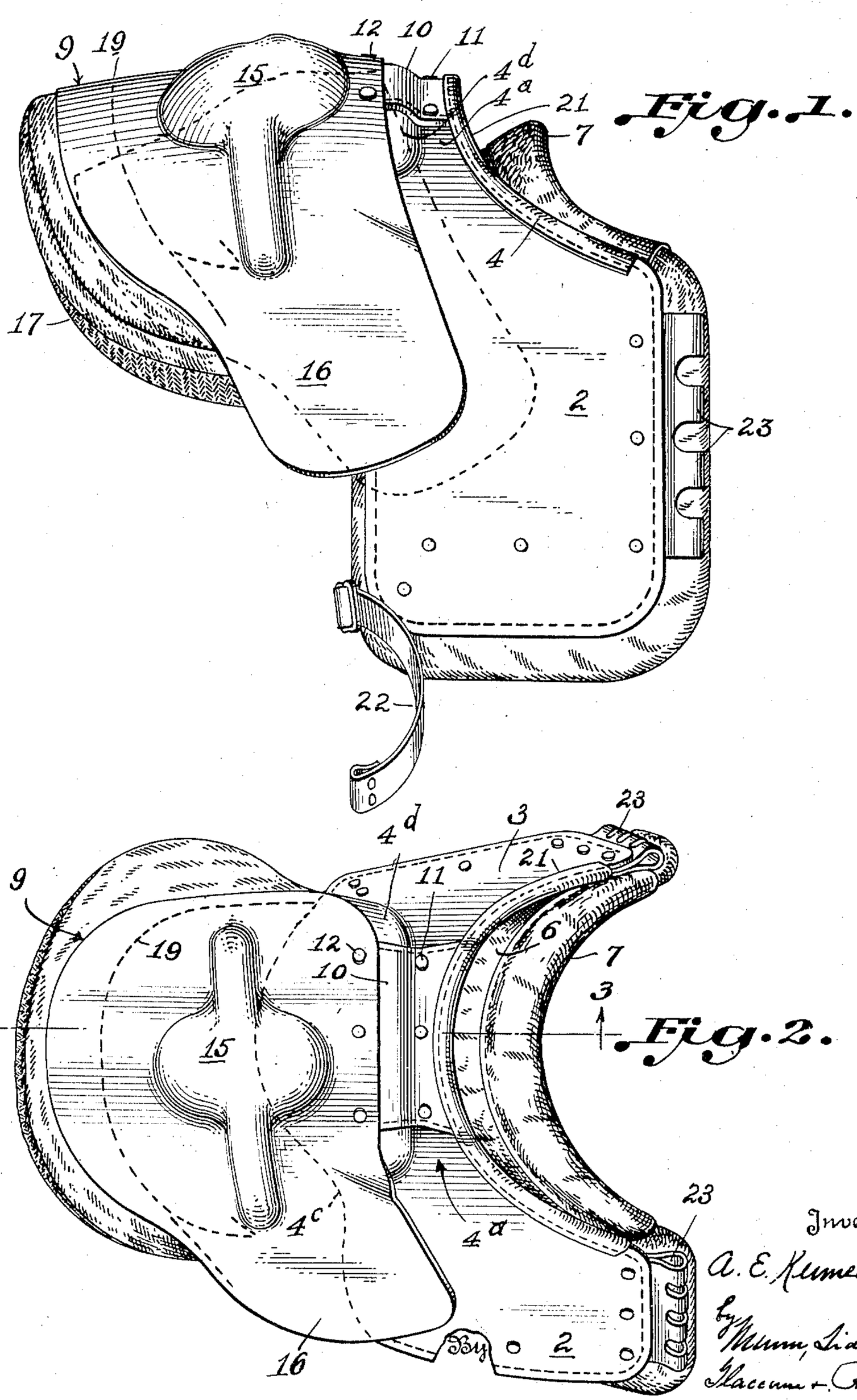

Fig. 1.

Fig. 2.

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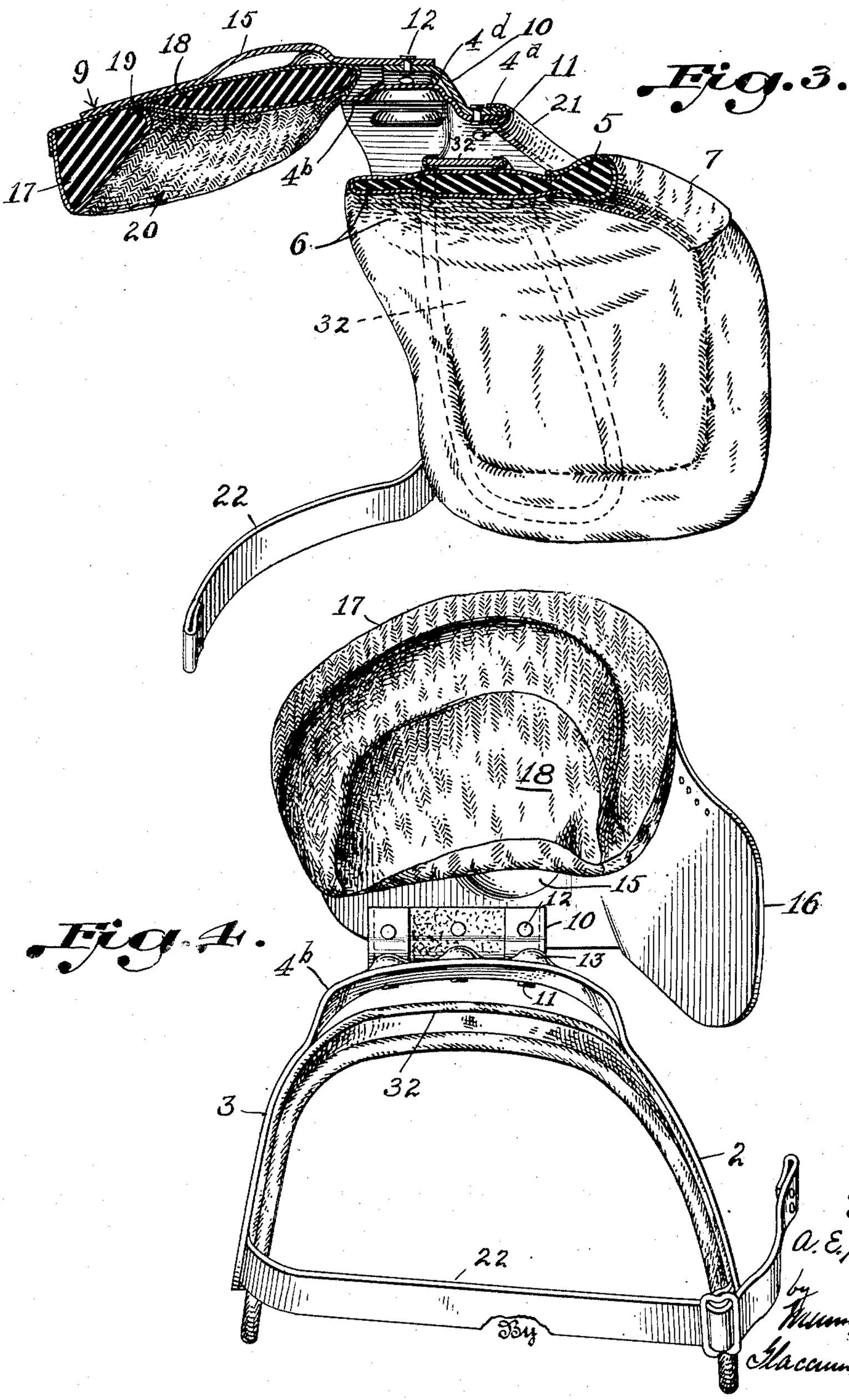

Fig. 3.

Fig. 4.

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Patented Feb. 6, 1951 2,540,952

UNITED STATES PATENT OFFICE

2,540,952

SHOULDER PROTECTOR

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Application August 6, 1948, Serial No. 42,981

3 Claims. (Cl. 2—2)

1

My present invention relates to shoulder padding for football players, and has for its object to provide an improved shoulder armor that is lighter in weight and which will give more complete coverage and protection to the wearer, both from the standpoint of offensive and defensive plays.

A further object of my invention is to produce a shoulder pad with a one-piece shoulder cap and clipper which protects the player's shoulder bones regardless of the position of his arm or hunching of the shoulders.

Still other objects and advantages will become apparent from the following description of the present invention illustrated in the accompanying drawings in which:

Figure 1 is a front elevation of a shoulder armor embodying my present invention.

Figure 2 is a plan view thereof.

Figure 3 is a central cross sectional view of the armor taken on line 3—3 of Fig. 2.

Figure 4 is a side view of the armor showing the combination cap and clipper piece in elevated position.

Similar reference characters in the several figures indicate similar parts.

The conventional football body protector comprises a body portion to which a padded shoulder cap is attached which leaves an opening between the side of the body and the underside of the player's arm. Consequently when a player, wearing such a protecting device lifts his arm, a vital portion of the body is exposed subjecting the player to a greater possibility of injury upon contact with an opposing player. Likewise, in the act of blocking when the player's arm is lifted slightly and when he is hit on the shoulder, injury sometimes occurs to the bones of the shoulder because of their wedge shaped open space.

With these hazardous disadvantages of the conventional shoulder pad in mind, I have produced an armor which will effectively protect the shoulder bones. This I accomplish by the use of a one piece shoulder cap with a clipper construction which is hingedly attached to the body armor and has a wing portion that is always resting on the stiff breast plate portion of the body member. The clipper and its wing is so designed as to prevent an opening occurring at any time between the different portions of the armor.

The entire protective assembly of my present invention consists of two similar halves, one of which the right shoulder half is illustrated in the drawings. In this half the armor comprises a body member consisting of chest and back plates

2

2 and 3 connected at their outer margins by an arch. The top edges of the plates are curved or rounded into the inner edge of the arch to form a neck line, as indicated by 4, adjacent which the arch is curved over the shoulder as a continuation of the plates, as shown at 4^a. The width of the arch is such that its outer edge 4^b extends to a point in line with the outer side of the player's arm and from this point its edge is curved inwardly to the outer edges of the breast and back plates, as indicated in dotted lines 4^c in Fig. 2. This latter portion of the arch is moulded to extend somewhat above the plane of the inner arch portion 4 as indicated at 4^d.

The parts above mentioned are formed as a unit of rigid fiber or like material that can be moulded as a base in proper sizes. While leather may be used for this base, in the interest of lightness and resistance to crushing blows, moulded fiber has been found to be very satisfactory for the intended purpose. Attached to the lower ends of the breast and back plates on their inner sides is a heavy webbing 32 which carries the weight of the armor and is so arranged that the intermediate portion thereof serves to hold the aforementioned arch elevated out of direct contact with the player's shoulder, as will be seen from an inspection of Figs. 3 and 4. To the inner surface of the body armor and beneath the weight carrying webbing is stitched a foam rubber padding 5 encased in a cloth covering 6. For resistance to wear, a soft leather covering 7 encloses that portion of the padding 5 which may bear against the neck of the wearer when the shoulder pad is in use. This padding extends well within the neck curve of the arch as shown in Figs. 1 and 3 for the purpose of holding the armor in place against any tendency to shift laterally.

Referring now to Fig. 4, it will be seen that in order to protect the wearer from the results of impact the padding is in spaced relation with the shoulder portion of the body member.

The point of the player's shoulder where the clavicle joins the humerus is protected by a shoulder guard 9. This part comprises the one piece cap and clipper feature which is an important feature of my present invention. It is attached to the lower and inner shoulder portion 4 of the arch by means of a connecting leather hinge 10 fixed to the guard by metal rivets 11 and to the shoulder portion by similar rivets 12. Bosses 13 pressed into the fiber of a raised section 4^d of the arch acts as bearing points for the rivets 12. The guard 9 is also formed of moulded fiber or the like and has a blister 15 so located as to be

directly above the outer end of the clavicle bone of the player when the pad is in use. This prevents even the lessened force of an impact blow from being delivered directly to the bone. The front end of the shoulder guard 9 is formed with an offset elongated wing or projection 16 which in the normal position of the guard overlaps a considerable portion of the front surface of the breast plate 2, as shown in Figs. 1 and 2. This wing 16 prevents the creation of any exposing space between the outer edge of the breast plate 2 and the shoulder guard 9 when the player's arm is lifted in action.

As best seen in Figs. 3 and 4, the lower surface of the shoulder guard 9 is padded to cushion the force of a blow delivered directly upon the guard. This padding is comprised of two sections 17 and 18 of foam rubber. Section 17 is of crescent shape and is attached to the outer end of the guard. The somewhat thinner section 18 covers the remainder of the surface both sections being enclosed in a single cover of fabric and attached to the guard 9 by stitching 19 as shown in Figs. 1 and 2.

The fabric cover has a lower half 20 of loosely woven jersey to confront the wearer's shoulder.

In order to protect the player's neck from dangerous or irritating edges of the assembly, a band 21 of soft leather is stitched to the inner edge of the shoulder portion 3 of the body member.

The entire assembly is adjusted in a conventional manner to the player, by a webbing strap 22 to extend under the arm and lacing eyes 23 for drawing together the two halves of the shoulder pad assembly.

From the foregoing description, it will be seen that by providing a shoulder pad assembly with a one piece shoulder guard having a downwardly and laterally extending end overlying the chest portion of the body member I am able to prevent the forming of a gap in front of the under arm of the player adjacent the chest either when the arm is raised away from the body or the shoulder itself raised vertically by contraction of the trapezius muscle. This is not only a protection to a tender portion of a player's anatomy, but extends the area of shoulder-body armor through which power can be delivered in offensive plays.

While a preferred form of the invention has been shown and described, it will be understood that variations in details of form may be made without departure from the invention as defined in the appended claims.

I claim:

1. A shoulder pad for a football player comprising a body member including breast, back and shoulder portions, said shoulder portion being adapted to extend from adjacent the neck to the outer end of the collar bone of the player, a shoulder guard comprising a continuous piece of material having downwardly extending portions on the front and back thereof, said guard being pivotally connected to said shoulder portion and extending outwardly over the outer end thereof, said guard having an outer edge which is adapted to cover the upper end of the arm and the outer end of the shoulder.

2. A shoulder pad comprising a body member including chest, back and shoulder portions, said shoulder portion extending outwardly to the end of the collar bone of the wearer, a raised bearing surface on said shoulder portion, a continuous piece of material forming an integral cap and clipper assembly, said assembly being pivoted to the said shoulder portion and extending outwardly over the outer end thereof and covering the upper end of the arm and the outer end of the shoulder, said assembly having an offset wing portion which extends downwardly and overlaps in part the chest portion to prevent the formation of a space between said assembly and breast portion when the player's arm is elevated.

3. In a shoulder protective device for a football player, the combination of a body member including chest, back and shoulder portions, said shoulder portion having an inner edge adapted to lie adjacent the player's neck and an outer edge adapted to lie adjacent the end of the player's collar bone, a raised bearing surface on said shoulder portion, an integral cap and clipper member formed from a continuous piece of material, said cap and clipper member being pivotally connected to said shoulder portion adjacent the inner edge thereof and extending outwardly over the outer edge thereof and covering the upper end of the arm and the outer end of the collar bone, said cap and clipper member having an offset wing which extends downwardly and overlaps in part said chest portion and is so constructed to overlap the chest portion when the player's arm is elevated.

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