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H. GOLDSMITH

FOOTBALL PROTECTIVE HARNESS

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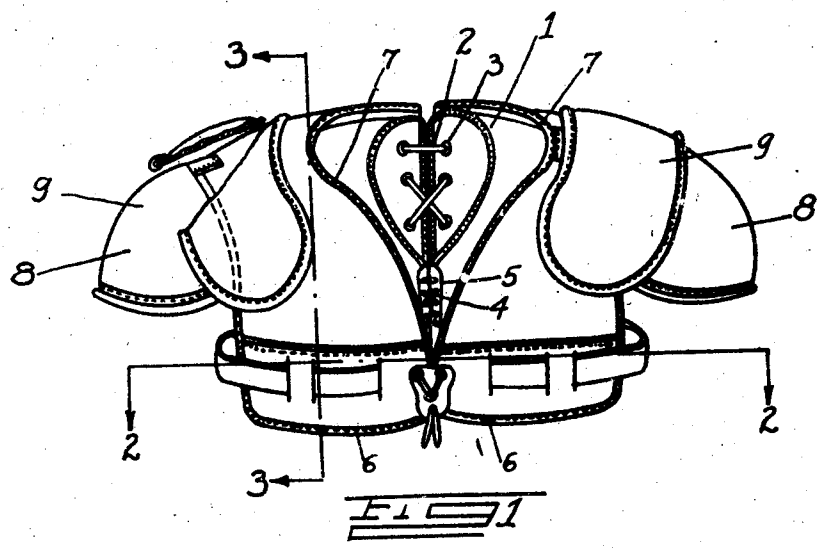


FIG 1

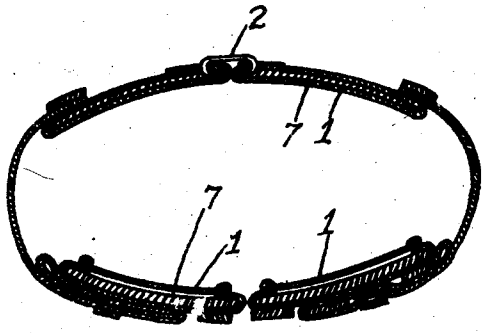


FIG 2

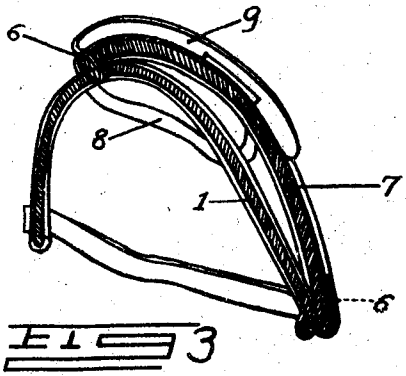


FIG 3

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UNITED STATES PATENT OFFICE.

HUGO GOLDSMITH, OF CINCINNATI, OHIO, ASSIGNOR TO THE P. GOLDSMITH SONS COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO.

FOOTBALL PROTECTIVE HARNESS.

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My invention relates to protective harness for athletic contests and particularly to protective harness for football players.

It is the object of my invention to provide protective harness which will have members which will be so disposed as to take the initial shock of a blow and in which these members will be so contoured and mounted on a supporting structure as to evenly distribute the impulse of the shock on the supporting structure which is secured to whatever portion of the body the members are designed to protect.

I contemplate the use of molded or shaped fiber or some such stiff outer members which may, if desired, be covered with cloth or leather and I support these outer members in such position that the initial shock of a blow will be so well distributed that the force of the blow will never be felt directly under the place on which it has fallen.

Referring to the drawing in which I have illustrated my invention as applied to a shoulder and chest protector:

Figure 1 is a front perspective of the chest and shoulder protecting harness.

Figure 2 is a horizontal section through the harness as indicated by the lines 2—2 in Figure 1.

Figure 3 is a vertical section through the harness as indicated by the lines 3—3 in Figure 1.

Generally indicated at 1 I have shown a supporting structure which may suitably be made of canvas or leather which is shaped like a vest open at front and back with the laces 2 and eyelets 3 providing a means of lacing the vest in back and the laces 4 and eyelets 5 providing a means of lacing it in front. The means of lacing and whether the inner or supporting vest-like garment is open at the front or back is immaterial as it forms no part of my invention. Onto the vest is secured by rows of stitching 6 the molded fiber pieces 7 which extend from the front lower edge of the vest-like member up over the shoulders to the back side of the portions overlying the shoulder blades. These pieces are contoured to a greater curvature than will occur on the vest-like portion when it is adjusted on the body so that the only positions of actual contact between the molded pieces and the undervest are at the lower side of the front and at the back of the shoulders. The remaining portions of the molded pieces are thus suspended in bulging position away from the vest so that an air space exists between the fiber pieces and the vest over the portions of the body which are most susceptible to shock such as the clavicle and neck bones. Further by attaching the shoulder guard caps 8 and the cover caps 9 which overlaps the shoulder caps to the molded pieces, I provide a novel method of supporting these guard caps and shoulder caps which tend to diminish very perceptibly the direct shock of a blow directed sideways against the top of the shoulder.

In football harness for protecting the shoulders and chest and collar bones it is of great importance that lightness of structure and ease of movement within the harness should be accompanied by great resistance to direct blows. Practically in every play each player contacts with some other player and his chest and shoulders are the main portions of his body which have to withstand the shock of the engagement. By so arranging my molded pieces so that no direct blow will fall on the clavicle or the shoulder and neck joints, I have accomplished a step in protecting athletes from injury of no small importance.

While I have shown my molded pieces as secured at both front and back edges to the supporting vest-like structure I consider the provision of an integral piece which will fit over the neck of a player and which is secured only in front or back much like a horse collar well within the range of mechanical equivalency.

It should further be understood that although I have illustrated my invention as applied to a chest and shoulder protector that it is equally applicable to protective harness adapted to fit other portions of the body. What I consider the basic idea embodied in my novel structure is the provision of outer protecting members molded to retain permanent curvatures greater than the curvatures of that portion of the body which they are designed to protect, in combination with supporting members provided with means for securing the supporting

members about the body or portions thereof, the molded members being secured to the supporting members at their edges or an edge only.

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

1. An athlete's protective vest, having pieces which extend from the front lower side of the vest up over the shoulders to the back side of the shoulder portions of the vest, said pieces of stiff material contoured to a greater curvature than will occur on the vest when it is adjusted on the body, said pieces supported on the vest only at their ends so that portions of the pieces intermediate the ends will be spaced from the vest, and the clavicles and neck bones of a wearer thereby protected.

2. An athlete's protective vest having pieces which extend from the front lower side of the vest up over the shoulders to the back side of the shoulder portions of the vest, said pieces of stiff material contoured to a greater curvature than will occur on the vest when it is adjusted on the body, said pieces supported on the vest only at their ends so that portions of the pieces intermediate the ends will be spaced from the vest, and the clavicles and neck bones of a wearer thereby protected and curved shoulder guard members attached to the pieces in the intermediate spaced portions thereof.

3. In an athlete's protective harness, stiff portions which extend from the lower side of the harness in front up over the shoulders to that part of the harness overlying the shoulder blades in back, in combination with means for supporting said portions at the ends thereof, said portions having spaced portions intermediate the ends contoured to a greater curvature than said supporting means, and said supporting means comprising flexible portions adapted to conform to the shape of the body.

HUGO GOLDSMITH.