

[54] **FEMALE PELVIS AND CROTCH PROTECTOR**

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128/528

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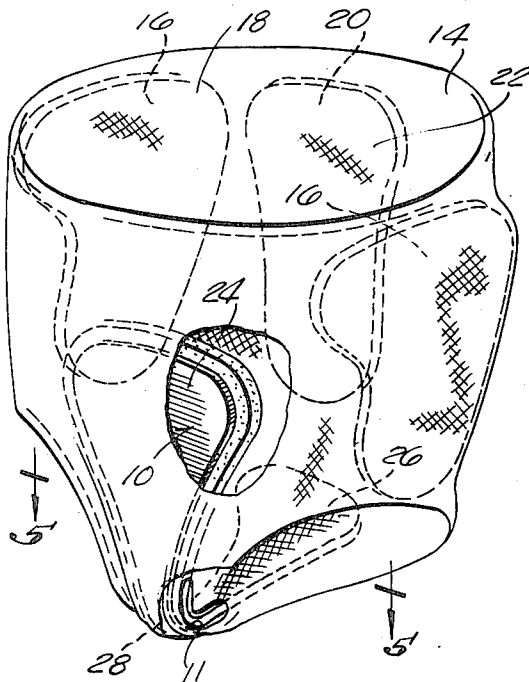
Primary Examiner—Geo. V. Larkin

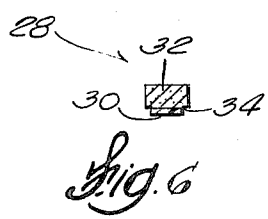
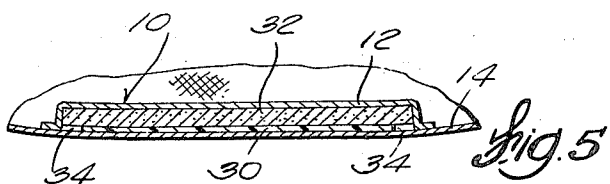
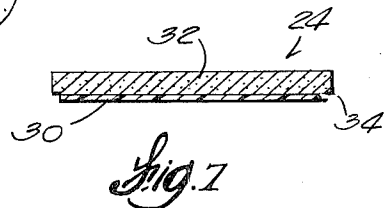
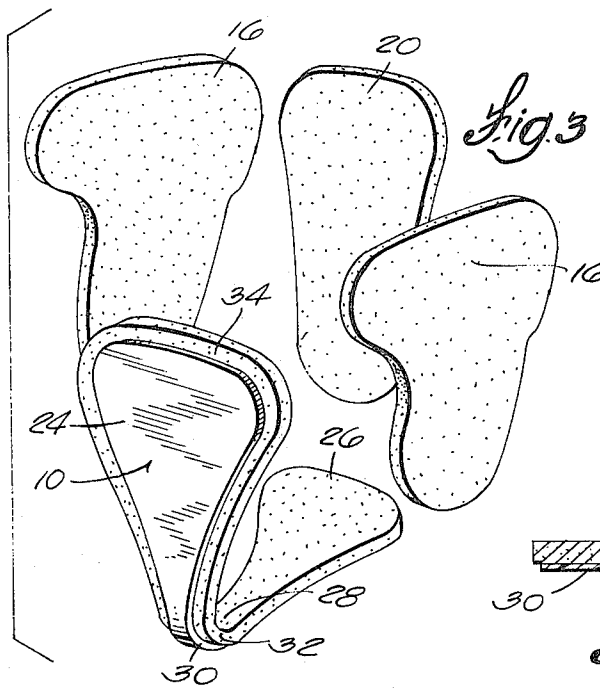
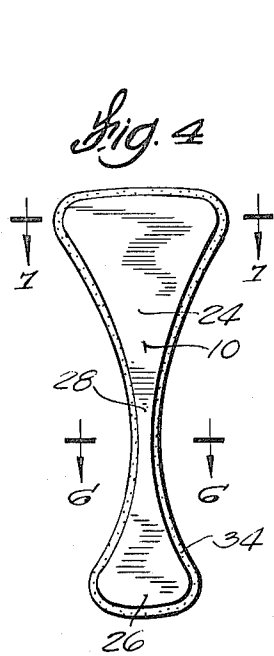
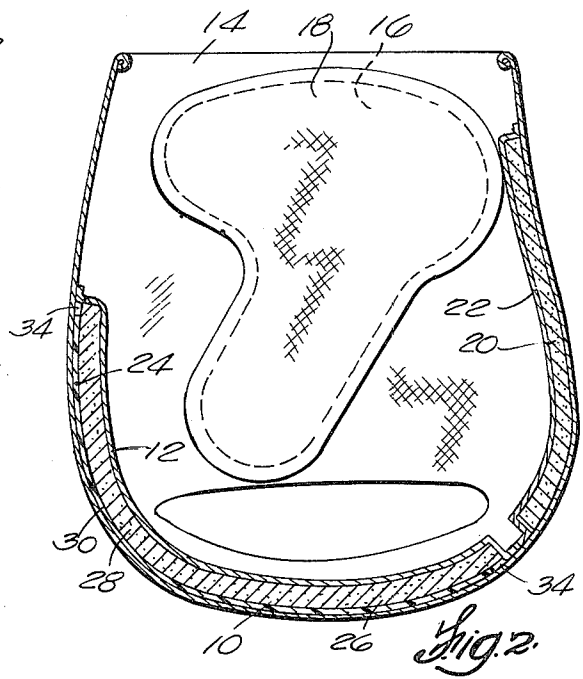
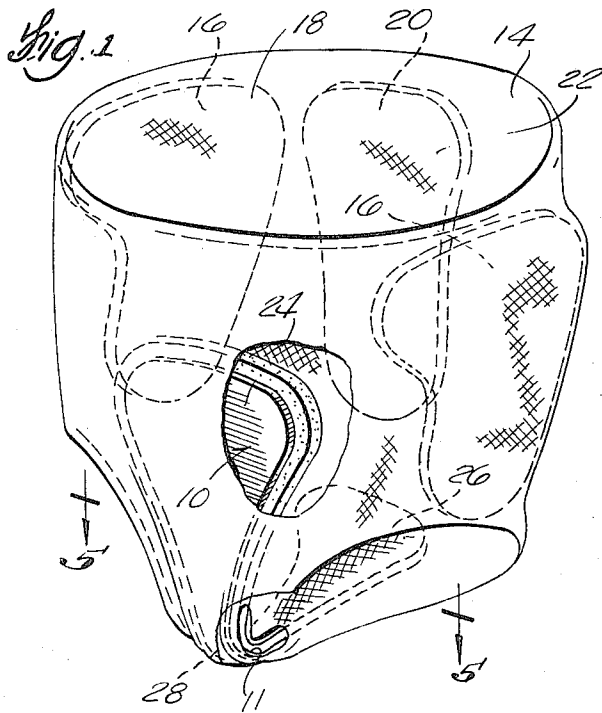
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[57] **ABSTRACT**

An hourglass shaped shock absorbent pad is held in a pocket of a girdle and is positioned to protect the pelvis and crotch of a human female wearer from shocks encountered in contact sports, gymnastics, and the like. The pad has enlarged triangular front and rear portions which are positioned over the female's front and rear pelvic regions respectively and has a narrow interconnecting neck which is positioned under the female's crotch. The pad is made of a relatively hard flexible outer layer laminated to a relatively soft flexible inner layer, the inner layer being both thicker and wider than the outer layer to prevent contact between the wearer's body and the relatively hard outer layer.

6 Claims, 7 Drawing Figures





FEMALE PELVIS AND CROTCH PROTECTOR

BACKGROUND OF THE INVENTION

This invention relates generally to athletic protectors and more particularly to female pelvis and crotch protectors. Although male crotch protectors have long been known in the art, no such protectors have heretofore been available for females.

SUMMARY OF THE INVENTION

This invention provides a female pelvis and crotch protector which will absorb and render harmless shocks encountered in karate, judo, gymnastics, basketball, and similar sports. The protector of the invention includes an hourglass shaped composite pad of shock absorbent and protective material and means for holding the pad in place on a female's body in such position as to protect the female's pelvis and crotch regions. The pad has enlarged front and rear portions which are positioned over the female's front and rear pelvic regions respectively and has a narrow interconnecting neck which is positioned under the female's crotch. The composite pad is desirably made of laminated plies of a relatively thick soft cushion pad and a relatively thin, hard but flexible shield which overlies the soft pad, but which is inwardly offset from the edge of the soft pad.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view, partially cut away, of a protective girdle embodying the invention.

FIG. 2 is a longitudinal sectional view of the girdle shown in FIG. 1.

FIG. 3 is a perspective view of the shock absorbing pads shown in FIG. 1, without the supporting panty or girdle.

FIG. 4 is a plan view of the hourglass shaped protective pad of this invention.

FIG. 5 is a detailed cross sectional view taken on the line 5—5 of FIG. 1.

FIG. 6 is a cross section taken on the line 6—6 of FIG. 4.

FIG. 7 is a cross section taken on the line 7—7 of FIG. 4.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Although the disclosure hereof is detailed and exact to enable those skilled in the art to practice the invention, the physical embodiments herein disclosed merely exemplify the invention which may be embodied in other specific structure. The scope of the invention is defined in the claims appended hereto.

The illustrated embodiment of the invention is characterized by an hourglass shaped pad 10 of shock absorbent material which is enclosed in a correspondingly shaped pocket 12 (FIG. 5) of a cloth girdle or panty 14. The girdle 14 may optionally also be provided with a pair of shock absorbent hip pads 16 (FIGS. 1 and 3) and a spine pad 20. The hip pads 16 are enclosed in pair of correspondingly shaped pockets 18 (FIG. 2) of girdle 14 and are positioned to protect a female wearer's hips. The spine pad 20 (FIGS. 1 and 3) is enclosed in a correspondingly shaped pocket 22 (FIG. 2) of girdle 14 and is positioned to protect the base of the female's spine. It should be understood, however, that hip pads 16 and spine pad 20 are not essential features

of this invention and may be omitted if desired. The cloth girdle 14 is likewise not essential, inasmuch as other suitable means may be provided for holding the pad 10 of this invention in the proper position of a female's body.

The hourglass shaped pad 10 has an enlarged, generally triangular front portion 24, a somewhat smaller enlarged generally triangular rear portion 26 and a narrow interconnecting neck 28 that extends between the enlarged portions 24 and 26 and joins them together. The pocket 12 in girdle 14 is positioned to hold pad 10 in position to protect the female wearer's pelvic and crotch regions. Pocket 12 has an access opening 11 through which pad 10 may be withdrawn therefrom. Panty or girdle 14 positions pad portion 24 over the female's front pelvic region with rear pad portion 26 positioned under the female's rear pelvic region and interconnecting neck 28 positioned under the female's crotch, as shown in FIGS. 1, 2 and 3. It should be noted that other means for holding pad 10 in the proper position could be provided in place of girdle 14, e.g., elastic straps or harness similar to those commonly used for supporting male crotch protectors or suspensories.

The shock absorbent pad 10 is preferably made of two layers or plies laminated together; namely, a relatively rigid tough flexible outer shield layer or ply 30 which is flexible enough to be bent in the shape shown in FIGS. 1—3 but is rigid and tough enough to resist deformation under relatively hard shocks, and a softer inner cushion layer or ply 32 which is sufficiently soft to be worn adjacent to the wearer's body without discomfort. Plies 30, 32 are desirably laminated together with flexible adhesive.

Outer shield ply 30 and inner cushion ply 32 also differ in density and thickness, shield ply 30 being relatively dense and cushion ply 32 being relatively spongy. Inner ply 32 is desirably several times thicker than outer ply 30. The cushion ply 32 is made of plastic foam or sponge rubber. It is yieldable and absorbs and spreads shock loads. The shield ply 30 is made of tough material such as vinyl. It protects the cushion ply and distributes shock loads.

As best shown in FIGS. 6 and 7, the shield ply 30 is offset inwardly from the edge of the cushion ply 32, thus to form a rabbet groove 34 around the periphery of the pad 10. This configuration militates against any sharp edge of the shield digging into the wearer's flesh, inasmuch as the soft spongy pad 32 overhangs the edge of the shield 30.

We claim:

1. A female pelvis and crotch protector comprising an hourglass shaped pad of shock absorbent material having enlarged front and rear portions and a narrow interconnecting neck extending therebetween, and means for holding said pad in place on a female's body with said front portion being positioned over the female's front pelvic region and said rear portion being positioned under the female's rear pelvic region and said neck portion being positioned under the female's crotch, said pad being made of an inner flexible cushion layer, an outer flexible shield layer, and means laminating said layers together, said shield layer being substantially more rigid and tougher than said cushion layer to provide protection from relatively hard shocks, and said cushion layer being sufficiently soft to absorb shock loads.

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2. The protector of claim 1 wherein said shield layer is offset inwardly from the edge of the cushion layer to provide a rabbeted edge around the periphery of the pad.

3. The protector of claim 2 wherein said front and rear portions are generally triangular in shape, said rear portion being smaller than said front portion.

4. The protector of claim 1 wherein said means for holding said pad in place comprises a girdle having a pocket formed in the front pelvic region, rear pelvic region and the crotch regions for receiving and holding said shock absorbent pad in place on said female's body.

5. The protector of claim 4 and further comprising two additional shock absorbent pads and two additional pockets in said girdle for receiving and holding said additional pads, said additional pockets being located on opposite hip portions of said girdle for protecting said female's hips.

6. The device of claim 5 and further comprising a fourth shock absorbent pad and a fourth pocket in said girdle for receiving and holding said fourth pad, said fourth pocket being located in the upper rear portion of said girdle for protecting the lower end of said female's spine.

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