E. V. ALBIN.

HIP AND KIDNEY PAD.

APPLICATION FILED MAR. 1, 1920.

1,373,377. Patented Mar. 29, 1921.

Fig. 1.

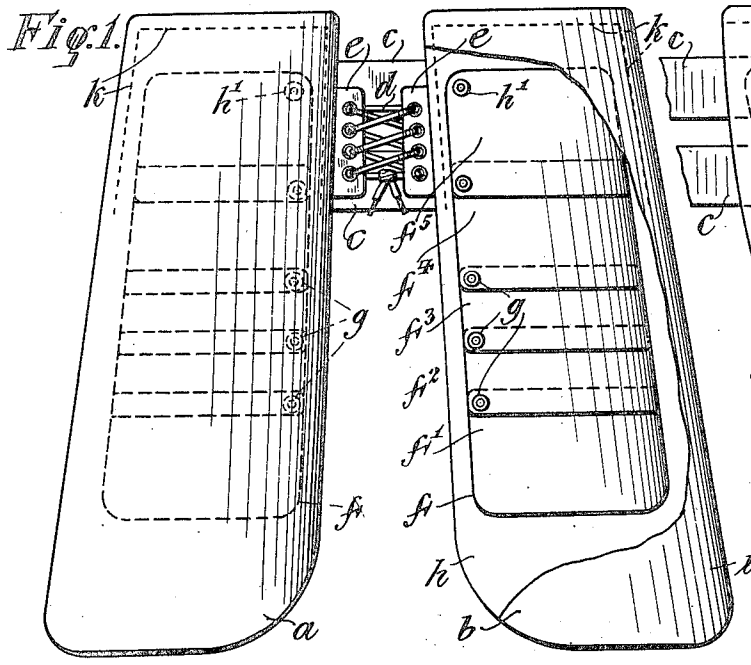
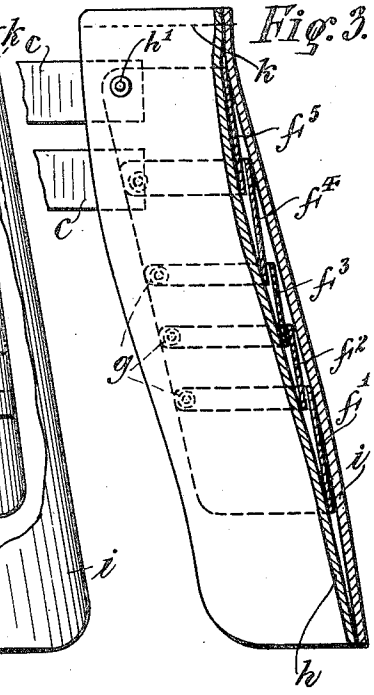


Fig. 3.



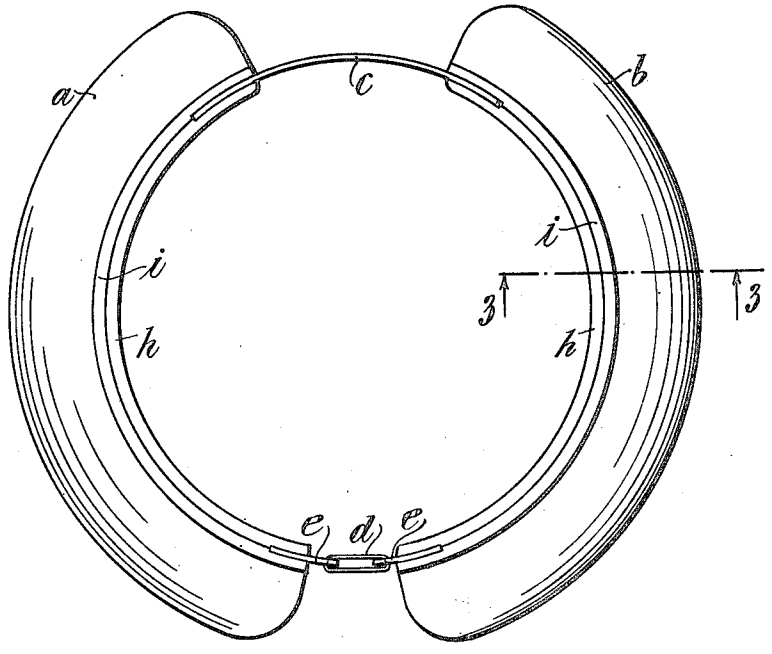


Fig. 2.

INVENTOR

Everett V. Albin

BY

Paddy & Sheely

ATTORNEYS

UNITED STATES PATENT OFFICE.

EVERETT V. ALBIN, OF LYNBROOK, NEW YORK, ASSIGNOR TO A. G. SPALDING & BROS., OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

HIP AND KIDNEY PAD.

1,373,377. Specification of Letters Patent. Patented Mar. 29, 1921.

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To all whom it may concern:

Be it known that I, EVERETT V. ALBIN, a citizen of the United States, residing in Lynbrook, in the county of Nassau, in the State of New York, have invented certain new and useful Improvements in Hip and Kidney Pads, of which the following is a specification, reference being had to the accompanying drawing, forming a part hereof.

This invention relates to an improved hip and kidney pad for athletes and is designed to protect the body against injurious blows by a relatively inflexible sheathing, while permitting free and unimpeded movement of the body. Protective coverings to safeguard the wearer against injuries should be of relatively inflexible material so that the blows will not be impressed on the body, but such pads as heretofore proposed have been objectionable either because they were not sufficiently cushioned on the body or because their inflexible character prevented the free and unimpeded movement of the body of the wearer such as is salient in sport. By the present improvement an effective protection is afforded against blows by means of an inflexible sheathing which is cushioned on the body, the force of the blows on the improved pad being resisted by the sheathing and transmitted throughout its area to the body, the cushion between the sheathing and the body being such as to make the shock of such a blow negligible when distributed over such a large area. A further object of the invention is to provide a protective sheathing of the character described which shall be made up of unyielding material and yet constructed mechanically in such manner as to afford free and unimpeded movement of the body to which it is applied. In carrying out this object, strips of suitable material, such as fiber, are united to one another at such points as to permit relative movement therebetween under the movements of the body, while presenting an unbroken and relatively unyielding protective sheathing to ward off blows. The protective section thus formed may be covered by strips of yielding material, such as felt, to cushion the blows and protect the body as well as opponents from injury by direct contact with the unyielding sheathing. For the fullest protection of the hips and kidneys two pads formed as described may be united by suitable belting and lacing and fastened in place on the body of the wearer. The invention will be described in greater detail in connection with the drawing showing one application of the inventive thought, in which—

Figure 1 is a view in elevation of two of the improved pads united to protect the body of a wearer, the strip of felt of one of the pads being broken away to show the protective sheathing.

Fig. 2 is a view looking down on the pads shown in Fig. 1 to show their relative positions about the body of the wearer.

Fig. 3 is a sectional view through one of the pads taken on the plane indicated by the line 3—3 of Fig. 2 and looking in the direction of the arrows.

As the description proceeds it will be understood that the inventive thought herein resides in the provision of a protective sheathing made up of sections of inflexible material so united as to permit relative movement between the sections in such manner as to afford free and unimpeded movement of the body of the wearer. Accordingly, while the disclosure herein is of the application of the invention to hip and kidney pads, as for football players, it will be understood that protective pads to be worn at other parts of the body might be built up in much the same way and the advantages thereof realized. Accordingly, no great emphasis will be laid on the provision of two such symmetrical pads *a*, *b*, nor on the means for uniting these pads, such means being illustrated as belting *c* secured thereto at the rear edges and lacings *d* passed through tabs *e* secured at the front edges of the pads, whereby the pads may be secured about the waist of the wearer and in proper position over the respective hips and kidneys.

The real protection to the body of the wearer is afforded by means of the protective sheathing, indicated as a whole by the reference character *f*. The material of which this sheathing is made up, to afford that degree of positive protection which is desired, is unyielding and relatively inflexible, although some degree of flexibility is not undesirable. The mechanical construction of the protective sheathing provides for that degree of flexion which will afford free and unimpeded movements of the legs and hips of the wearer with relation to his trunk. It will be understood that the movements of the wearer will not impose any strains on the

protective sheathing laterally, although such stresses may be imposed thereon by opponents. The material of which the sheathing is made is of such composition as to receive these stresses and bend sufficiently under them to prevent the sheathing from actually breaking. A great degree of flexibility, however, is required lengthwise of the body of the protective sheathing. To secure this flexibility without sacrificing the advantages of an unyielding guard-piece, the sheathing is made up of a series of sections f', f^2, f^3, f^4, f^5, which have their edges lapped and are united pivotally to one another as by means of rivets g passed through the overlapped edges, preferably adjacent the ends of the sections. This construction permits the entire sheathing to flex longitudinally thereof, since the contiguous sections can move about the pivotal connections afforded by the rivets g. Twisting strains, in the same way, will be taken care of by this peculiar sectional construction and manner of uniting.

The protective sheathing f being of relatively unyielding material could not ordinarily be employed directly against the body of the wearer without interposing suitable protective covering which should preferably have some cushioning properties. Neither would it be well to leave the outer surface of the protective sheathing f exposed since its unyielding character might cause injury to opponents. For this reason, the protective sheathing when incorporated in a hip and kidney pad may be secured between inner and outer sheets h, i of relatively yielding material, such as felt padding. The sheets h and i may be stitched together along their upper edges and side edges, as indicated at k, although the extent of this stitching may be determined by one skilled in the art. Ordinarily it would not be necessary to extend the stitching along the side edges of the pads h and i below the lower edge of the protective sheathing f. The sheathing f, itself, will be secured in generally fixed relation to the pads by uniting the upper section f^5 thereof to at least one of the pads, rivets being a convenient means of accomplishing this union. With the upper section f^5 of the sheathing united to, say, the inner pad h, one of the securing rivets being indicated at h', the lower sections f', f^2, f^3 and f^4, will all be held against bodily movement with respect to the pads h, i and yet flex freely with relation to the fixed section f^5.

The two pads a, b, constructed in the manner described and secured about the waist of the wearer, will cover the hips and kidneys adequately, as indicated in Fig. 2, and afford most substantial protection against injury to the wearer, while permitting free movement of his body and legs. As indicated hereinbefore, where a protective pad is required at some other part of the body it will be evident that a flexible sheathing made up of strips of unyielding material might be adapted to the particular part of the body to which it is to be applied and the advantages pointed out herein realized.

I claim as my invention:

1. A protective body pad comprising a sheathing formed of transverse sections of unyielding material united pivotally to one another to permit flexion of the sheathing.

2. A protective body pad comprising a sheathing formed of transverse sections of unyielding material, the edges of the contiguous sections being overlapped and united pivotally adjacent their ends to permit flexion of the sheathing.

3. A protective body pad comprising a sheathing formed of transverse sections of unyielding but slightly flexible material, the edges of adjacent sections being overlapped and united pivotally adjacent their ends to permit flexion, and a covering of cushioning material.

4. In combination, separate pads to cover the hips and kidneys of the wearer, means to secure the pads removably in place, coverings for each of the pads of felt strips and protective sheathings secured between such felt strips and comprising transverse sections of unyielding material united contiguously with pivotal connections to permit free flexion of the body in any direction, the uppermost strip being pivotally connected to the inner felt strip.

This specification signed this 27th day of February, A. D. 1920.

EVERETT V. ALBIN.