Nov. 8, 1932. G. S. WARNER 1,887,473

SHOULDER PROTECTOR

Filed April 8, 1932

Fig. 1.

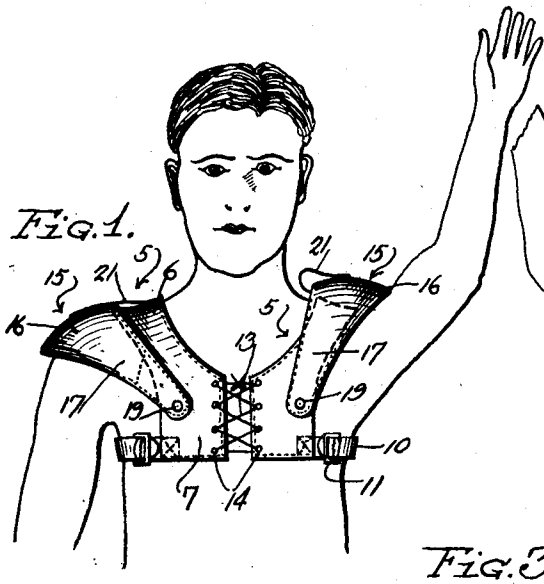


Fig. 2.

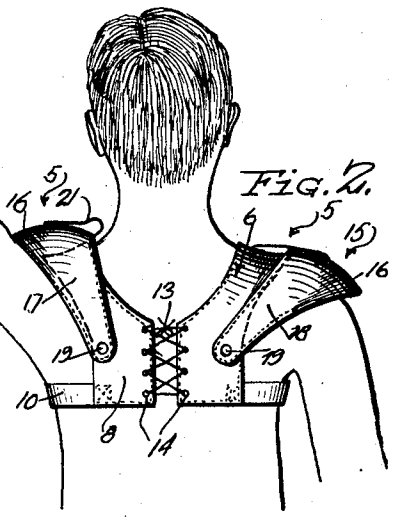


Fig. 3.

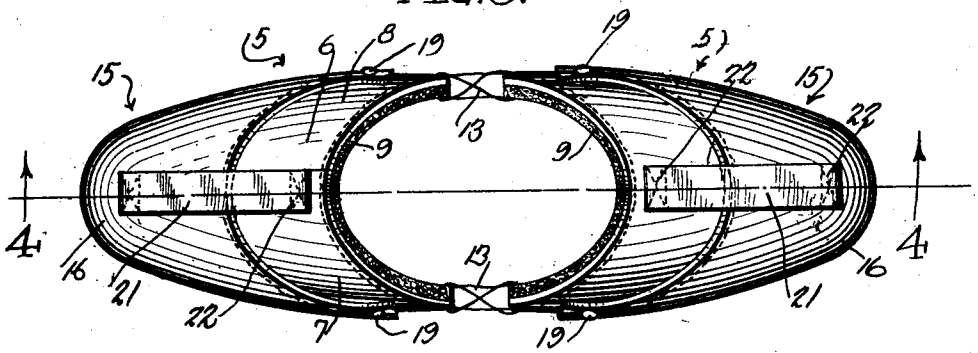
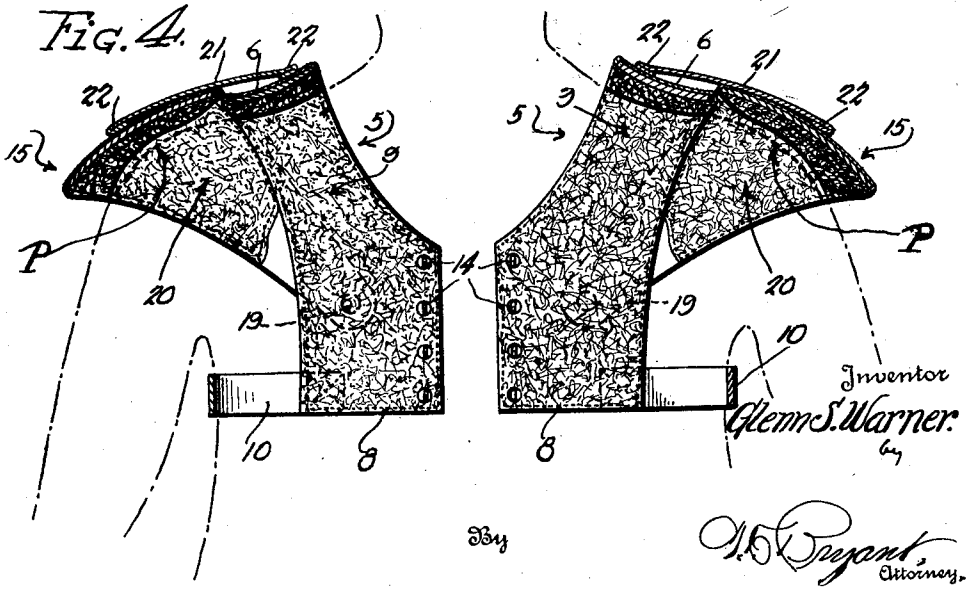


Fig. 4.



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UNITED STATES PATENT OFFICE

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SHOULDER PROTECTOR

Application filed April 8, 1932. Serial No. 604,061.

This invention relates to certain new and useful improvements in shoulder protectors.

The primary object of the invention is to provide a shoulder protector to be worn during the playing of games, such as football and the like for the protection of the shoulders of the wearer and particularly the high points of the shoulders, the same being of a construction to permit free body and arm movements.

A further object of the invention is to provide a shoulder protector comprising a body harness or pad to be secured to the shouldered portion of the body with shoulder pads having front and rear portions pivotally mounted on the front and rear sides of the body pad with the upper ends of the shoulder pads normally slightly spaced from the high points of the shoulders of the wearer so that in the presence of sudden impact, shocks absorbed by the shoulder pads are transmitted to the body pad for the relief of undue pressure on the high points of the shoulders of the wearer.

With the above and other objects in view that will become apparent as the nature of the invention is better understood, the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

In the drawing:—

Figure 1 is a schematic view showing the protection in front elevation on the shoulders of a person with one arm raised to illustrate freedom of arm movement with the adjacent shoulder pad moved on its pivotal mounting;

Figure 2 is a rear elevational view, similar to Figure 1;

Figure 3 is a top plan view of the two sections of the shoulder protector placed together at their front and rear sides; and

Figure 4 is a vertical longitudinal sectional view taken on line 4—4 of Figure 3, showing the shoulder pads normally spaced from the high points of the shoulders of the wearer.

In the accompanying drawing which shows a preferred embodiment of the present invention, there is illustrated a shoulder protector comprising two similarly constructed members adapted to be placed on the body of a person to overlie the high points of the shoulders, each member of the shoulder protector being designated in general by the reference numeral 5 and including a body harness or pad having a shoulder portion 6 carrying breast and back portions 7 and 8 respectively. Each body pad section comprising the parts 6 to 8 may be constructed of any suitable material, preferably of a laminated character embodying outer layers of stiff non-buckling material with inner linings 9 of a soft padded character to render the wearing of the protector more comfortable. The outer lower edges of the front and back portions 7 and 8 of the body pad are connected by non-elastic arm pit straps 10 provided with adjusting buckles 11 so that the shoulder protector may be adjusted to persons of different sizes.

The two sections of the shoulder protector are adapted to be connected together at the adjacent vertical edges of the front and back portions 7 and 8 of the body pad by means of an elastic cord 13 laced through openings 14 in the edges of the body pad portion as shown in Figures 1 to 3, the elastic cord connection 13 between the sections permitting chest expansion of the wearer in response to breathing and other body movement. The non-elastic arm pit straps 10 limit movement of the two sections of the body pad toward each other while the elastic cords permit limited separating movement for chest expansion and the like.

Each section of the body pad 5 has a shoulder pad 15 attached thereto that includes an arched shoulder portion 16 having front and rear arms or legs 17 and 18 respectively tapering toward their points of attachment to the front and back portions 7 and 8 of the body pad, the connections consisting of pivot pins or rivets 19 or tie or laced so as to allow pivotal movement. Each shoulder pad is of a laminated character embodying a layer of stiff normally unbendable material covered with an outer layer of leather, canvas or other suitable material and an inner layer 20 of a padded character for the comfort of the wearer. As illustrated more clearly in Figure 4,

the arched shoulder portions 16 of the shoulder pad 15 are normally spaced from the high points of the shoulders as indicated at P, the purpose of which will presently appear. Each shoulder pad 15 is connected to its associated body pad section at the shoulder portion 6 thereof by means of a flexible strap 21 secured at its ends to said parts as indicated by the reference character 22. These straps 21 permit free pivotal movement of the shoulder pads toward the neck of the wearer as illustrated in Figures 1 and 2 as well as freedom of movement of the arms of the wearer and they also operate to limit outward pivotal movement of the shoulder pads over the shoulders of the wearer. The shoulder pads 15 are of dimensions to permit movements thereof overlapping the shoulder portions 6 of the body pad sections.

The object of this invention is to transfer shocks, impacts and the like directed toward the high points P of the shoulders of the wearer and absorbed by the shoulder pads 15 to the body pad sections of the protector. The shoulder pads 15 being normally slightly spaced from the high points P of the shoulders of the wearer to receive the shocks and transmit them to the body pad section to be absorbed by said section as well as the arm pit straps 10 that operate to hold the body pad sections against movements toward each other with the possible exception of such movements that may be occasioned by the inherent cushioning characteristics present in the body of the wearer. The pivotal mounting for the shoulder pads 15 permits free arm movement so that the wearer of the shoulder protector is not in any way impeded in body movement required in the playing of games, especially football. The apparatus provides a safe protection for the high points of the shoulders of the wearer and operates to transfer shocks and impacts directed to the shoulder high points to other parts of the apparatus for absorption.

From the above detailed description of the invention, it is believed that the construction and operation thereof will at once be apparent and while there is herein shown and described the preferred embodiment of the invention, it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the invention as claimed.

I claim:—

1. A shoulder protector including an inverted U-shaped body member adapted to fit over the shoulder between the shoulder joint and neck and having its legs extending downwardly in front of and behind the body, a second inverted U-shaped member of stiff material normally overlying the shoulder joint and having its legs overlapping the legs of the first member, pivots connecting the lower ends of the legs of the second member to the legs of the first member for free pivotal movement of the second member toward and from the neck, means for securing the first member on the body, and a strap connecting said members and having one end fixed to the upper face of the upper portion of the first member adjacent its inner edge and having its other end fixed to the upper face of the upper portion of the second member intermediate its inner and outer edges.

2. A shoulder protector including an inverted U-shaped body member adapted to fit over the shoulder between the shoulder joint and neck and having its legs extending downwardly in front of and behind the body, said member having its upper portion curved transversely to present a convex surface fitting the hollow of the shoulder between the shoulder joint and neck whereby to assist in holding the member in fixed position on the body, a second inverted U-shaped member of stiff material normally overlying the shoulder joints and having its legs overlapping the legs of the first member, pivots connecting the lower ends of the legs of the second member to the legs of the first member for free pivotal movement of the second member toward and from the neck, means for securing the first member on the body, and a strap connecting said members and having one end fixed to the upper face of the upper portion of the first member adjacent its inner edge and having its other end fixed to the upper face of the upper portion of the second member intermediate its inner and outer edges.

In testimony whereof I affix my signature.

GLENN S. WARNER.