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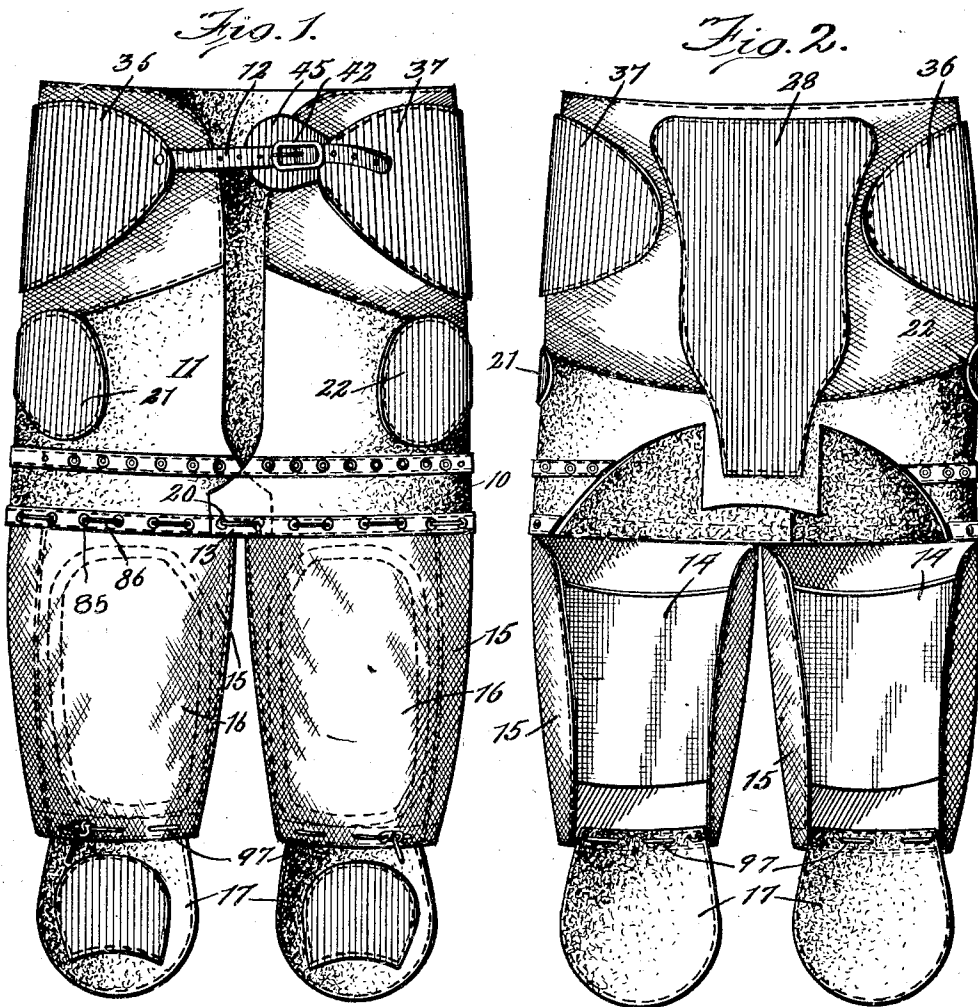
D. LEVINSON

1,803,335

PROTECTIVE APPARATUS FOR ATHLETES

Filed June 22, 1928

2 Sheets-Sheet 1



Inventor

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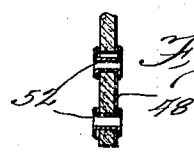
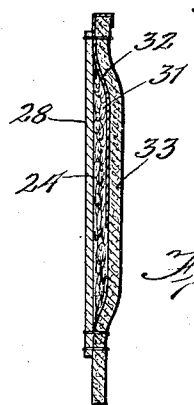
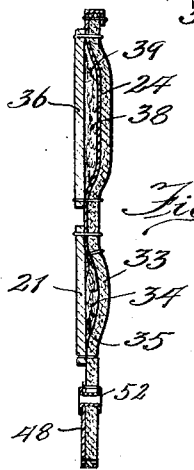
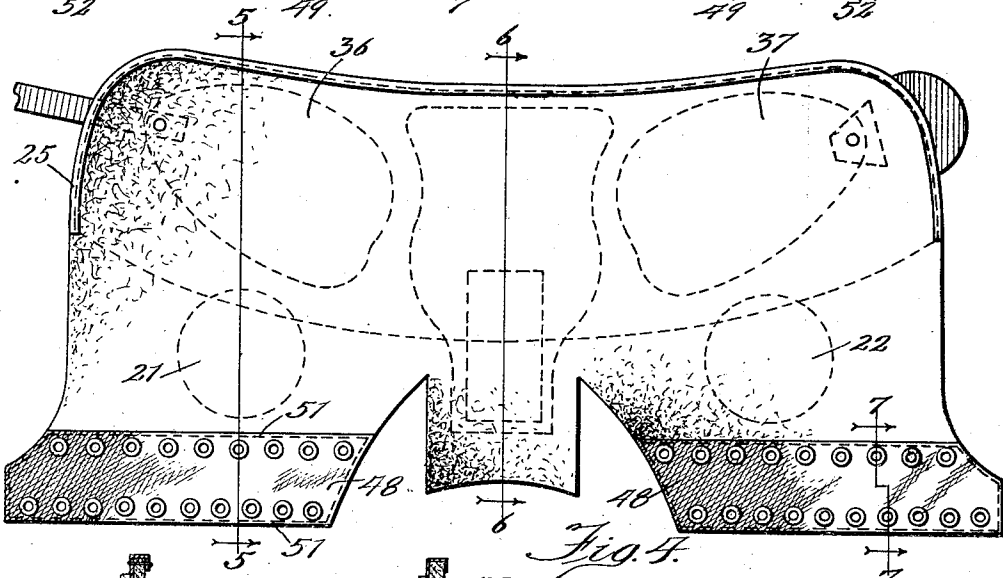
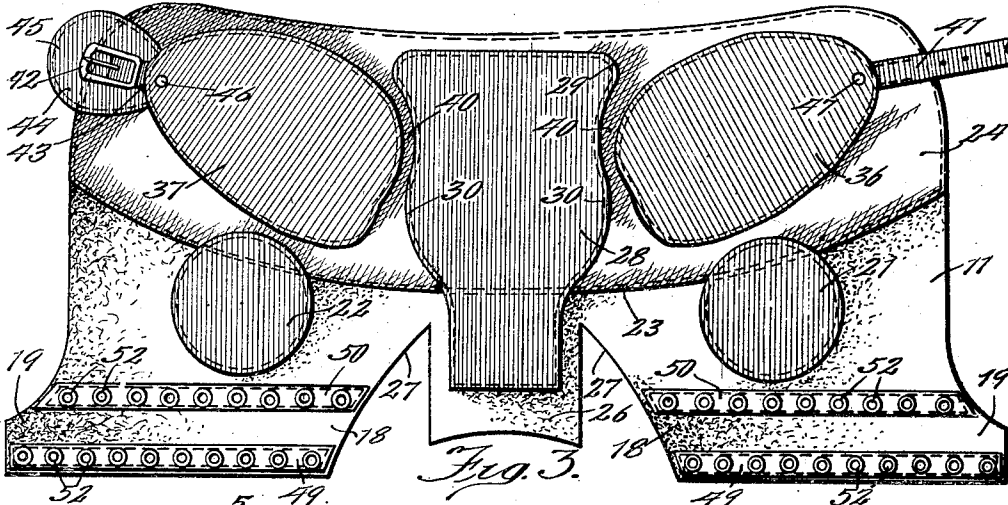
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2 Sheets-Sheet 2



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# UNITED STATES PATENT OFFICE

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## PROTECTIVE APPARATUS FOR ATHLETES

Original application filed February 14, 1927, Serial No. 167,976. Divided and this application filed June 22, 1928. Serial No. 287,497.

My invention relates to protective apparatus for athletes, being more particularly concerned with the provision of protective harness for football players.

5 One of the objects of my invention is the provision of a unitary protective harness for football players which may be supported upon the body of the player independently of football trousers or other garments, but  
10 which is also composed of novel elements which may be either worn separately or in conjunction with the various other parts of the harness.

Another object of my invention is the provision of a novel reinforced guard for football players, particularly adapted for protecting the thigh and having means for supporting said guard independently of the harness or trousers.

20 Another object of my invention is the provision of such a thigh guard having novel reinforcing means comprising a tension member which is light in weight, cheaply manufactured, and which does not require padding  
25 or other means on the reinforcing itself to prevent injury to players.

Another object of my invention is the provision of a novel unitary protective harness for football players, including a girdle with  
30 adjustable means for securing the upper part of said girdle about the body of the player, a common means for both adjustably securing the lower part of the girdle about the hips  
35 of the wearer and for securing the same to a pair of thigh guard supports.

Other objects and advantages of my invention will be apparent from the following description and from the accompanying drawings, in which similar characters of reference  
40 indicate similar parts throughout the several views.

The present application is a division of my prior application, Serial No. 167,976, filed February 14th, 1927, for Protective apparatus for athletes, in which the claims are directed to the novel thigh guard and its support.

50 The present application relates to the football harness as a whole, and to the girdle in particular,

Referring to the drawings, of which there are two sheets:

Figure 1 is a front elevational view of an embodiment of my football harness,

Figure 2 is a rear elevational view of the same, 55

Figure 3 is an elevational view of the girdle portion spread out to form a flat surface,

Figure 4 is a similar view of the inside of the girdle portion, 60

Figure 5 is a detailed cross sectional view of the line 5—5 of Figure 4,

Figure 6 is a similar view of the line 6—6 of Figure 4,

Figure 7 is a similar view of the line 7—7 of Figure 4. 65

Referring to Figures 1 and 2, 10 indicates in its entirety my football harness which is adapted to be supported upon the body of the wearer without additional support from other garments, such as, trousers, etc., and my harness is preferably worn underneath football trousers which may be adapted to fit the wearer very closely, having no additional padding, projecting parts  
70 or loose folds of fabric which may be grasped by opponents during the play. If desired, the trousers may be made of closely fitting fabric which is smooth and slippery to the touch, thereby aiding the player in eluding the grasp of his opponents. 75

Referring to Figure 1, 11 indicates a girdle portion which is adapted to be drawn closely about the body of the player by means of the strap 12 and by the adjustable lacing at 13. Attached to the girdle 11, but supported independently upon the limbs of the player by means of an elastic band 14, are the thigh guard supporters 15 having a pocket therein to support the thigh guards 16. Supported at the lower edge of the thigh guard supporters 15 are the knee pads 17, and it will be noted that while all of these parts are essential to a complete protective harness, any of the same may be worn separately, if so desired, by the provision of separate means for supporting each of the same upon the body of the wearer. For this purpose the trousers may be provided with a transverse raceway consisting of a tape having a plurality of spaced apertures 80 85 90 95 100

located at proper height within the trousers to attach the pads 17 by means of the usual lacing. The trousers may also be provided with a pocket in front of each knee which is adapted to receive the knee pad 17, thereby providing separate supporting means for each of the elements of the harness.

Having briefly outlined the different parts of my harness, I shall now describe in detail each of these elements which, though separable, I prefer to use together, each of the elements co-operating with the other to better hold the harness in place upon the body of the wearer.

The girdle portion 11 comprises a thick piece of felt of the shape shown in Figure 3, which is adapted to extend almost entirely about the trunk of the player, leaving a slight opening between the edges in front as shown in Figure 1. The girdle 11 has two downwardly extending legs 18 which have outwardly projecting portions 19 at each side so that the portions 19 may overlap when the harness is worn, the apertures 20 providing an adjustable fastening means for the lower portion of the girdle.

In order to provide adequate protection for the upper and forward points of the hip-bones or ilia, the girdle 11 is provided at 21 and 22 with shields comprising substantially circular pieces of thick leather which may be stitched to the girdle 11 at such points as to locate these shields directly above the upper and forward points of the hip-bones or ilia. It will thus be observed that the location of the waistline is substantially at the seam 23 and that the girdle 11 is adapted to extend upward to a point considerably above the lower ribs.

The upper portion of the girdle 11 is preferably covered with a layer of strong and closely woven fabric as at 24 extending completely across the upper portion of the girdle 11, the fabric being turned under and stitched to the felt as at 23 and turned about the exterior edge of the felt as at 25 where the edge of the fabric may again be folded under and fixed to the felt by stitching through both the felt and the fabric on both sides of it.

In order to provide additional protection for the back and the base of the spine, the girdle may have a downwardly projecting portion 26 bounded by the V shaped edges 27 which permit a maximum of flexibility to the limbs of the wearer, so that the harness may protect these parts without binding upon the player. Extending over the upper central portion of the girdle to the downwardly projecting portion 26 is another leather shield 28 of substantially blunt wedge shape having rounded corners 29 and intermediate rounded edges 30.

In order to provide additional padding to distribute the impact of blows received upon the shield, I provide a felt pad 31 which may

be of slightly less area than the shield 28, having outwardly beveled edges 32, and the pad 31 is preferably inserted between the fabric 24 and the shield 28, being retained therein by the stitching about the exterior edge of the shield 28. The hip pads 21 and 22 may likewise be provided with a felt pad 34 of substantially the same shape as the hip pads but of smaller size, having beveled edges 35 and inserted between the hip pads 21 and 22 and the felt 33.

The upper girdle portion 24 may also be provided with a pair of oblong leather shields 36 and 37 extending from a point adjacent the wedge shaped shield 28 to a point near the joined edges of the girdle. The shields 36 and 37 are particularly adapted to protect the lower ribs of the player and they are also preferably provided with a felt pad 38 of slightly smaller size, but of similar shape, and having beveled edges 39, the pad 38 being preferably inserted between the fabric 24 and the leather shield 36 and retained therein by the stitching about the edges of the shields 36 and 37.

By providing the shields 21 and 22, 28, 36 and 37 of thick leather, the relatively stiff character of the shield distributes the force of the impact over a substantial area and while the flexible qualities of the leather permit the wedge shaped shield 28 to curve inwardly to fit the back of the wearer and the shields 36 and 37 are also disposed in such manner that they may curve inwardly about the trunk of the wearer, leaving no projecting parts to form surfaces upon which an opponent may grasp the player. It should be noted that though the harness is worn beneath other garments, it is important nevertheless that the harness fit closely about the body of the wearer without tending to project at points or causing the garments to project over the body.

The separation of the upper shields 28, 36 and 37 into the three parts of this shape permits a greater flexibility at the points 40 between the shields so that the upper portion of the girdle may conform closely to the body of the player. The provision of beveled edge padding beneath the leather shields further tends to distribute the force of impact upon the shields and to provide additional protection where needed and the pad is preferably inserted between the fabric and the shield in order that the fabric may further reinforce the felt girdle, the tendency of which is to bulge inwardly as shown in Figures 5 and 6.

The girdle may be provided upon one of the upper edges with a perforated strap 41 and upon the other edge with the buckle 42 supported by means of a strap 43 and shielded from the body by a flexible leather tab 44. The leather tab 44 may be padded upon its rear side with a layer of felt se-

cured to the same by an exterior line of stitching 45 and the tab 44 and strap 43 as well as the strap 41 may each be secured to the girdle by stitching under the shields 37 and 36 respectively and by rivets 46 and 47. The rivets employed should preferably be the type of rivet having smooth exterior surfaces, and it will be observed that by the construction shown the tension placed upon the girdle by the strap 41 and buckle 42 is not borne solely by the felt 33 and fabric 24, but by means of the shields 36 and 37; this force is distributed over a substantial area of the girdle, thereby making a very durable and lasting construction.

The girdle 11 is provided at each of the lower legs 18 with an internal strip of strong, closely woven fabric 48 and upon the exterior side with a pair of strips of the same material 49 and 50 upon each leg. All of the strips may be fixed upon the felt 33 by four lines of stitching as at 51. The fabric and felt may then be pierced at spaced intervals along the strips 49 and 50 and provided with standard eyelets 52 in such manner as to provide a plurality of reinforced apertures at regularly spaced intervals for the purpose of lacing the lower legs of the girdle to the thigh guard supporters which are described hereinafter.

The thigh guard supporter comprises a pocket formed from a plurality of pieces of strong, closely woven fabric, having elastic tension means 14, secured to both edges of the pocket for holding the same closely upon the limb of the player.

The pocket is provided with thigh guard 16 comprising a curved fibre member, reinforced and protected in a novel manner, which is completely described in my prior application above mentioned.

The upper two edges of the pockets are provided with a plurality of eyelets, registering with the eyelets 52 of the girdle, and the girdle may be secured about the hips of the player and adjustably secured to the thigh guard pockets by the same lacing passing through the eyelets on the girdle and thigh guard pocket.

The thigh guard supporter is thus capable of being independently supported upon the leg of the player by the elastic 14, and when the upper edge of the thigh guard supporter is laced to the girdle 11 by means of the apertures 52, the thigh guard supporter performs the additional function of holding down the girdle, which might otherwise tend to slide upward.

The double rows of apertures 52 provide adjustable means for the relative positions of the girdle and thigh guard supporter, as well as providing adjustable means for securing the girdle about the hips, and the apertures 85 at the lower edge of the thigh guard supporter provide means for supporting the

knee pads 17. The same lacing 86 which attaches the thigh guard supporter to the girdle 11 also serves to close the end of the pocket, thereby retaining the thigh guard in fixed position within the pocket.

While I prefer to support my thigh guards as shown, I desire it to be understood that the guards may also be supported in pockets upon the football trousers, or the football trousers may be provided with raceways, consisting of strips of tape, having eyelets, and the pocket being likewise provided with eyelets along the side seams of the pocket, the pocket may be laced to the inside of the trousers. If desired, the elastic 56 may also be made adjustable by substituting an appropriate raceway for one of the seams, so that the tension of the elastic may be adjusted by lacing.

The knee pads 17 comprise thick felt members, having a reinforcing pad on their forward surface, as shown, and having fabric stitched to their rear surface to form a pocket for holding additional padding to suit the individual needs of the player. The knee pad pocket is also closed, and the knee pad secured to the thigh guard supporter by lacing 97, and as the knee pads themselves form the subject of a divisional application, they will not be described in detail herein.

It will thus be observed that I have invented a novel flexible protective harness for football players, which is adapted to fit closely upon the body of the player, and to conform to the curvature of the body.

My football harness may be worn beneath relatively tight football garments without producing any projections, or the like, which may be grasped by the opponents during the play.

While I have illustrated and described a specific embodiment of my invention, many modifications may be made without departing from the spirit of the invention, and I do not wish to be limited to the precise details of the construction set forth, but desire to avail myself of all changes within the scope of the appended claims.

Having thus described my invention, what I claim is new and desire to secure by United States Letters Patent is:

1. A protective harness for football players comprising a girdle formed of an integral piece of thick felt, and adapted to extend about the trunk of a player from points below the hips to points above the lower ribs, a strap for drawing the upper part of said girdle in to conform with the waist of the wearer, a plurality of pieces of thick and flexible leather stitched on said felt to protect the vital parts of the player, and adjustable means for securing the lower part of said girdle together closely about the hips, the intermediate parts of said girdle between the top and bottom being unsecured.

2. A protective harness for football players comprising a girdle formed of an integral piece of thick felt, and adapted to extend about the trunk of a player from points below  
 5 the hips to points above the lower ribs, a strap for drawing the upper part of said girdle in to conform with the waist of the wearer, said girdle being formed with downwardly extending integral leg protecting extensions  
 10 and a downwardly extending integral spine protecting extension separated at its end from said leg extensions, a pair of kidney pads carried by the upper outside of said girdle, and a  
 15 spine pad located between said kidney pads and having inwardly curved edges adjacent said kidney pads.

spine pad located between said kidney pads and having inwardly curved edges adjacent said kidney pads, and tapered felt pads interposed between and confined by said girdle and kidney pads.

In witness whereof, I hereunto subscribe my name this 6th of June, 1928.

DAVID LEVINSON.

3. A protective harness for football players comprising a girdle formed of an integral  
 20 piece of thick felt, and adapted to extend about the trunk of a player from points below the hips to points above the lower ribs, a strap for drawing the upper part of said girdle in to conform with the waist of the wearer, said  
 25 girdle being formed with downwardly extending integral leg protecting extensions and a downwardly extending integral spine protecting extension separated at its end from said leg extensions, a pair of kidney pads  
 30 carried by the upper outside of said girdle, a spine pad located between said kidney pads and having inwardly curved edges adjacent said kidney pads, and a pair of hip socket  
 35 joint pads, one located below each of said kidney pads, carried by said girdle.

4. A protective harness for football players comprising a girdle formed of an integral  
 40 piece of thick felt, and adapted to extend about the trunk of a player from points below the hips to points above the lower ribs, a strap for drawing the upper part of said girdle in to conform with the waist of the wearer, a plurality of pieces of thick and flexible leather  
 45 stitched on said felt to protect the vital parts of the player, and adjustable means for securing the lower part of said girdle together closely about the hips, the intermediate parts of said girdle between the top and bottom  
 50 being unsecured, comprising oppositely projecting overlapping extensions formed on the lower front of said girdle and provided with lacings.

5. A protective harness for football players comprising a girdle formed of an integral  
 55 piece of thick felt, and adapted to extend about the trunk of a player from points below the hips to points above the lower ribs, a strap for drawing the upper part of said girdle in to conform with the waist of the wearer, said  
 60 girdle being formed with downwardly extending integral leg protecting extensions and a downwardly extending integral spine protecting extension separated at its end from said leg extensions, a pair of kidney pads carried  
 65 by the upper outside of said girdle, a

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