



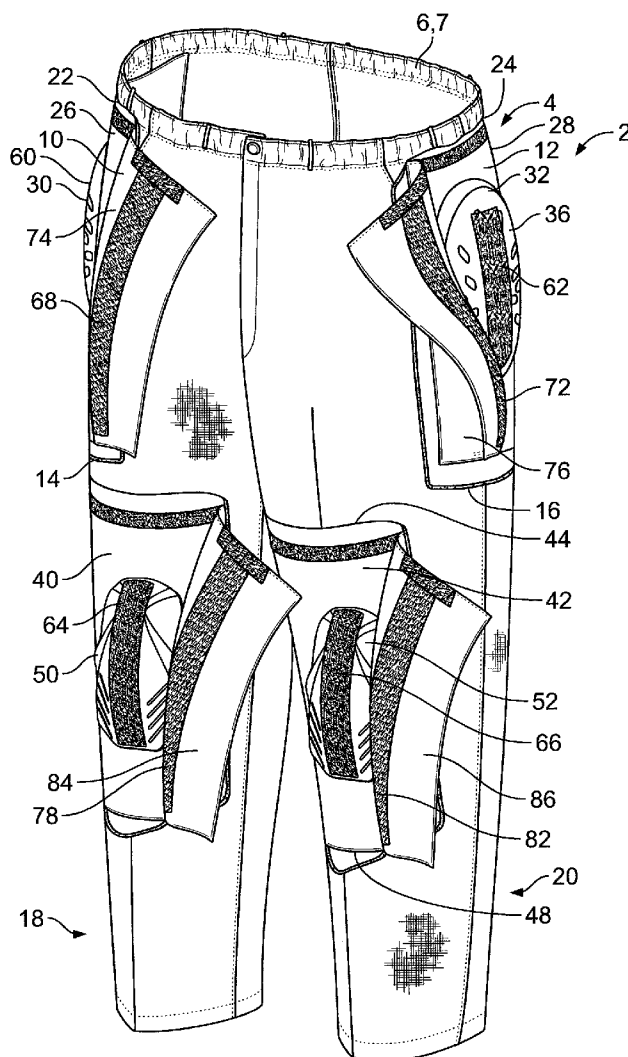
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(19) **United States**(12) **Patent Application Publication**
HABIP(10) **Pub. No.: US 2014/0215679 A1**(43) **Pub. Date: Aug. 7, 2014**(54) **PADDED PANTS**

(57)

ABSTRACT(71) Applicant: **Tolga U. HABIP**, New York, NY (US)(72) Inventor: **Tolga U. HABIP**, New York, NY (US)(21) Appl. No.: **13/757,419**(22) Filed: **Feb. 1, 2013****Publication Classification**(51) **Int. Cl.**
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USPC **2/23**

A pair of padded pants having a hip covering region and legs depending below the hip covering region. A respective hip pad pocket at and over each hip area of a wearer and inside the hip covering region of the pants. A respective knee pad pocket inside the pants at and over each knee of a wearer. An impact protection pad is removably disposed in each pocket. A respective first fastening element is on each pad and a cooperating second fastening element is on a surface in the respective pocket, such that the positions of the pads in the respective pockets may be selected and then secured by the respective fastening elements. Straps hold the pants legs to the areas above and below each knee.



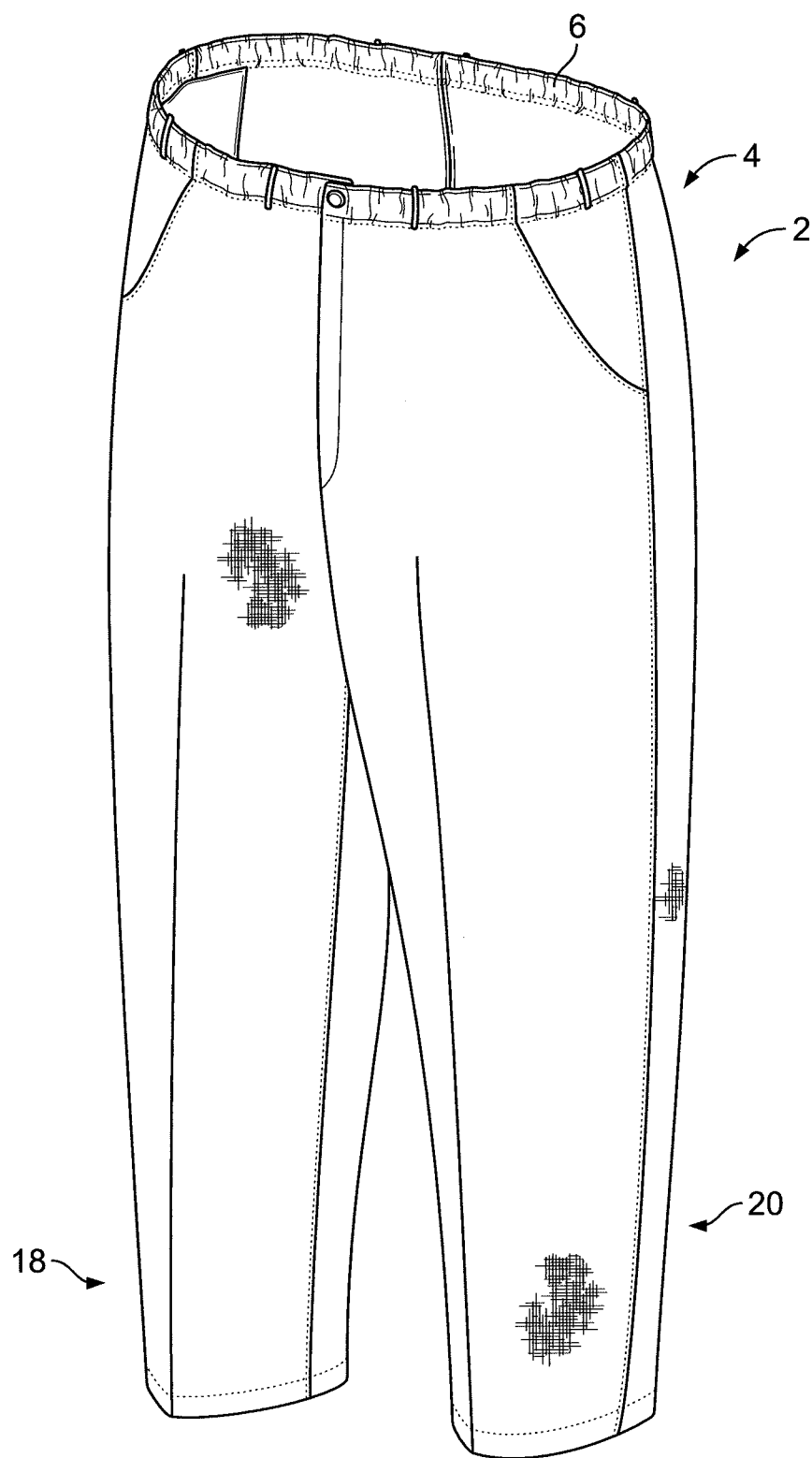


FIG. 1

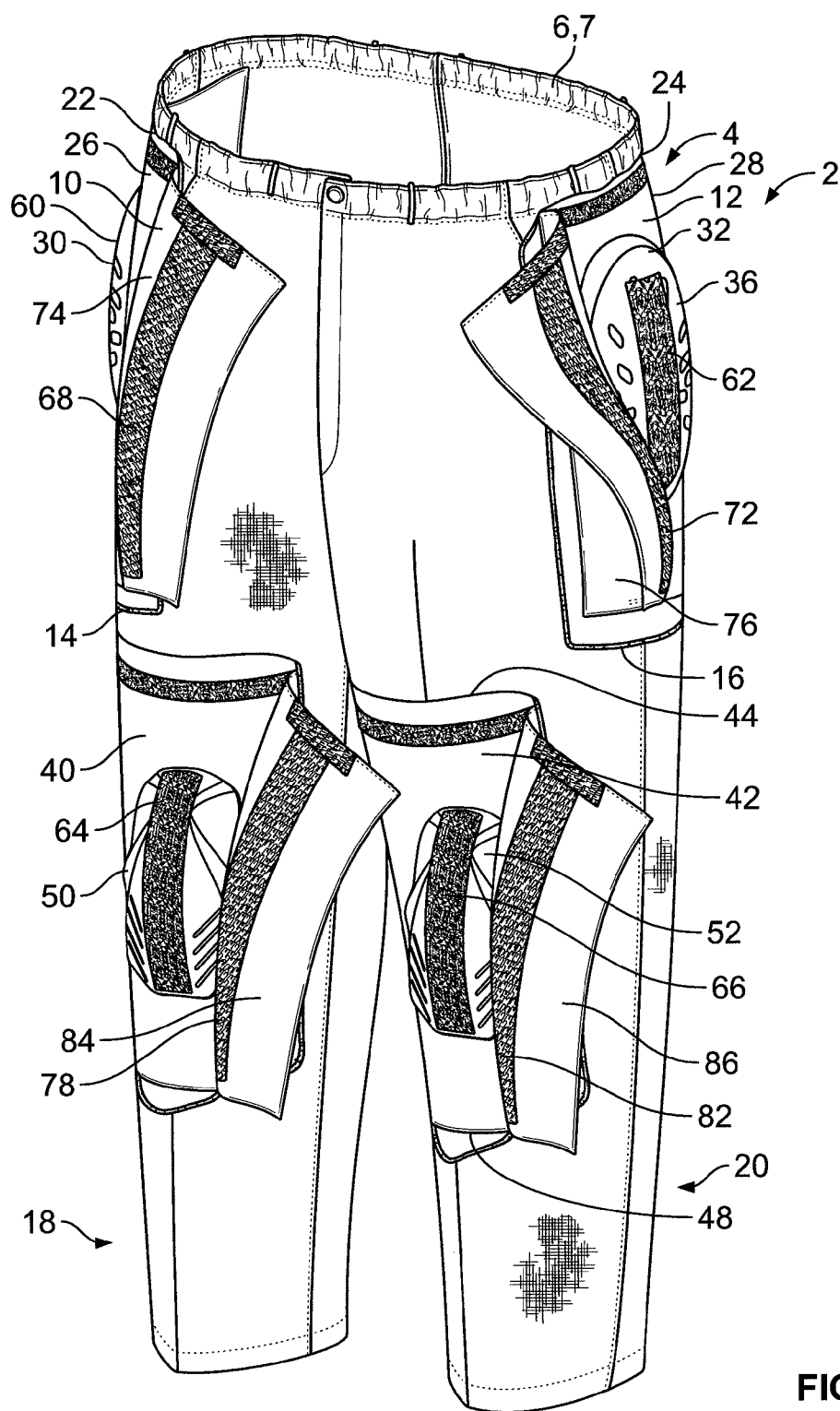


FIG. 2

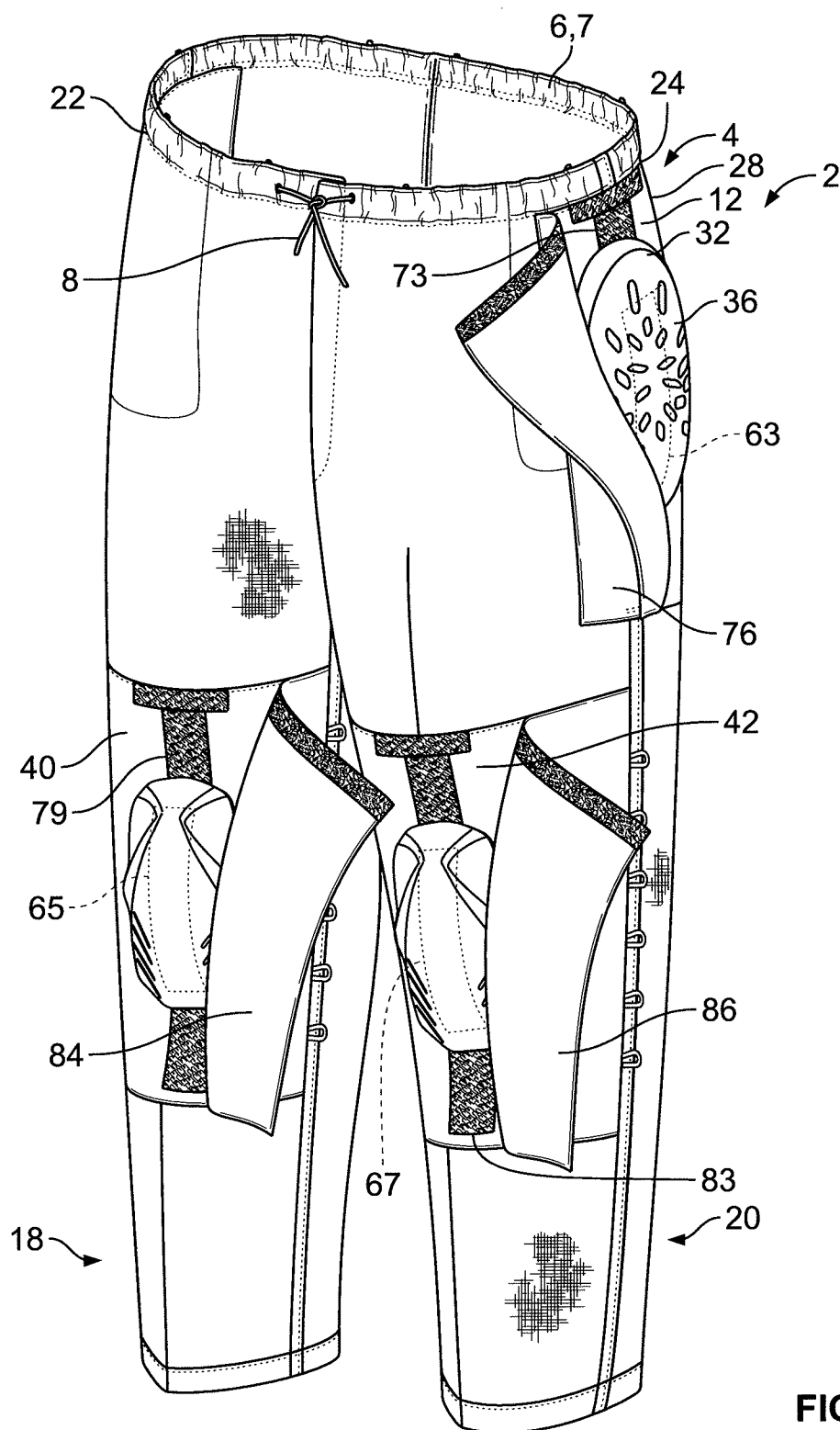


FIG. 3

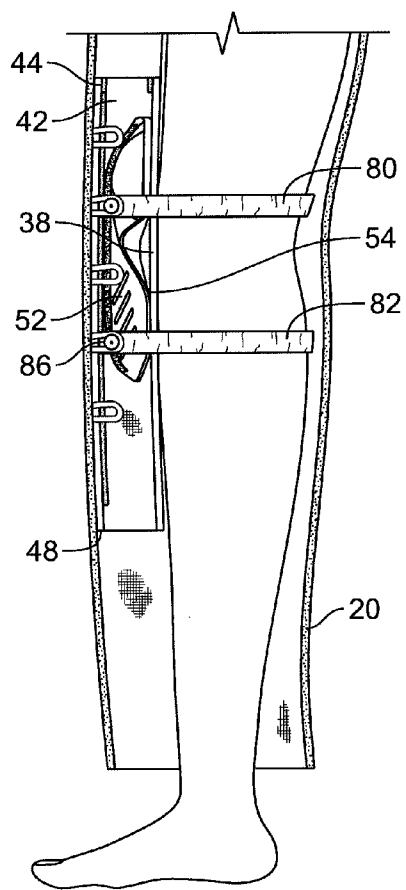


FIG. 4

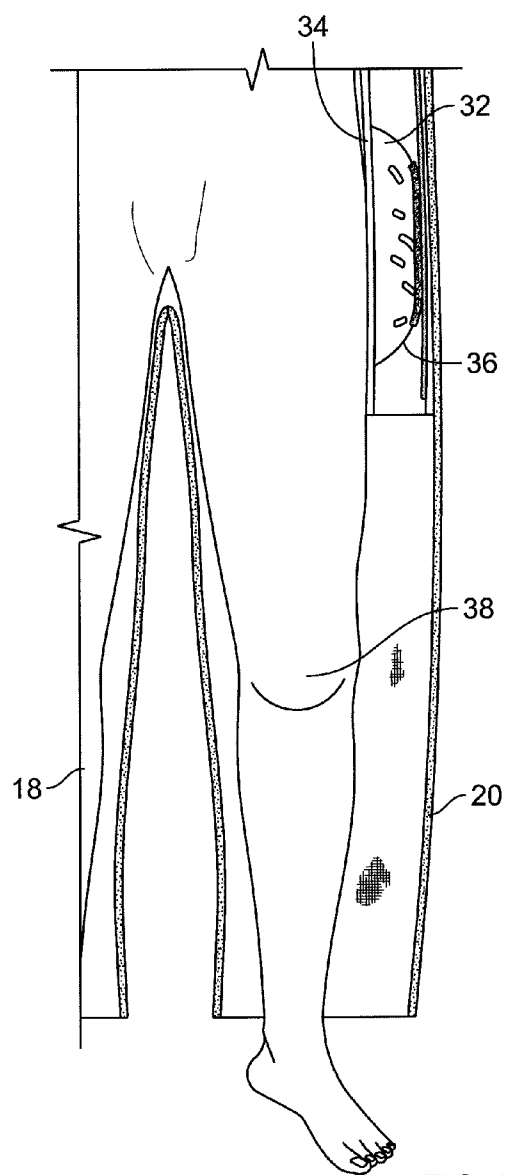


FIG. 5

PADDED PANTS

BACKGROUND OF THE INVENTION

[0001] The present invention relates to pants which contain pads held at locations in the pants to protect the wearer from impact damage at areas likely to suffer significant injury due to impact. The areas to be protected by the padded pants preferably include the hip area and the knee area. However, the invention additionally contemplates providing pads in the pants at other locations that may suffer from impact.

[0002] Pads in clothing, and particularly in pants, is known, for example for shaping a garment for fashion reasons and pads are used in athlete's uniforms to protect them from injury due to impact.

[0003] The present invention provides an improved design of padded pants which are capable of protecting body areas prone to injury of the wearer. The elderly are more prone to impact injury than most other people. But, the use of these pants is not limited to the elderly.

[0004] Pants are produced in various sizes including circumference at the waist and hips and leg lengths, to be worn by various size and shape persons. However, each person wearing a particular size pants may not have his knee areas or the hip areas at precisely the same locations along the height of his body as do others who wear the same size pants. This could be due to physical differences in the height of a person's knees or hips, the height on the body where the pants rest, which may be higher or lower for different wearer's and for reasons of style.

[0005] Athlete's uniforms are padded at specific locations selected for the particular athlete due to the nature of, speed and possible violence of the action to which the wearer of an athlete's uniform is exposed. Pants of standard sizes, are not specifically closely fitted to the wearer and the location of any padding is not selectable precisely for each individual wearer at a particular height and circumferential location.

[0006] Examples of padded pants are known from U.S. Pat. Nos. 6,523,599 and 7,089,596 and U.S. Publication No. 2007/0169250. They show pads in pockets, although not pads that are readily adjustable in their positions in the pockets.

SUMMARY OF THE INVENTION

[0007] The design and construction of padded pants according to the invention permit the padded pants to be of any size, including standard sizes. So long as the pants would fit in a normal manner on a wearer, the precise location of pads in those pants may be adjusted for the wearer.

[0008] Rather than fastening pads fixedly to preselected locations on the pants, there are cooperating fastening elements on the pants and on the pads to be placed on the pants that allow the location of the pads along the height of the legs and hips of the wearer to be selected as or before the wearer dons the pants. Even after the wearer dons the pants, adjustments in pad positions and heights are possible. To this end, there are cooperating fastening elements on the pants legs at the portions of the pants that go over the knees and over the hips and also on the pads. The fastening elements permit adjustment of the heights of the pads along the pants and enables fastening of the pads to the pants legs over the knees and over the hip covering area at the selected heights. The adjustable fastening is preferably of the known hook and loop type fastener, which may be sold under the trademark "VELCRO". The nature of fastening between a VELCRO part on

the pads and a complementary VELCRO part on the pants enables secure fastening of the VELCRO parts even with the pads at various locations along the pants. Locations, wrapped around the body also may be adjusted by making at least one of the VELCRO parts of greater width so that it can cooperate with the other VELCRO part at various locations around the body, generally in the hip protecting area.

[0009] In a preferred version, there are padding receiving pockets on the inside of each pants leg at the knee and inside the pants at both hips. The pockets are sized relative to the padding to receive selected shape and size padding in each pocket and so that the padding can be adjusted in location to any selected position for providing impact protection to the hips and knees. In particular, the pockets are taller and may be wider than the pads installed in them, which enables selected desirable positioning of the pads for a particular wearer. When the desired positions are selected, the pads are fastened in those positions in the pockets. Because the pads may be positioned as needed, the pads may be smaller than might be pads which have only one or a limited choice of positions and which pads are therefore dimensioned larger to protect the knees or hips of a variety of differently dimensioned wearers.

[0010] Fastening is inside the pocket, by complementary fastening elements, such as complementary strips of the hook and loop connectors of VELCRO, one on the inside of the pocket and the other on the surface of the padding that is brought into engagement with that VELCRO part on the inside of the pocket.

[0011] It is a matter of choice whether the fastening element on the pants be on the side of the pants directly at the surface of the leg or be on the inside surface of the outer side of the pocket, outward of the leg and the padding. Wearer comfort from the pants against the legs and from holding of the padding at the selected locations in the pockets may determine on which one or both opposite sides of the pocket the fastening elements are applied.

[0012] When the pants are donned, the correct heights and circumferential locations for the padding pieces are selected and the cooperating fastening elements on the padding and the pants legs and hips are secured so that the padding is held in position along the height and within a protective pocket which keeps the padding from being knocked or pushed away from its selected impact protection locations.

[0013] Pants legs tend to be loose around the wearer's legs during walking, sitting, or manipulating the pants leg, and the pants leg can be folded up, moved up, moved down, etc. To minimize or prevent that occurring and thereby to effectively prevent shifting of the padding due to shifting of the pants and pants leg, there may be attached inside each pants leg a respective strap that extends from the pants leg and around the knee. The strap is either elastic or is tightened enough to keep the pants leg at a selected location along the height of the leg, so that the padding will be properly positioned for impact protection of the knees and the hips. One strap above and one strap below the knee is preferable. To accommodate different height positions for wearer's knees, the strap(s) may be selectively attached at different heights along the legs. This may be accomplished using snaps, buttons, etc. at several heights along the legs.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] FIG. 1 is a front, perspective view of the outside of a pair of pants wherein pads are supported inside the pants;

[0015] FIG. 2 is a partial cross-section of the pants shown in FIG. 1, illustrating interior pockets of the pants opened to show the interior of the pockets and showing pads in pockets inside the pants;

[0016] FIG. 3 is a partial cross-section illustrating an alternate embodiment;

[0017] FIG. 4 is a cross-section, front to back, through a leg fragment of the pants showing a knee pad in the pant leg; and

[0018] FIG. 5 is a cross-section, from lateral side to side, though a fragment of the pants showing a hip pad in the pants.

DETAILED DESCRIPTION OF EMBODIMENTS OF THE INVENTION

[0019] In FIG. 1, the pair of pants 2 has a hip region 4. The top of the pants 6 may be elastic to hold the pants up. There may be a drawstring 8 (FIG. 3) at the top of the pants for securing them. Alternatively, a belt or suspenders or the like may be used.

[0020] Referring to FIG. 2, respective hip pockets 10 and 12 are located circumferentially around the hip region 4 of the pants and are attached at the hip region 4. Each hip region pocket has a bottom end 14, 16 secured to a respective pants leg 18, 20 and has a respective top end 22, 24 secured at the hip region or waistband 7. Each hip region pocket 10, 12 has a respective opening 26, 28 at its top end 22, 24. Each hip region pocket 10, 12 is sized larger than a hip pad 30, 32 it receives. The shaped hip pads 30, 32 are of a type known in the art and are shaped on one respective inner surface 34 (see FIG. 5) to rest on and to protect the hip area and on its exterior 36 is shaped to provide such support as to diffuse impact over the entire hip pad 30 and thereby minimize damage to the wearer.

[0021] Referring to FIGS. 2 and 4 at the area of the knees 38, there is a respective knee pocket 40, 42 on the inside of each of the wearer's pants legs. Each knee pocket is fastened to the inside of the pant leg at both the top 44 and bottom 48 ends of the pockets and at all corners of the pockets e.g. by being sewn in. Each knee pocket 40, 42 is also sized larger than a knee pad 50, 52 to receive a respective shaped knee pad 50, 52, which is shaped on one rear surface 54 (see FIG. 4) to fit over a knee area to protect the knees 38. The knee pad may be comprised of the same material as the hip pad.

[0022] Referring to FIG. 2, one complementary VELCRO fastening element 60, 62 is on the outward facing surface of each hip region pad 30, 32, respectively, and at 64, 66 on the outward facing surface of each knee pad, respectively. That fastening element cooperates with a similarly shaped, complementary, respective VELCRO fastening element 68, 72 on the opposing inward facing surface 74, 76 inside its pocket 10, 12 and element 78, 82 on the opposing inward facing surface 84, 86 inside its knee pocket 40, 42. The fastening element inside the pocket is hidden inside the pocket. One VELCRO fastening element comprises hooks on one of the pad surfaces or the pocket surfaces and the other VELCRO fastening element comprises loops on the opposing surfaces, so that the pads can be placed in their pockets and secured on the inside of the pockets when the respective cooperating hooks and loops engage. Other fastening arrangements may be used, if they enable the position of each pad in its pocket to be adjusted in their height position for a particular wearer.

[0023] A preferred design in FIG. 2 has its complementary VELCRO fastening elements 60, 62 and 64, 66 on the outside of the pads and on the insides at 68, 72 and 78, 82 of the

outward, inward facing side of the pocket. This placement of the fastening elements avoids pressure of the VELCRO against the wearer's leg. Alternatively, however, as illustrated in an alternative embodiment of FIG. 3, one VELCRO fastening element 63 and 65, 67 may be on the inside of the pads toward the hip or leg, and the complementary fastening elements 73 and 79, 83 are then on the outward facing surfaces of the inward sides of the pockets.

[0024] The heights of the VELCRO strips or other fastening elements on a surface of a pocket extend over the full height of the pocket so that the element on the pocket can engage the complementary element on the pad. The height of the fastening element on the pad itself is shorter than the height of fastening element on the pocket surface. This provides space in the pocket for enabling adjustment of the height of each pad in its pocket, to adapt to the height and locations on the wearer's body of the knee and hip regions to be protected, as contrasted with fixing all pads at one selected height in all pants disclosed herein for all wearers.

[0025] Not until each pad is fully inside and appropriately located in its pocket are the respective complementary fastening elements on the pads and in the pants pockets secured together to thereafter hold the pads securely in location within pockets in the pants.

[0026] Referring to FIG. 4, outside of the knee pockets 40, 42 but inside each pants leg 18, 20, there is an upper and a lower elastic strap 80, 82. When the pants leg is on the wearer, the straps are passed over the back side of the leg and fastened toward the front of the leg. This draws the knee pockets 40, 42 to the respective legs of the wearer, holds the knee pads 50, 52 in their selected positions along the legs and prevents the pants legs at the knees from shifting during walking or other movement, or pulling up of the legs of the pants, and other motion. Retention of the knee pads over the knees is obtained. The straps 80, 82 are attached, e.g. by buttons and loops 86 at selected locations, or else are attached by clothing snap connection snaps, or the like, at selected respective heights along the legs to be above and below the wearer's knees 38.

[0027] Further, adjustments can be made to the pants for the wearer or for use of the pants by other wearers, etc.

[0028] After the hip and knee pads have been installed, the pants can be worn in their normal condition and the presence of pads may not be readily visible, due to the pockets for pads and appropriate shaping of the pads.

[0029] The pads selected for the preferred illustrated pair of padded pants are any pads that will provide suitable protection. The inventor hereof has found that a military grade silicone rubber is available commercially and recommends, but does not require, that such material be used to form the pads. The pads may be available commercially without special manufacture by or for the pants maker. Other shape and size pads may be selected for a particular user or by a manufacturer. The type of pad suggested therefore is the best mode now known to the inventor, but others may suffice.

[0030] The illustrated pants may have the appearance of conventional pants without pads, as the pads are in interior pockets. The invention may be a retrofit into a regular pair of pants, with the pants pockets for pads located inside the pants and sewn in place and the straps attached inside the pants leg.

[0031] Although the present invention has been described in relation to particular embodiments thereof, many other variations and modifications and other uses will become apparent to those skilled in the art. It is preferred, therefore,

that the present invention be limited not by the specific disclosure herein, but only by the appended claims.

1. A pair of padded pants comprising a hip covering region and legs depending below the hip covering region;

a respective hip pad pocket configured to be and located at and over each hip area of a wearer and inside the hip covering region of the pants;

a respective knee pad pocket inside the pants at and configured to be and located at and over a knee of a wearer; an impact protection pad removably disposed in each pocket and each pocket and the respective pad therein are shaped and configured and sized such that the pad is positionable in its respective pocket to any of various positions in the pocket; and

a respective first fastening element on each pad and a cooperating, opposing second fastening element on a surface in the respective pocket, the first and second fastening elements being positioned and configured to engage each other when each pad is in its respective pocket at one of its various positions, and the first and second fastening elements being sized and positioned such that when one of the various positions of each pad in its respective pocket is selected, then each pad in its pocket and the respective first and second fastening elements in the pocket are configured to fasten each pad in its pocket by fastening their respective first and second fastening elements when each pad is at the respective selected position of each pad in the respective pocket.

2. The pants of claim 1, further comprising at least one strap within the pants leg and configured to be and located to be wrapped around a wearer's leg when the pants are worn and for holding the pants leg against shifting along the wearer's leg.

3. The pants of claim 2, further comprising two of the straps in each of the wearer's pants legs, wherein one strap is disposed and configured to be and is located where a wearer's knee would be when the pants are worn and the other strap is disposed and configured to be and is located below where the wearer's knee would be when the pants are worn.

4. The pants of claim 1, wherein each of the pockets has an entrance end facing upwardly in the pants, the entrance end being shaped and sized for permitting passage therethrough

of the respective pad into the pocket for installation in and removal of the pad from the pocket.

5. The pants of claim 1, wherein the pocket is larger across the pants leg than is the respective pad therein, to permit the pads to be adjusted in position across the inside of the pockets prior to securing each pad in the pocket therefor.

6. The pants of claim 5, wherein the fastening elements together comprise hooks on one of the fastening elements and loops on the other of the fastening elements.

7. The pants of claim 1, wherein the fastening elements together comprise hooks on one of the fastening elements and loops on the other of the fastening elements.

8. The pants of claim 1, wherein each pad has an inward side toward the inside of the pants and an outward side toward the outside of the pants;

each first fastening element is on the outward side of the respective pad and the complementary second fastening element is on a facing surface in the respective pocket.

9. The pants of claim 1, wherein each pad has an inward side toward the inside of the pants and an outward side toward the outside of the pants;

each first fastening element is on the inward side of the respective pad and the complementary second fastening element is on a facing surface in the respective pocket.

10. The pants of claim 5, wherein each pocket is larger by being at least one of wider across the pants leg or the hip covering region than the respective pad therein and longer along the pants leg or the hip covering region than the respective pad therein.

11. The pants of claim 10, wherein the fastening elements together comprise hooks on one of the fastening elements and loops on the other of the fastening elements;

each fastening element with one of hooks or loops is of a size selected such that, each pad may be moved to the various positions in its respective pocket, and at any of the various positions, each fastening element in the pocket engages its respective fastening element on the respective pad in the pocket.

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