Dec. 9, 1930. D. LEVINSON 1,784,148

GUARD FOR ATHLETES

Filed March 23, 1929

Fig. 1

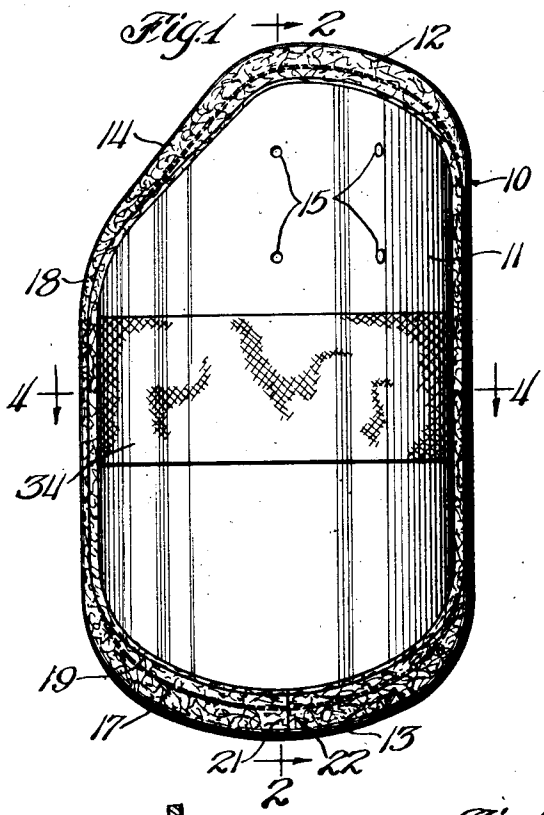


Fig. 2

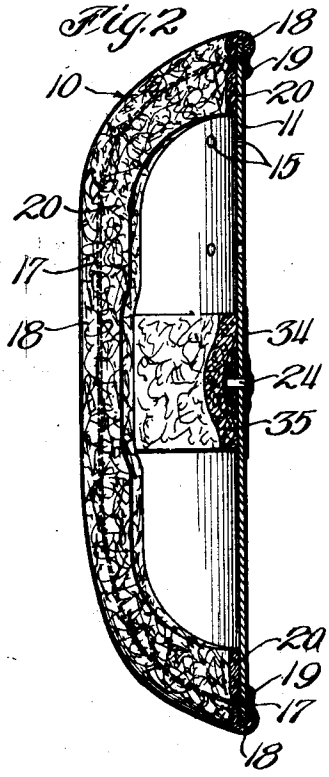


Fig. 3

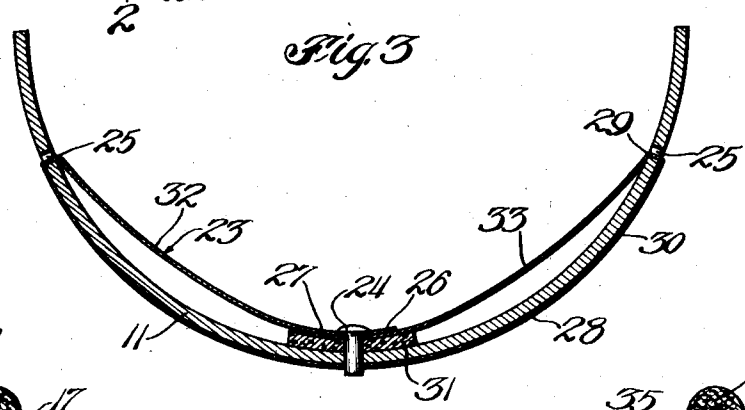
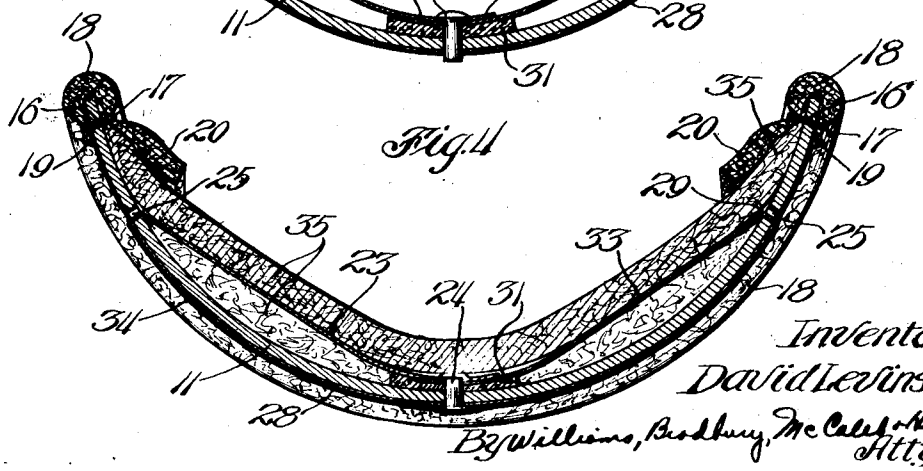


Fig. 4



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UNITED STATES PATENT OFFICE

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GUARD FOR ATHLETES

Application filed March 23, 1929. Serial No. 349,314.

The present invention relates to guards for athletes, and is particularly concerned with the provision of an improved construction and method of manufacture of the guard disclosed in my prior application, Serial No. 167,976, filed February 14, 1927.

One of the objects of the present invention is the provision of a more simple and more easily manufactured form of the guard disclosed in said prior application, and the provision of a novel method of manufacture of guards of this type.

Another object of the invention is the provision of an improved form of thigh guard, including a curved guard member and a tension brace, in which the brace is automatically tensioned when it is secured to the guard member.

Another object of the invention is the provision of an improved guard construction, including a tension member passing about a portion of the guard and secured thereto by a rivet in such manner that the tension member is tensioned by the act of riveting the tension member upon the guard.

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

Referring to the single sheet of drawings;

Fig. 1 is a front elevational view of a guard constructed according to the present invention;

Fig. 2 is a sectional view taken on the plane of the line 2—2 of Fig. 1;

Fig. 3 is a sectional view of an incomplete guard illustrating the same at one point during its construction;

Fig. 4 is a similar sectional view of the completed guard taken on the plane of the line 4—4 of Fig. 1.

The present guard is adapted to be worn in the manner disclosed in my prior application, being carried by a pocket on the football trousers, by lacing the same to the football trousers or by a pocket elastically supported upon the leg of the wearer.

Referring to Figs. 1 and 2, 10 indicates the preferred construction of my thigh guard in its entirety, and the guard preferably comprises a laterally curved sheet 11 of relatively stiff fiber board, the curvature of the sheet being substantially concentric with the curvature of the limb of the wearer, adapted to be protected by the guard.

It is, of course, contemplated that the guard may be constructed in a plurality of different sizes, so that a player may select a size which is most nearly adapted to provide the desired fit.

The guard member 11 is preferably slightly oblong in shape, having its longest dimension parallel to the elements of curvature of the guard, and the top 12 and bottom 13 are provided with curved outer edges to eliminate any sharp corners. The inner and upper corner 14 may be cut away diagonally, as shown in Fig. 1, to prevent interference of the guard with parts of the body of the wearer, and the guard may be provided with a plurality of apertures 15 for use in lacing the guard to the trouser leg or to the pocket in which it is supported.

The outer edge of the guard member 11 is provided with a line of spaced apertures 16, extending along the edge of the guard and adapted to receive the stitching 17, which secures a protective covering 18 of felt, or the like, about the edge of the guard. The felt 18 may comprise a strip of relatively thick felt preferably wider than necessary to cover the edge, and the strip is stitched to the guard with its outer edge 19 extending just past the stitching 17, and its inner edge 20 projecting considerably beyond the stitching 17 to form additional padding adjacent the limb of the wearer.

It will thus be observed that the felt 18 is curved around the outer edges of the guard and stitched in place to provide both a protective covering for the sharp edges and to provide a layer of padding of considerable area on the inner part of the guard for engagement with the leg of the wearer.

Referring to Fig. 1, it will be observed that one end 21 of the felt strip 18 is located at the bottom of the guard, and the felt strip extends completely about the outer edge of

the guard until the opposite end 22 is located in abutting relation to the end 21.

The guard member 11 is preferably provided with bracing means which may comprise one or more tension members 23, and in the present embodiment, the tension member 23 is preferably passed around a portion of the guard itself and secured thereto by a single fastening means which may comprise the rivet 24. In order that the tension member 23 may be tensioned around a part of the guard 11 transversely to the curved portion without exposing the tension member at the edges of the guard, I prefer to provide the guard with a pair of slots 25 extending vertically of the guard and located adjacent the opposite vertical edges of the guard.

The tension member 23 may consist of a band or strap of fabric, leather, or metal, such as relatively thin spring steel, and the band 23 may be located upon the guard as follows: Both ends 26 and 27 of the band, which is cut to proper size, are passed through the slots 25 from the front of the guard, the band being pulled through the slots 25 until the outer part 28 of the tension band 23 conforms to the curvature of the guard. If desired, the guard 11 may be slightly flattened during this operation, and in the preferred form, the band 23 comprises a spring steel member which may be bent over at 29 just inside of the guard 11 at the slots 25 to form hooks in the band, and when the guard 11 returns to its predetermined curvature, the outer portion 28 of the band will be tensioned against the outer curved surface 30 of the guard.

In the guard disclosed in my prior application, the reinforcing band corresponding to the band 23 was secured by a plurality of separate rivets in such manner that the tension band was adapted to resist flattening of the guard or further curvature of the guard, but considerable difficulty is involved in the fastening of the ends 26 and 27 of the band to the guard under sufficient tension to immediately resist forces tending to change the curvature of the guard.

The prior construction also involves the use of a plurality of rivets which entails more labor and material than has been found necessary in a guard of the present construction.

The present method is also adapted to effect a greater tension of the reinforcing band about the guard without the necessity for particular effort on the part of the operator in the securing of the tension, and the guards constructed according to the present invention may be manufactured in large quantities at a low cost, so that they are within the reach of a vast number of the public, including amateurs and persons of moderate means, who use such articles.

In order that the band may be simultaneously secured and tensioned upon the guard, the guard is preferably provided with a compressible spacing member 31 located between the ends 26 and 27 of the band and the inner surface of the guard 11. The spacing member 31 may comprise a relatively thick piece of leather of any convenient shape and adapted to be compressed by the riveting operation which is performed upon the rivet 24.

The leather spacer 31 may be secured to the inner surface of the guard 11 by glue in order to hold it in place during the process of construction, after which the ends 26 and 27 of the band 23 may be pressed against the leather spacer by the thumbs of the operator applied at the points 32 and 33 of the band. The operator may then hold the guard with its spacing member 31 and band 23 in the proper position under a punching machine, simultaneously punching an aperture through the ends 26 and 27 of the band 23, the spacing member 31, the guard 11, and the outer curved portion 28 of the band 23.

The guard may then be removed from the punching machine, the operator still holding the parts in the predetermined position, and the rivet 24 may be put in place as shown in Fig. 3 and riveted by a riveting machine, as shown in Fig. 4. During the riveting operation, the compressible spacing member 31 is compressed by the rivet 24 and the portions 32 and 33 of the band 23 are drawn from the curved positions as shown in Fig. 3 to the position shown in Fig. 4, where the portions 32 and 33 extend along the lines of chords across the arcs of curvature of the guard member 11.

As a matter of fact, the portions 32 and 33 of the tension band may not be exactly straight, depending upon the relative stiffness of the band employed, but it is found that by means of the improved construction shown, sufficient tension may be secured to brace the guard against any forces tending to change its curvature.

It should also be noted that the use of a single fastening means reduces the cost of manufacture, and the cost of material, and enables the operator to tension the band along its entire length in a single operation.

The outer exposed surface of the portion 28 of band 23 may be covered by gluing a strip of fabric 34 over the metal band, in order to prevent contact of the band with the clothing, and to prevent the rusting of the band when exposed to the moisture of the body of the wearer. The inner portions 32 and 33 of the band 23 may also be covered by a relatively thick strip 35 of felt, which is glued to the band 23 and to the fiber board 11 above and below the band. The ends of the felt strip 35 and the ends of the fabric strip 34 are preferably secured between the felt strip 18 and the fiber board 11 by means of the same stitching 17, which secures the

strip 18. The glue provides a form of waterproofing for the metal band which is protected by the felt or fabric.

Referring to Fig. 4, it will be noted that the portions 32 and 33 of the tension band project slightly inside the contacting surface of the padding strip 20. The felt padding 35 is thus adapted to engage the limb of the wearer at these points; tending to further curve the portions 32 and 33 of the tension band, so that as the guard is pressed more firmly against the limb of the wearer, it is securely seated upon the limb of the wearer without possibility of rocking.

It will thus be observed that I have invented a novel method of manufacture of the thigh guard of the above mentioned application, and an improved form of construction, by means of which the tension band may be more securely fastened about the guard with an initial tension capable of resisting any forces which tend to deform the guard.

The present invention includes the use of tension bands of various materials, but most satisfactory results have been secured by the use of spring steel of approximately gauge No. .014.

The present invention may also be manufactured more cheaply than the devices of the prior art, and the guard is considerably lighter than the devices of the prior art, which include bracing members of metal, which brace by virtue of their stiffness rather than their tensile characteristics.

While I have illustrated a preferred 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 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 Letters Patent of the United States is:

1. In an athletic guard, the combination of a relatively stiff guard member curved to the general contour of a member to be protected, with a metal tension member extending along a chord of an arc of curvature of said guard member, a rivet for simultaneously tensioning said tension member and securing the same to said guard, and a compressible washer between said tension member and said guard and adapted to be compressed in said tensioning operation.

2. In a foot ball guard, the combination of a curved fiber guard member, with a protective edge covering curved about the edge of said guard member and stitched thereto, a tension member comprising a metal band passing about a part of said guard and across an arc of curvature of said guard, a single fastening means for securing said band to said guard and tensioning said band, and a compressible member between said band and said guard and adapted to be compressed in the tensioning of said band.

In witness whereof, I hereunto subscribe my name this 16th day of March, 1929.

DAVID LEVINSON.