

June 20, 1939.

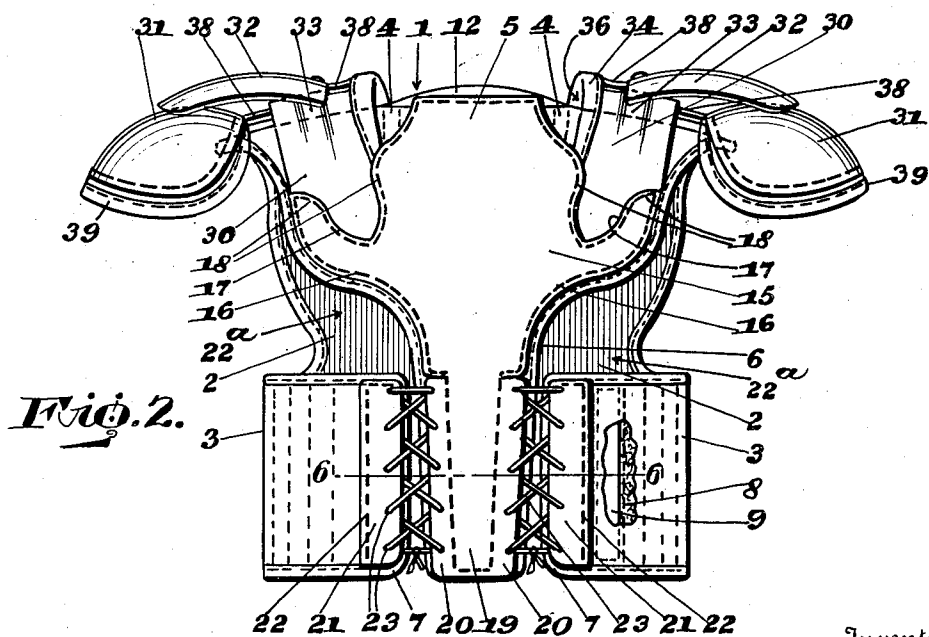
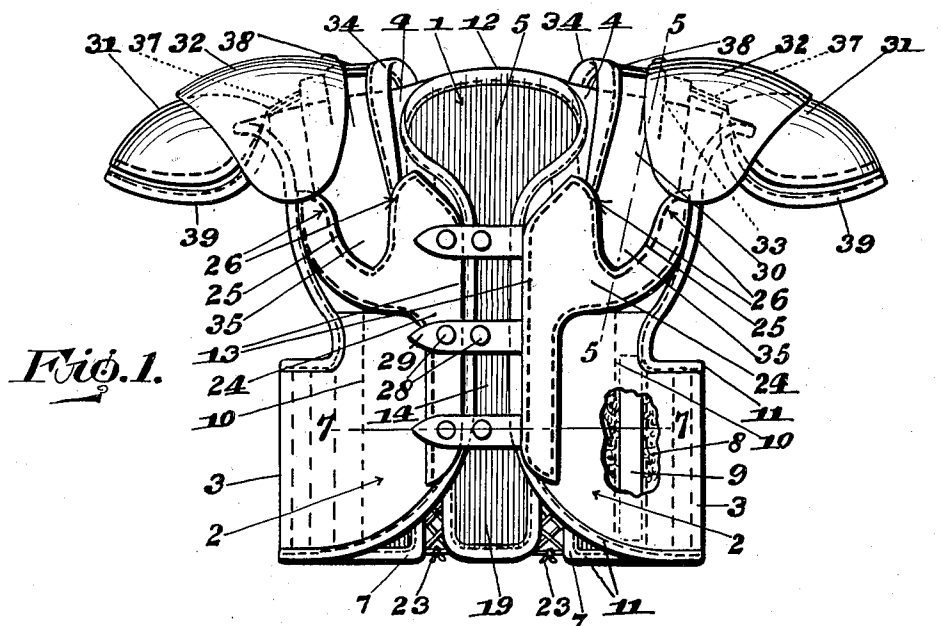
A. E. KENNEDY

2,163,463

PROTECTIVE GARMENT

Filed Jan. 25, 1938

2 Sheets-Sheet 1



Inventor

A. E. Kennedy

By *Munn, Anderson & Siddy*
Attorneys

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Fig. 3.

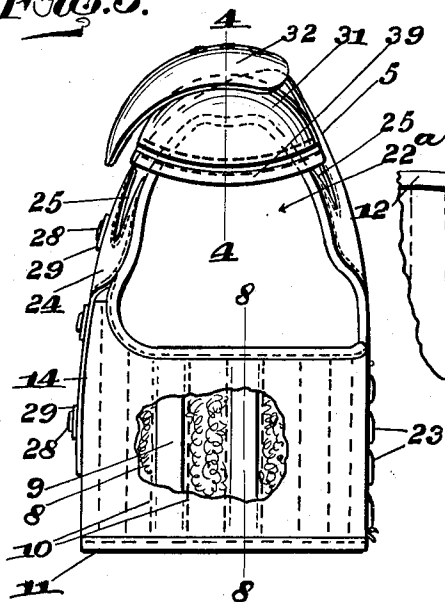


Fig. 4.

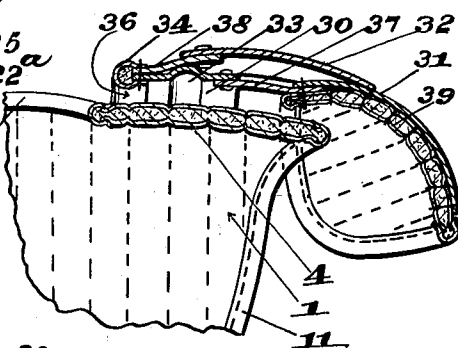


Fig. 6.

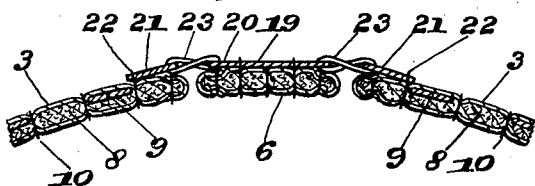


Fig. 5.

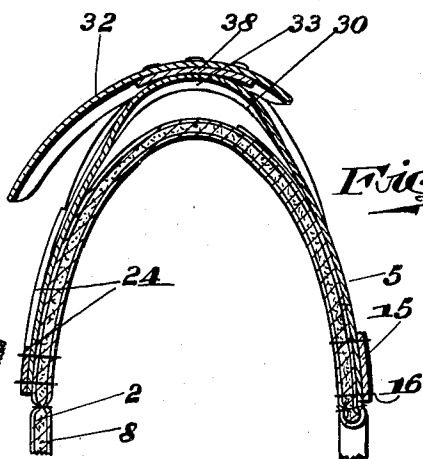


Fig. 7.

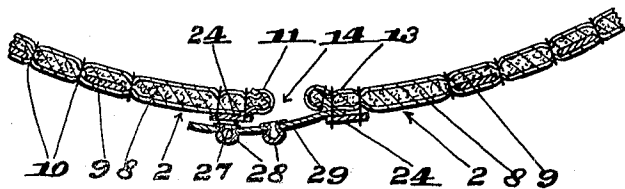
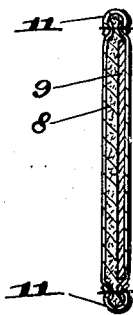


Fig. 8.



Inventor

A. E. Kennedy

By *Munn, Anderson & Liddy*
Attorneys

UNITED STATES PATENT OFFICE

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PROTECTIVE GARMENT

Allen E. Kennedy, Utica, N. Y.

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3 Claims. (Cl. 2-2)

This invention relates to improvements in protective garments for sports wear, more particularly for use in the playing of football. The playing of this game has led to the development of a number of pieces of wearing apparel, all more or less reinforced, to afford the player the maximum amount of protection without encumbering him too much with excess weight.

The particular articles of wearing apparel herein had in mind are the regular shoulder pad and the regular rib protector. These articles are commonly made and sold as separate units and have to be donned and doffed as such.

Up to the present time every shoulder pad is secured on the body of the player with laces in the front, or in the front and back, to enable the necessary adjustment. This shoulder pad is pulled over the head in putting it on and taking it off, and it is usually very hard to do both. The rib protector is always attached around the waist and hangs on the shoulders by means of elastic bands.

It is a common annoyance that the rib protector will slide around on the body of the wearer and thus get out of place. Obviously the intended protection for the ribs is missing and as a consequence of this players are often seriously injured.

There has been a persistent demand on the part of both players and coaches for a combination of the foregoing separate units in a single garment. It has been found that the combination could be made, as herein disclosed, and that two important results were gained by the combination; first the combined garment is materially lighter than the customary separate items, second, the combined garment affords much more strength than the earlier units because of the special construction involved. With this preamble in mind the objects of the invention are as follow:—

First, to provide a garment especially for use in playing the game of football, one of the new and important features of it being the combination into a single garment the customarily and universally used and known shoulder pad and separate rib protector.

Second, to make provision for the combination of these elements into a unit by any means whatsoever that will accomplish the purpose, and thereby prevent the occurrence of the disadvantages attending the current use of the separate items, for example the notorious sliding around of a rib protector.

Third, to combine a shoulder pad and a rib protector into a unitary garment, and in the form

of a vest or coat so that the garment can be put on and taken off without having to pull it over one's head.

Fourth, to provide a protective garment of the characteristics aforesaid, which has provision for an adjustment as to size, which when once made will last for an entire season or longer.

Fifth, to provide a protective garment which, although it consists of the combination of two separate protective elements, is lighter in the combination of the two than the latter are when weighed separately.

Other objects and advantages will appear in the following specification, reference being had to the accompanying drawings, in which:

Figure 1 is a front elevation of the protective garment, a portion being broken away to show the internal construction.

Figure 2 is a rear elevation of the garment.

Figure 3 is an elevation of the left side of the garment.

Figure 4 is a cross section taken on the line 4—4 of Fig. 3.

Figure 5 is a cross section taken on the line 5—5 of Fig. 1.

Figure 6 is a cross section taken on the line 6—6 of Fig. 2.

Figure 7 is a cross section taken on the line 7—7 of Fig. 1.

Figure 8 is a section taken on the line 8—8 of Fig. 3.

In carrying out the invention, provision is made of a jacket which is generally designated 1. This jacket comprises frontal, side, shoulder and back portions 2, 3, 4 and 5. The back portion terminates in a tail 6 which, when the garment is finally assembled, takes a position between the terminals 7 of the side portions 3. The foregoing various portions of the jacket 1 are each and all padded on the interior. This padding is commonly designated 8 in such views as Figs. 3, 4 and 8. Said padding comprises a soft substance and it is supplemented with stiffeners 9 (Figs. 6, 7 and 8) which are provided in any desired numbers and combinations. The meaning of this is that the various jacket portions are stitched on parallel lines 10, partly to insure keeping the padding 8 distributed as desired, and partly to produce pockets in which the stiffeners are held. The stiffeners may be distributed in alternate pockets or otherwise, as may be desired, in accordance with the degree of reinforcement required. These stiffeners occur only in the side portions 3 and their primary purpose is to protect the ribs of the wearer.

The margins of the frontal, side, shoulder, back and tail portions 2, 3, 4, 5, and 6 have a binding 11 which produces the desired finish to the garment. The frontal and shoulder portions 2, 4, are so shaped as to provide a neck opening 12 and side flaps 13 which define the margins of an opening 14. This construction enables the wearer to put the garment on and to take it off like any jacket, vest or coat. This obviates the discomfort and difficulty of slipping the garment over the head of the wearer.

A so-called armour plate 15 is mounted on the back and tail portions 5, 6 (Fig. 2). This armor plate preferably comprises a piece of leather which is cut to the desired shape and then stitched to the portions mentioned at 16. In cutting the armor plate V formations 17 are provided (Fig. 2), the purpose and advantage of these formations being to increase the linear distance of the stitching between the points 18.

In securing the tail 19 of the armor plate 15 to the tail portion 6 of the jacket, the stitching is so placed as to leave flanges 20 free. Corresponding flanges 21 are stitched at 22 to the terminals of the side portions 3. The various flanges are perforated and are then threaded with laces 23. These enable the player to make one adjustment whereafter the garment can be put on and taken off as many times as desired without ever having to touch the laces again. It is to be noted that when the terminals 7 are secured to the tail portion 6 by the laces, that the side portions 3 define the bottoms of arm openings 22a.

At the front the garment has other armor plates 24 (Fig. 1). In cutting these out of leather or some other preferred material, provision is again made of V formations 25. As before, the purpose of these formations is to increase the distance of the stitching between the points 26. Snap fasteners 27 are carried along one of the armor plates 24 (Figs. 1 and 7) and matching fasteners 28 are carried by straps 29 which are attached in common with the other armor plate. Usually there is a plurality of matching fasteners 28 so that if any adjustment is needed the player can make it at the front where the snap fasteners are easily accessible.

Thus far the description has related to a rib protector structure, although the jacket 1 which is identified with said structure, does include the shoulder and back portions 4, 5 which ordinary rib protectors do not have. The element herein which is chosen to be identified as the shoulder pad structure comprises the following parts; the bridge members 30 are superimposed upon the shoulder portions 4, as shown in Figs. 1 and 5. These bridge members are supplemented with cupped and closure shoulder plates 31, 32. The bridge members and the shoulder plates are made of stiff material. Leather may be used, but in the interest of lightness it has been found that moulded fiber serves the intended purpose admirably well. This substance is quite hard, yet it has a degree of flexibility, and because of the fact that in every instance it is bowed into shape, it has an extraordinary amount of strength in resisting crushing blows.

The bridge members 30 are ribbed at 33 to further reinforce them across the crests of the bows. The inner margins of the bridge members have a padded neck binding 34 which is slightly spaced away to the outsides of the neck opening 12. The padding avoids injury to the neck of the wearer.

The terminals 35 of the bridge members 30 are secured to the jacket by the stitching 18, 26, this being the same stitching which secures the front and back armor plates 24, 15. By extending the stitching along the V formations 17, 25 it is evident that the bridge members are anchored to the jacket far more firmly than if the stitching were carried straight across. Moreover, a crushing blow delivered directly on top of the bridge members will be sustained and resisted much more effectively by the stitching along the V formations than if it had to be resisted by stitching that ran straight across.

In applying the stitching 18, 26, the bridge members 30 are made to be spaced at 36 (Fig. 4) from the adjacent shoulder portion 4. This spacing affords an additional guard in that any crushing blow, as aforesaid, will not be delivered directly to the shoulder of the wearer. The blow will be dissipated in the stitching 18, 26 and has to be abnormally heavy to compress the bridge member to that extent necessary for it to touch the shoulder portion 4.

Hinges 37, 38 (Fig. 4) secure the cupped and closure plates 31, 32 to the outer and inner margins of the bridge members 30. These hinges usually consist of leather. Their lengths are such as to make the shoulder plates overlap. The plates 32 overlap the bridge member 30 and the cupped plate 31 acting as a closure for any spacing in between. The cupped plates are internally padded at 39.

From the foregoing description it will be understood that the primary purpose of the invention is to combine the erstwhile separate shoulder pad and rib protector in a unitary protective garment. It is immaterial how the combination is made, whether continuous as herein disclosed, or by means of less definite modes of attachment as by tapes, lacing and the like, to form the unit.

In conclusion it is desired to summarize some of the advantages derived from the use of the protective garment. The combined garment when put on always stays in proper place. This is important from the standpoint of the player. The continual up and down slippage due to the stretch of the elastic supports in known chest protectors when undue friction occurs on the shoulders, is totally eliminated. Further, the combined garment provides protection for the higher portion of the spine along the player's back, and is kept in place by means of the combined unit. With reference to the previously mentioned padding, the fact that internal padding is mentioned is not to be regarded as a restriction. The various portions of the jacket may be padded outside as well as inside, and the stiffeners may be made to extend entirely around the body.

I claim:

1. A combination shoulder and rib protector garment comprising a jacket which has shoulder portions, frontal portions depending from the shoulder portions, reinforced rib protector portions depending from said frontal portions and thereby being connected in combination with said shoulder portions, said rib protector portions curving around the sides of the jacket and having back terminals, and a back portion depending from the shoulder portions, terminating in a tail which is centered between and is coextensive with the terminals of the rib protector portions; means adjustably and loosely connecting said terminals to the side margins of the tail so that the chest-size of the garment can be changed, and fastening means from side to side of the frontal portions.

2. A protective garment comprising a padded jacket which includes frontal portions, rib protector portions, shoulder and back portions, the latter merging into a tail situated centrally of the rib protector portions, a stiff, jointed and overlappingly arranged shoulder pad structure which includes bridge members spaced upwardly from the shoulder portions and having terminals which overlie the frontal and back portions, front and back armour plates, and means securing said plates to the respective frontal and back portions, parts of the securing means commonly securing the bridge member terminals also, leaving the medial portions of the bridge members unsecured.
3. A protective garment comprising frontal or chest, shoulder protector portions, back and rib protector portions, divided centrally along the frontal and rib protector portions to define arm openings to enable donning and doffing the combined portions like a jacket, reinforcing front and back plates respectively overlying said frontal and back portions and having downwardly directed V-formations, bridge members arched over said shoulder protector portions in spaced relationship thereto and having V-terminals, and means securing said bridge members to the frontal and back portions at the margins of the respective V-formations and V-terminals as to firmly support said bridge members in said spaced relationship to said shoulder portions.

ALLEN E. KENNEDY. 15