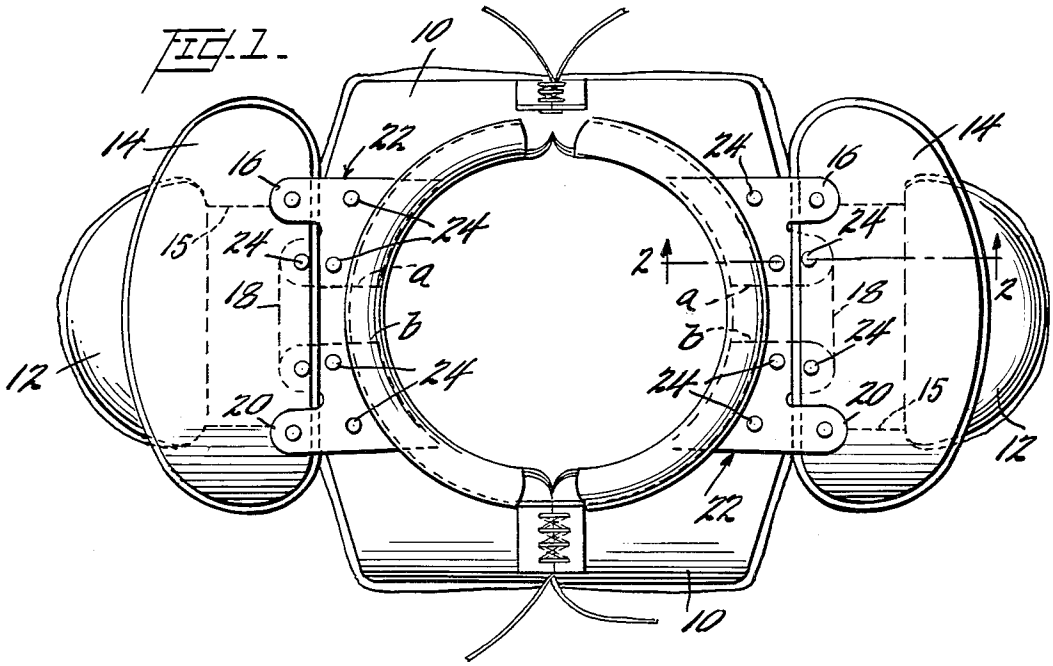
April 17, 1956 W. P. WEEKS 2,741,767

HINGE FOR FOOTBALL SHOULDER PADS

Filed March 18, 1954

FIG. 1.



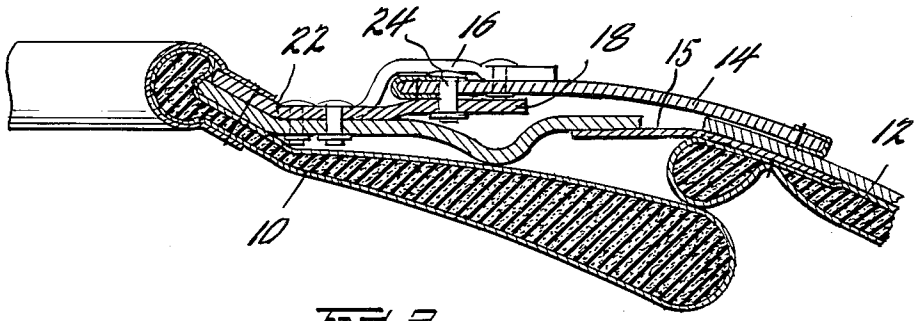


FIG. 2.

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HINGE FOR FOOTBALL SHOULDER PADS

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3 Claims. (Cl. 2—2)

This invention relates to hinges of the kind which are employed on football shoulder pads to pivotedly connect together certain parts of the shoulder pad.

The general construction and function of football shoulder pads is well known, and will not be described here except as may be necessary to explain the environment of the present invention. In this connection, it should be noted that football shoulder pads generally consist of a wide flat collar of hard material that is padded on its underside and shaped to extend over the shoulders and partially overlie the upper parts of the back and chest of one wearing the pad. The lateral extremities of the collar support padded shoulder caps which are contoured to fit over the point of the shoulder and the upper part of the arm. In order to permit unrestricted movement of the arm, the shoulder caps are hingedly connected to the collar of the pad. The provision of such hinge joints necessarily involves removing or weakening the padding along the line of the hinge joints, and thus in this area, the protection provided by the pad would be reduced if no provision for correcting this defect were made. The common arrangement for overcoming this defect involves the use of floppets which are hingedly supported on the upper surface of the collar inwardly of the hinge connection between the collar and caps, and which floppets extend laterally beyond the hinge connections. The floppets are formed of a hard material and as they overlie the hinge connections between the caps and collar, the portion of the player's shoulder beneath the hinge connections is adequately protected. Since the floppets partially overlie the shoulder caps, they too, must be hingedly supported in order to permit the movement of the shoulder caps that is necessary to permit the player wearing the shoulder pad to move his arms freely. In the past, this hinge connection between collar and floppets has consisted simply of a leather tab or tabs secured at one end to the floppet and at the other end to the collar. Examples of this type of hinge connection are shown in United States Patents No. 2,636,170 and Reissue No. 22,084. This type of floppet hinge has several drawbacks, which ultimately result in making the shoulder pad less comfortable to wear and less able to provide the desired protection against heavy impacts. Such hinges allow the floppets to be displaced sideways from their proper position over the hinge connection between the collar and cap. This disadvantage is particularly pronounced after the leather hinge has been flexed a large number of times and loses some of its initial resiliency.

The principal purpose of the present invention is to provide an improved hinge for connecting floppets to the collar portion of a football shoulder pad, which hinge may be made of leather or similar flexible material but will not permit the floppets to be displaced from their proper position, even after extended use of the shoulder pad. A further purpose of the invention is to provide an improved hinge which may be employed to connect a shoulder cap to the collar portion of a football shoulder pad so that it will permit freedom of movement of the

wearer's arm but will remain properly positioned with respect to the collar portion of the shoulder pad even after extended use.

Other objects and advantages of the invention will be apparent from the following detailed description of the embodiment of the invention which is illustrated in the drawings by way of example.

In the drawings:

Figure 1 is a top plan view of a football shoulder pad comprising a floppet hinge according to the invention; and

Figure 2 is a vertical sectional view on the line 2—2 of Figure 1.

The general construction of the shoulder pads shown in the drawings is conventional. The pads comprise a collar portion **10** which consists of two similar sections which are adapted to be laced together to form the collar portion. A shoulder cap **12** is hingedly fixed at **15** to each of the lateral edges of the collar portion and these caps, in the conventional manner, are formed to fit over the shoulder joint of one wearing the shoulder pad. The floppets **14** are hingedly supported on the upper surface of the collar portion intermediately of the hinged connections between the collar portion **10** and the caps **12** and the inner edge of the collar portion which encircles the neck of one wearing the shoulder pad. The floppets **14** extend laterally a sufficient distance to overlie the hinged connection between the collar portion and the caps **12**, all as is well known in the art.

The hinge provided by this invention may be used in a shoulder pad construction of the kind described as illustrated in Figures 1 and 2. This embodiment of the hinge comprises a plate of flexible, durable material, such as leather, which is cut, or slit, inwardly from one edge to provide three tongues or flaps **16**, **18**, **20**, which extend from the base section **22**. The base section **22** of the plate is fastened to the collar portion **10**, by rivets **24**, or similar fastening devices, so that the tongues extend laterally outwardly toward the shoulder caps **12**. The tongues **16** and **20** overlie and are secured to the upper surface of the floppet **14**, while the broader middle tongue **18** extends beneath the inner edge of the floppet and is securely fixed to the under surface thereof by any suitable fastening means, such as rivets **24**.

It will be observed that the described hinge minimizes the chances of the floppets being displaced from their proper position on the shoulder pad as the result of an impact or long continued use. The hinge construction is such that the floppet will not be displaced by a blow which would in other designs cause the floppet to be twisted in the direction indicated by the arrow in Figure 1. The floppet is held at each end between adjacent tongues which extend respectively over and under the floppet. The inner edge of the floppet thus rests in the crotches formed between the tongues **16** and **18** and **18** and **20** and it is not subject to being displaced inwardly either as a unit or at either end The hinge plate **22** is formed of flexible material, such as leather, which is not subject to being extended during normal use, and consequently, the floppet cannot be displaced outwardly, either as a unit or by twisting of either end. The floppet is consequently, at all times, maintained in its proper position on the shoulder pad without detracting in any degree to swing about its hinged connection to the collar portion, as may be required in the course of normal use of the shoulder pad.

For convenience of assembly in some instances, it may be desirable to divide the hinge into two separate sections. When the shoulder pad is assembled in this manner, the construction is similar to that shown except that the section of the hinge lying between the dotted lines *a* and *b* in Figure 1 is then removed, thus providing a

hinge having two spaced apart sections of similar construction. This and other modifications and variations which would be apparent to those skilled in the art are encompassed by the invention as defined in the following claims.

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

1. A shoulder pad comprising a collar portion, shoulder caps hingedly connected to the lateral edges of said collar portion, a floppet, and a hinge supporting said floppet on said collar, said hinge comprising a flexible plate having a base portion and adjacent tongues extending laterally from said base portion, one of said tongues being fixed to the upper surface of said floppet toward its inner edge and the adjacent tongue being fixed to the underside of said floppet toward its inner edge, and said inner edge lying in the crotch formed between said adjacent tongues.

2. A shoulder pad comprising a collar member, a shoulder protecting member, and a hinge supporting said shoulder protecting member on said collar member, said hinge comprising a flexible plate having a base portion secured to one of said members and two tongues extending laterally from said base portion, one of said tongues being fixed to the upper surface of the other of said members toward an edge of said other member, and the adjacent tongue being fixed to the under surface of said other member toward its said edge, and said edge lying in the crotch formed between said adjacent tongues.

3. A shoulder pad comprising a collar member, a shoulder protecting member, and a hinge supporting said shoulder protecting member on said collar member, said hinge comprising flexible plate means attached to one of said members, said plate means having more than two tongues extending laterally therefrom, said tongues forming between them at least two crotches spaced from each other, the tongue on one side of each said crotch being fixed to the upper surface of the other of said members, and the tongue on the other side of each said crotch being fixed to the under surface of said other member.

References Cited in the file of this patent

UNITED STATES PATENTS

Re. 22,084	Lookabaugh	Apr. 28, 1942
1,748,890	Martin	Feb. 25, 1930
2,545,039	Mitchell	Mar. 13, 1951
2,636,170	Goldsmith	Apr. 28, 1953