Sept. 15, 1970

R. A. AUSTIN

SHOULDER GUARD

3,528,106

Filed April 9, 1969

2 Sheets-Sheet 1

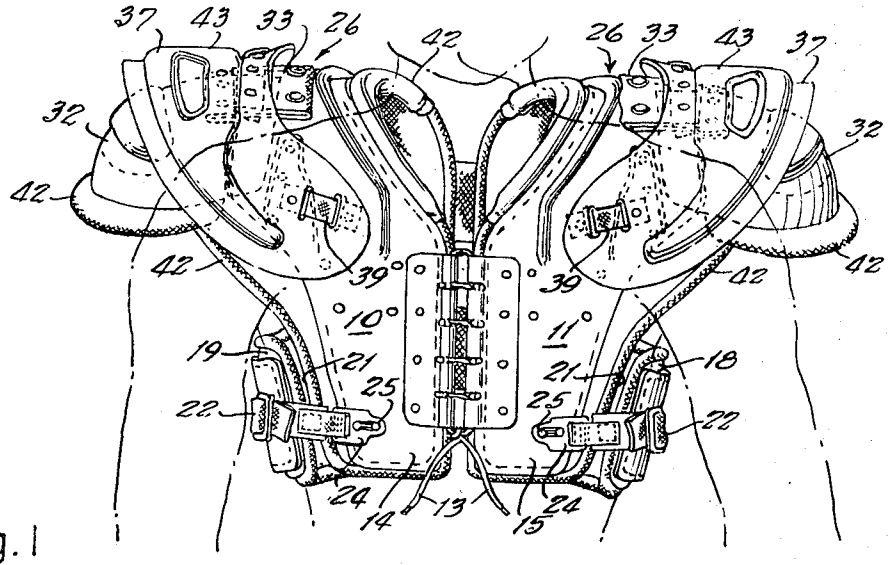


Fig. 1

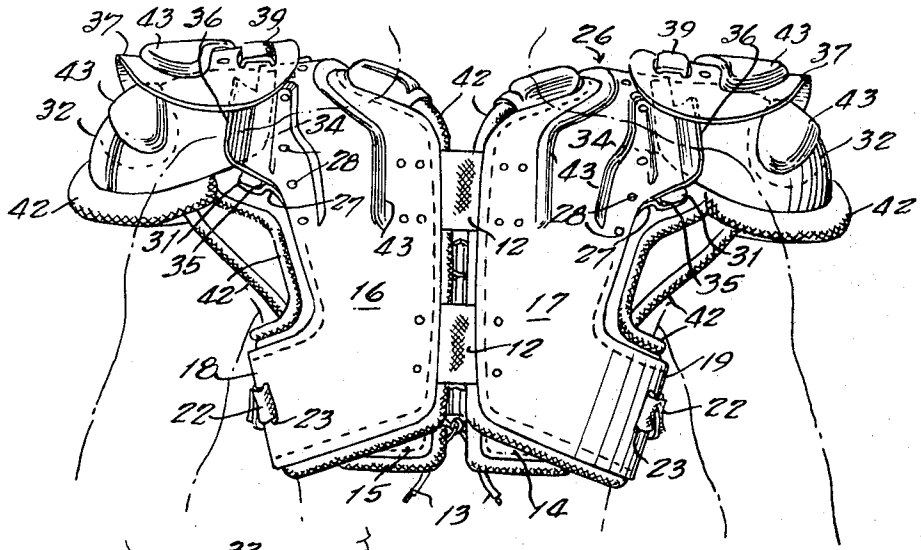


Fig. 2

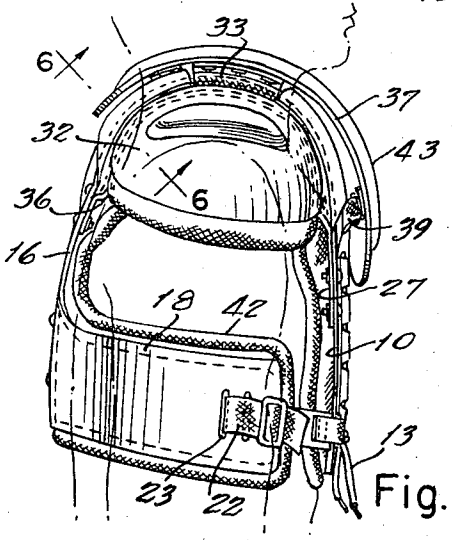


Fig. 3

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SHOULDER GUARD

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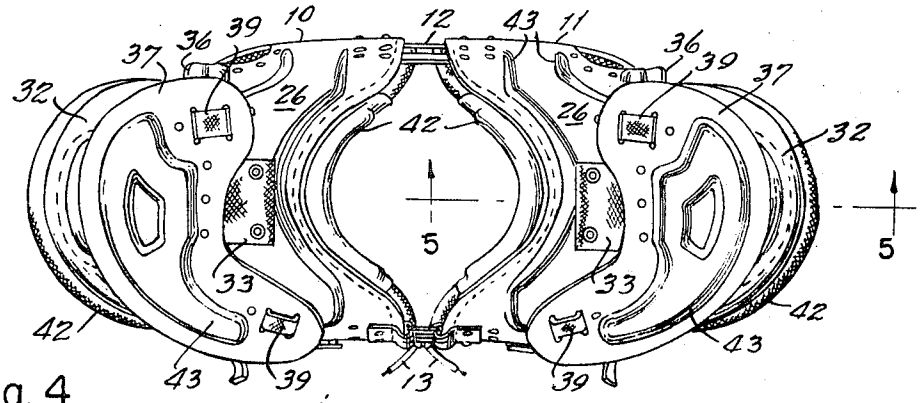


Fig. 4

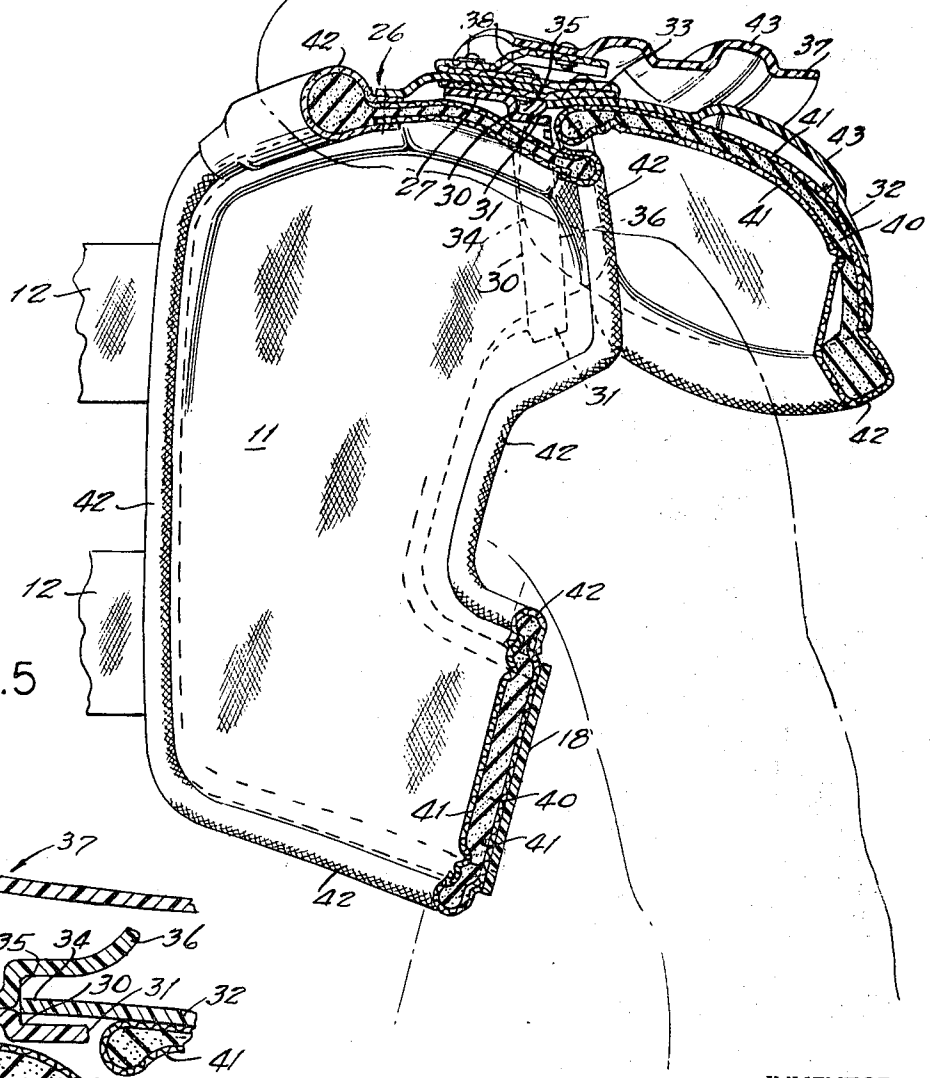


Fig. 5

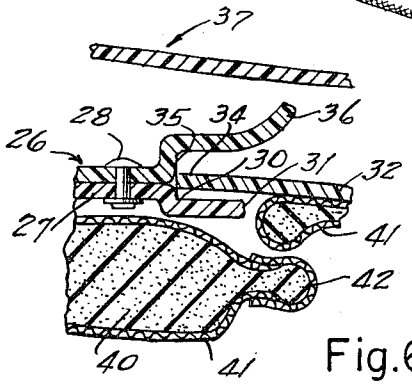


Fig. 6

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SHOULDER GUARD

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Int. Cl. A41d 13/00
U.S. Cl. 2—2 3 Claims

ABSTRACT OF THE DISCLOSURE

A shoulder and upper body guard for football players comprising a semi-rigid protective covering for the breast, back and shoulders while engaged in the game of football, and consists of a pair of right and left similarly shaped members of light and resilient material, such as semi-rigid plastics, and conformable to the upper body of the wearer and flexibility connected across the front and back by suitable fastening devices. Shoulder caps or epaulets are hingedly attached to each member in a manner which will limit their downward movement under applied force, to protect the shoulders of the wearer, while possessing limited flexibility.

BACKGROUND OF THE INVENTION

The invention has reference to subject matter described in U.S. Pat. No. 3,431,560, dated Mar. 11, 1969, to Russell A. Austin, and U.S. Pat. No. 2,430,502, dated Nov. 11, 1947, to Hugo Goldsmith.

SUMMARY

This invention relates to shoulder and body protectors for football players, and the like.

A prime object of the invention resides in the provision of a protective armor for players in such games as football, hockey, and other such hazardous sports, and which comprises a pair of similarly formed right and left members shaped to conformably embrace the shoulders, breast, shoulder blades in back of the body, the rib cage and the clavicular area in front and over the shoulder between the neck and the shoulder tips.

Another and important object of the invention is that of providing an improved arrangement by which the shoulder caps or epaulets are hingedly attached to the respective body members to afford adequate protection for the shoulders of the wearer by restricting the downward movement of these elements toward the shoulders while providing for limited flexibility thereof to allow for some yieldability under stress.

Broadly, the invention is designed to provide a protective device for the vital parts of the upper body of the player against injuries peculiar to the game of football, and especially to afford a semi-rigid shield about the shoulders, the rib cage, and the clavicle bones, the anatomical parts most vulnerable to injury under the substantial stresses encountered in scrimmage.

While the foregoing objects are paramount, other and lesser objects will become apparent as the description proceeds, when considered in connection with the appended drawings wherein:

FIG. 1 is a front elevational view of the embodiment of the invention as worn by a player shown in broken lines.

FIG. 2 is a rear elevational view opposite that of FIG. 1.

FIG. 3 is a right side elevational view showing the extended portion of the right body member, the rib cage of the wearer, and showing one of the shoulder caps.

FIG. 4 is a top plan view showing the forwardly extended protective shoulder flaps.

FIG. 5 is an enlarged fragmentary sectional view, on line 5–5 of FIG. 4, showing the hinged association of the shoulder cap with one body member and its seating action thereagainst, and

FIG. 6 is another enlarged fragmentary sectional illustration, on line 6–6 of FIG. 3, showing the uppera portion of the flanged seat limiting the downward movement of the shoulder cap.

The invention seeks to provide a protective device which comprises a pair of right and left sections **10** and **11** flexibly joined at the back by one or more straps **12** riveted, or otherwise secured, to opposing marginal edges of the members, and detachably securable to the wearer by lacing **13**, or other device, as best shown in FIGS. 1, 2 and 3. Each of the sections **10** and **11** are substantially U-shaped in vertical section, as indicated in FIG. 3, to conformably embrace the shoulders of the wearer (shown in broken lines in FIGS. 1 to 3) and provide a shield for the breast, rib cage and clavicular area in front of the wearer, and for protection of the shoulder blades and rib area in the back.

While the front depending portions **14** and **15** of the sections **10** and **11**, when associated as in FIG. 1, present a marginal contour defining a breast protector, the corresponding portions **16** and **17** in the rear have extended portions **18** and **19** which are curved radially in slightly inclined planes around the body, embracing the rib cage on each side and under the arms, terminating in front of the body adjacent to the marginal edges **20** and **21** of the portions **14** and **15**, as best illustrated in FIGS. 2 and 3, and detachably secured thereto by straps **22** arranged through slots **23** in the ends of the members **18** and **19**, each having a fastener **24** thereon which is joined to a pin **25** in each of the front portions **14** and **15**.

The entire assembly is preferably formed of plastic material having suitable flexibility yet possessing sufficient rigidity to withstand shocks of substantial force. The "wrap-around" feature provided by the radial extensions **18** and **19** obviously affords protection for the wearer's rib cage without restricting body movements or the discomfort resulting from a sense of confinement.

The shoulder portion **26** of each of the sections **10** and **11**, being arcuate, is reinforced by a conforming plastic plate **27**, which is secured by rivets **28** to each section **10** and **11**, as shown in FIG. 6. The outer arcuate portion of each plate **27** is offset to form a shoulder **30** and a flange **31**.

A shoulder cap or epaulet **32** is hinged by a strap **33** to each shoulder portion **26** of the sections **10** and **11** so that the inner curved edges **34** on each side of the epaulet **32** will abut the shoulder **30** in its normal seated position, overlapping the flange **31**, and thus prevent the epaulet **32** from being depressed against the wearer's shoulder, as indicated in broken lines in Figure **5**.

The outer perimeters of the shoulder portions **26** extend beyond the shoulders **30** whereby to define an arcuate channel **35**, and guide tabs **36** are formed at the rear of each shoulder portion **26**, as shown in FIG. 2 and 6, and curved outwardly to guide the epaulets **32** to their seats and to prevent excessive lateral displacement thereof under any applied force.

A flap **37** is hinged to each of the shoulder portions **26** by the straps **33** which are folded over the outer edges of these members and secured by rivets **38**, the flaps **37** extending over the epaulets **32**, and are downwardly curved over the upper portions of the front members **14** and **15**. Each end of each flap **37** is flexibly anchored to the sections **10** and **11** by straps **39**, as shown in Figures **1**, **2** and **4**.

Both of the sections **10** and **11**, as well as the epaulets **32**, are padded with a suitable material **40**, such as foam rubber, covered by a lining material **41**. All edges of the

members are provided with a cushioned binding **42**. The sections **10** and **11**, the epaulets **32** and the flaps **37** are suitably reinforced by embossments **43**.

What is claimed is:

1. In a protective device for football players, in combination, a semi-rigid shield comprising a pair of opposingly formed and flexibily joined sections, each having an arcuate shoulder portion adapted to conformably embrace a shoulder, and having front portions adapted to depend over the clavicular area and breast of the wearer, and rear portions for depending over the shoulder blades, the said rear portions having integral lateral radial extensions for embracing the rib cage and terminating forwardly thereof, flexible means on each of said lateral extensions for detachably and adjustably joining the same to said depending front portions, a shoulder cap hingedly attached to the shoulder portion of each section and having a rim, a reinforcing plate attached to and conformably embracing each shoulder portion, the said reinforcing plate having an outer offset portion extending below and outwardly of the level of said reinforcing plate formed therewith providing an abutment engaged by the adjacent rim of each shoulder cap in its uppermost position.

2. A protective device as described in claim **1**, a tab element formed on the rear of each shoulder portion extending outwardly from and over said abutment for restricting each shoulder cap from lateral movement with respect to said abutment.

3. A protective device as described in claim **1**, the said means for joining said lateral extensions to said front portions comprising adjustable straps having detachable fasteners thereon, and means for detachably joining said sections in front of the wearer.

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