

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5412081

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	MR. REGG MILLER	09/26/2017
RECEIVING PARTY DATA		
Name:	2598466 ONTARIO INC.	
Street Address:	1668 WEDMORE WAY	
City:	MISSISSAUGA	
State/Country:	CANADA	
Postal Code:	L5J 2J8	
PROPERTY NUMBERS Total: 1		
Property Type	Number	
Patent Number:	7774865	
CORRESPONDENCE DATA		
Fax Number:	(416)787-0578	
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>		
Phone:	6473084314	
Email:	diyhb@sympatico.ca	
Correspondent Name:	DAVID YOUNAN	
Address Line 1:	1 KINGSMILL ROAD	
Address Line 4:	TORONTO, CANADA M8X 2N7	
ATTORNEY DOCKET NUMBER:	Y16115616	
NAME OF SUBMITTER:	DAVID YOUNAN	
SIGNATURE:	/DY/	
DATE SIGNED:	03/08/2019	
	This document serves as an Oath/Declaration (37 CFR 1.63).	
Total Attachments: 39		
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PATENT ASSIGNMENT AGREEMENT.

This Agreement dated as of September 26, 2017

BETWEEN:

REGINALD MILLER, an individual residing in the City of Toronto, in the Province of Ontario.
(hereinafter the "Assignor" or "Regg")

- and -

2598466 ONTARIO INC., a company incorporated pursuant to the laws of the Province of Ontario
(hereinafter the "Assignee" or "Corporation")

WHEREAS, the Assignor is the legal and beneficial owner of the invention relating to an athletic support for both men and women, which has been patented in Canada and the United States of America, as further defined below;

AND WHEREAS the Assignor has the right to transfer and assign the Assigned Patents and Intellectual Property Rights, as defined below, and the Assignee desires to acquire the ownership interest in the Assigned Patents and Intellectual Property Rights.

NOW THEREFORE WITNESSETH that in consideration of the sum of Ten Dollars (\$10.00) paid by the Assignee to the Assignor, and the mutual promises and covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by all the parties to this Agreement, the parties hereby acknowledge, covenant and agree as follows:

1. Definitions

The capitalized terms used in this Agreement have the respective meanings as defined below or as defined in the Agreement.

- 1.1 "Assigned Patents" shall mean all patents, including inventions, utility models and design patents and registrations and applications assigned by Assignor to Assignee pursuant to this Agreement, as described in the recitals above, and identified in Schedule "A" hereto.
- 1.2 "Intellectual Property Rights" means all rights, title and interest in and to any intellectual property in the name "The Lock" and the Assigned Patents.
- 1.3 "Invention" means the invention of an athletic support for both men and women, as patented and described in Schedule "A".
- 1.4 "Patents" means the invention which has been patented, in Canada under Patent Number 2,4644,782, and in the United States of America under Patent Number US 7,774,865 B2 (collectively referred to as "Patents") as further described in Schedule "A".

- 1.5 "Third Party" means a Person other than a Party or any director, officer or employee of a Party or an Affiliate of a Party or their successors and assigns hereunder.

2. Assignment

- 2.1 The assignor hereby confirms that he has sold, assigned and transferred and does hereby sell, assign and transfer to the assignee, its successors and assigns, the whole right, title and interest it may have throughout the world in and to the Assigned Patents and Intellectual Property Rights, effective as of the date first written above.
- 2.2 To the extent that any such assigned Intellectual Property Rights or Assigned Patents is not assignable or transferable to the Assignee ("Non-assignable IP"), the Assignor hereby grants to the Assignee an exclusive, royalty-free, irrevocable, perpetual, world-wide license to make, have made, modify, manufacture, reproduce, sub-license, use and sell such Non-assignable IP, and any residual rights the Assignor holds in the Non-assignable IP will be held by him in trust for the sole benefit of the Assignee. The Assignor shall convey, transfer, dispose of and otherwise deal with the Non-assignable IP (including the execution and delivery of all documents and other instruments relating to the Non-assignable IP) in such a manner as the Corporation shall from time to time direct. The Assignor shall not encumber, pledge, or take any action that would hinder or jeopardize the Non-Assignable IP, or the unfettered right or use of the Non-Assignable IP by the Assignee, without the prior express written consent of the Assignor, which consent may be unreasonable withheld.
- 2.3 Upon Assignee's written request, Assignor shall execute all documents and instruments, and shall do all lawful acts, in each case as may be reasonably necessary and at Assignee's expense, to perfect Assignee's rights, title, and interest in and to the Assigned Patents or Intellectual Property Rights. For documents that require notarization, the foregoing obligation of Assignor shall be satisfied if Assignor reasonably cooperates in obtaining signatures, notarized by an appropriate notary; any notarial authentication, legalization, and the like of such notarized signatures shall be obtained by Assignee at Assignee's expense.
- 2.4 Assignee shall be solely responsible for all actions and all costs whatsoever, including legal fees, arising after the date hereof and associated with the continuous prosecution and the maintenance and enforcement of the Assigned Patents or Intellectual Property Rights, and Assignor shall have no obligation to pay any maintenance fees which become due for the Assigned Patents or Intellectual Property Rights after Closing.
- 2.5 Assignor shall assist and execute any and all necessary documents for the registration of the assignment of patent with the appropriate governmental body.

3. Enforcement

- 3.1 Assignor agrees to promptly notify Assignee in writing of any infringement or misappropriation or claim of infringement of third party rights in respect of any of the Assigned Patents or Intellectual Property Rights to which Assignee becomes aware and will provide Assignee with any and all evidence in its possession, if any, of such infringement or misappropriation.

- 3.2 In the event of any infringement or misappropriation or claim of infringement of third party rights in respect of any of the Assigned Patents or Intellectual Property Rights, Assignee will have the right to determine an appropriate course of action to enforce or defend such Assigned Patents or Intellectual Property Rights or otherwise abate the infringement or misappropriation thereof, to take (or refrain from taking) appropriate action to enforce or defend such Assigned Patents or Intellectual Property Rights, and, in the event that Assignee elects to take action, to control any litigation or other enforcement action, to enter into or permit the settlement of any such litigation or any other enforcement action with respect to such Assigned Patents or Intellectual Property Rights, and to recover and retain any monetary damages, settlement, royalties or other recovery arising from such litigation or other enforcement action. Assignor will use reasonable efforts to cooperate with Assignee at Assignee's expense, in any litigation or enforcement action under this Section 3.

4. Representations and Warranties

- 4.1 The Assignor represents and warrants to the Assignee that:

- (a) he is not under any pre-existing obligation inconsistent with the terms of this Agreement;
- (b) the Invention is his original work, and the Assigned Patents and Intellectual Property Rights are free and clear of any claims or encumbrances of any kind, and, to the best of his knowledge, will not infringe any patent, copyright or other proprietary right or violate a trade secret of any person or entity;
- (c) his execution and fulfillment of this agreement has not and will not violate or conflict with or result in a breach of any terms, conditions, duties or obligations he has to any third party; and
- (d) he has not authorized any third party to use, or granted any option to acquire any rights to or licenses to use any of the Assigned Patents or use of the Intellectual Property Rights, nor has he covenanted or agreed with any third party not to sue or otherwise enforce any legal rights with respect to any of the Assigned Patents or Intellectual Property Rights. The representations and warranties of this paragraph shall survive the date of this Agreement.

- 4.2 The Assignee represents and warrants to the Assignor that:

- (a) there is not now any agreement or other instrument binding upon the Assignee that will be violated by the execution and delivery of this Agreement, or will prevent the performance or satisfaction by the Assignee of any of the terms herein contained, and that the Assignee has the full right to enter into this Agreement; and
- (b) the Assignee is not a non-Canadian within the meaning of the Investment Canada Act

5. Notice

- 5.1 Any notice required or permitted to be given to the Assignor shall be sufficiently given if delivered to the Assignor personally, faxed (with a copy delivered by regular mail with a copy of the facsimile transmission report) or if mailed by registered mail to her address last known to the Assignee, currently being 16 Brookers Lane, UPH06, Toronto, ON, M8V 0A5.
- 5.2 Any notice required or permitted to be given to the Assignee shall be sufficiently given if delivered to the President of the Corporation personally, faxed (with a copy delivered by

regular mail with a copy of the facsimile transmission report) or if mailed by registered mail to the Corporation's head office address last known to Assignor, currently being 1 Kingsmill Road, Toronto, Ontario, Canada, M8X 2N7.

- 5.3 Any notice given by registered mail shall be deemed to have been given five (5) days after the time it is posted. Any notice given by personal delivery and handed to the recipient as stated in section 5.1 and 5.2, or delivered by facsimile, shall be deemed to have been given the same day as delivered or faxed.

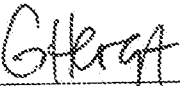
6. Miscellaneous

- 6.1 No amendment, modification or alteration of the terms or provisions of this Agreement will be binding unless the same is in writing and duly executed by each of the Parties hereto, except that any of the terms or provisions of this Agreement may be waived in writing at any time by the Party which is entitled to the benefits of such waived terms or provisions. No waiver of any of the provisions of this Agreement will be deemed to, or will, constitute a waiver of any other provision hereof (whether or not similar). No delay on the part of any Party to this Agreement in exercising any right, power or privilege hereunder will operate as a waiver thereof.
- 6.2 If any provision of this Agreement or the application of any such provision to any person, Party or circumstance will be held invalid, illegal or unenforceable in any respect by a court of competent jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision of this Agreement and this Agreement will remain in full force and effect and will be effectuated as if such illegal, invalid or unenforceable provision is not part thereof.
- 6.3 This Agreement (including the Schedules attached hereto or delivered in connection herewith), constitute the entire agreement between the parties to this Agreement and supersede all prior agreements and understandings, oral and written, between the parties to this Agreement with respect to the subject matter hereof and thereof. If there is conflict or contradiction between this Agreement and the other agreements, this Agreement shall prevail in relation to any issues arising out of or in connection with the Assigned Patents or Intellectual Property Rights.
- 6.4 The failure of any party hereto to exercise any right, power or remedy provided under this Agreement, or otherwise available in respect hereof at law or in equity, or to insist upon compliance by any other party hereto with its obligations hereunder, and any custom or practice of the parties at variance with the terms hereof, shall not constitute a waiver by such party of its right to exercise any such or other right, power or remedy or to demand such compliance.
- 6.5 The parties acknowledge that money damages are not an adequate remedy for violation of this Agreement and that any party may, in its sole discretion, apply to the court for specific performance, or injunctive, or such other relief as such court may deem just and proper, in order to enforce this Agreement or prevent any violation hereof, and to the extent permitted by applicable law, each party waives any objection to the imposition of such relief.
- 6.6 The terms and conditions of this Agreement shall inure to the benefit of, and be binding upon, the respective successors and assigns of the parties hereto.

- 6.7 The Parties hereto acknowledge and agree that the recitals above and the schedules attached hereto are an integral part of this Agreement, and are hereby incorporated by reference herein and made a part hereof.
- 6.8 This agreement shall be governed by and construed in accordance with the law of the Province of Ontario, Canada. In the event of any dispute under the agreement, a suit shall be brought only in a court of competent jurisdiction of the Province of Ontario, Canada.
- 6.9 Assignee and Assignor each acknowledge that this Agreement has been prepared jointly by the Parties and shall not be strictly construed against any Party.
- 6.10 This Agreement may be executed in two or more counterparts, each of which will for all purposes be deemed to be an original but all of which together will constitute one and the same instrument.
- 6.11 Each Party shall do and execute, or arrange for the doing and executing of, each necessary act, document and thing to implement this Agreement, including without limitation executing and delivering and recording any license required by law, with terms consistent with this Agreement to the extent permitted by such local law, in the relevant country or jurisdictions.

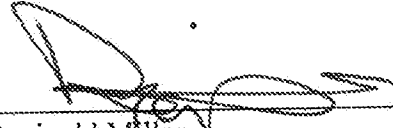
IN WITNESS WHEREOF the parties hereto have hereunto set their hands and seals on the day and date first above written.

SIGNED, SEALED & DELIVERED In the present of:



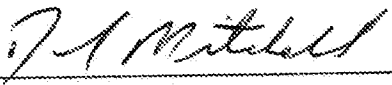
Name and address

Name and address



Reginald Miller

2598466 Ontario Inc.
per



David Mitchell, A.S.O.

Schedule "A"

The Patents attached hereto forms part of this Schedule "A".



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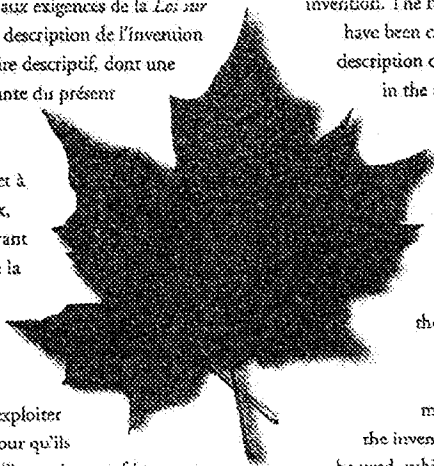
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Brevet canadien / Canadian Patent

* Le commissaire aux brevets a reçu une demande de délivrance de brevet visant une invention. Ladite requête satisfait aux exigences de la *Loi sur les brevets*. Le titre et la description de l'invention figurent dans le mémoire descriptif, dont une copie fait partie intégrante du présent document.

Le présent brevet confère à son titulaire et à ses représentants légaux, pour une période expirant vingt ans à compter de la date du dépôt de la demande au Canada, le droit, la faculté et le privilège exclusif de fabriquer, construire, exploiter et vendre à d'autres, pour qu'ils l'exploitent, l'objet de l'invention, sauf jugement en l'espèce rendu par un tribunal compétent, et sous réserve du paiement des taxes périodiques.



* The Commissioner of Patents has received a petition for the grant of a patent for an invention. The requirements of the *Patent Act* have been complied with. The title and a description of the invention are contained in the specification, a copy of which forms an integral part of this document.

The present patent grants to its owner and to the legal representatives of its owner, for a term which expires twenty years from the filing date of the application in Canada, the exclusive right, privilege and liberty of making, constructing and using the invention and selling it to others to be used, subject to adjudication before any court of competent jurisdiction, and subject to the payment of maintenance fees.

BREVET CANADIEN 2,464,782 CANADIAN PATENT

Date à laquelle le brevet a été
accordé et délivré

2011/06/21

Date on which the patent
was granted and issued

Date du dépôt de la demande

2004/04/15

Filing date of the application

Date à laquelle la demande est
devenue accessible au public
pour consultation

2005/10/15

Date on which the application
was made available for
public inspection

Commissaire aux brevets / Commissioner of Patents

Canada

3256 (CIPC 91) 02/10

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CA 2464782 C 2011/06/21

(11)(21) **2 464 782**

(12) **BREVET CANADIEN
CANADIAN PATENT**

(13) **C**

(22) Date de dépôt/Filing Date: 2004/04/15

(41) Mise à la disp. pub./Open to Public Insp.: 2005/10/15

(45) Date de délivrance/Issue Date: 2011/06/21

(51) Cl.Int./Int.Cl. A41B 9/02 (2006.01),
A41B 9/00 (2006.01), A41B 9/04 (2006.01),
A41D 13/05 (2006.01), A63B 71/08 (2006.01)

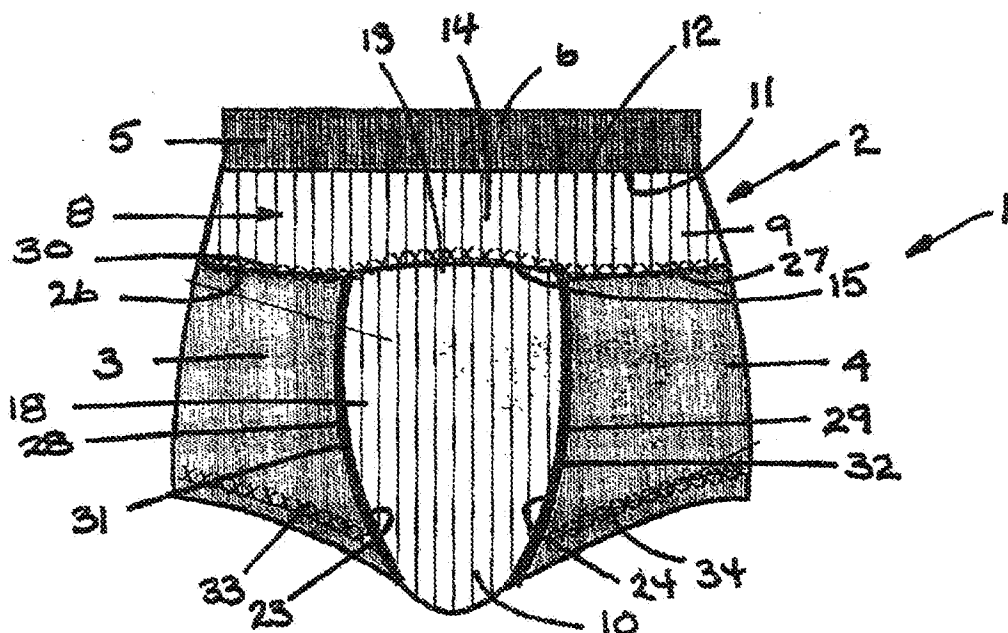
(72) Inventeur/Inventor:
MILLER, REGG, CA

(73) Propriétaire/Owner:
MILLER, REGG, CA

(74) Agent: BLANEY MCMURTRY LLP

(54) Titre : SUSPENSOIR

(54) Title: ATHLETIC SUPPORT



(57) Abrégé/Abstract

The present invention relates to an athletic support having a waistband with a bottom edge having a front side and a back side and a support panel. The support panel includes a crotch section having a front portion sized and shaped to contain a person's

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(57) Abrégé(suite)/Abstract(continued):

genitals, a rear portion sized and shaped to cover the space between the buttocks but not restrict or impede movement of the person's legs and a strap portion joining the front portion and rear portion of said crotch section. A first front edge of the support panel is attached to the front side of the bottom edge of the waistband and a second rear edge of the support panel is attached to the rear side of the bottom edge of the waistband. The support panel is formed from a woven fabric comprising a blend of a synthetic fiber and at least 10% of a stretchable fiber wherein the tensile strength of the fabric is sufficient to hold the genitals in place against the body when in use and the waistband is made from a fabric with an equal or greater tensile strength than the support panel.

TITLE: ATHLETIC SUPPORT

BACKGROUND OF THE INVENTION

5 FIELD OF THE INVENTION

This invention relates to an athletic support for both men and women. In particular the present invention provides an athletic support that holds the genitals, particularly male
10 genitals, in place against the body and can accommodate a hard cup.

DESCRIPTION OF THE PRIOR ART

15 Athletic supports to protect and support male genitals are known. Athletic supports are believed to be for all males that engage in sports or strenuous activity. It is believed that the athletic support helps relieve tension and bring the testicles out of harms way. In contact sports, such as ice
20 hockey, additional protection is provided by a hard protective cup to prevent damage from blows to the groin. However in known devices the level of support and protection is less than desired and the devices are not comfortable.

25 A common design involves a wide elastic waistband with a depending pouch and a pair of straps having one end attached to the bottom of the pouch and the other end attached to the waistband. U.S. Patent No. No. 4,679,554, No. 4,989,594 and No. 5,003,972 show this type of athletic support. In this design the
30 genitals are not held tightly against the body for support and a protective cup in the pouch can move around.

Other designs have focused on incorporating a protective cup within a sport brief. Examples of this type of
35 product are shown in U.S. Patent No. 5,157,793 and No. 5,819,323. These products used stretchable fabrics typically a cotton/Lycra™

combination. This design does not offer enough strength to support the cup against the body or to hold the genitals in place. The material permits the cup and/or genitals to move around not providing adequate support or protection. In addition
5 the cotton/Lycra™ fabric is not able to "remember" or go back to its original shape after being stretched, worn, or repeatedly washed over time.

10 Compression shorts, made from nylon and spandex, have recently replaced the typical athletic support in many non-contact sports and activities. The compression shorts stretch as the person moves and breathe better than cotton, but permit considerable movement of the genitals and may be subject to concerns such as rubbing, chaffing and rashes.

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SUMMARY OF THE INVENTION

It is an object of the invention to provide an athletic support that holds the genitals in place against the body.

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It is a further object of the invention to provide an athletic support that can accommodate a protective cup.

25 It is a further object of the invention to provide an athletic short that holds the genitals in place against the body and is comfortable to wear.

30 Thus in accordance with the present invention there is provided an athletic support having a waistband with a bottom edge having a front side and a back side and a support panel. The support panel has a crotch section having a front portion sized and shaped to contain a person's genitals, a rear portion sized and shaped to cover the space between the buttocks but not restrict or impede movement of the person's legs and a strap
35 portion joining the front portion and rear portion of said crotch section. A first front top edge of the support panel is attached

to the front side of the bottom edge of the waistband and a second rear top edge of the support panel is attached to the rear side of the bottom edge of said waistband. The support panel is formed from a fabric comprising a blend of a synthetic fiber and at least 10% of a stretchable fiber wherein the tensile strength of the fabric is sufficient to hold the genitals in place against the body when in use and the waistband is made from a fabric with an equal or greater tensile strength than the support panel. The support panel is preferably made of a blend of a fiber selected from the group consisting of acetate, acrylic, lyocell, nylon, olefin, polyester and rayon fibers with more than 10% spandex or other elastic fibers and preferably 15% spandex fibers. The support section preferably has a first body section and a crotch section. The first body section has a top side attached to a bottom edge of the waistband. A first end of the crotch section is attached to a front side of the bottom edge of the first body section and a second end of the crotch section is attached to a rear side of the bottom edge of the first body section. The first and second ends of the crotch section are centered on the front side and rear side respectively of the bottom edge of the first body section.

In another embodiment the present invention provides an athletic short having an athletic support as described above and a pair of leg panels. Each of the leg panels has an upper edge and an inner edge. Where the waistband and first body section of the support panel are combined, the upper edge of each leg panel is attached to the waistband and the inner edge of each leg panel is attached to one side of the crotch section of the support panel. Where the support panel has a first body section and a crotch section, the upper edge of each leg panel is attached to a bottom edge of the first body section of the support panel and the inner edge of each leg panel is attached to one side of said crotch section of the support panel. The leg panels are preferably made from a light-weight stretchable fabric with less tensile strength than the fabric used for the support panel.

Further features of the invention will be described or will become apparent in the course of the following detailed description.

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BRIEF DESCRIPTION OF THE DRAWINGS

In order that the invention may be more clearly understood, a preferred embodiment thereof will now be described in detail by way of example, with reference to the accompanying drawings, in which:

10

Figure 1 is a front view of one embodiment of an athletic short according to the present invention.

15

Figure 2 is a top view of the athletic short of Figure 1;

Figure 3 is rear view of the athletic short of Figure 1;

20 Figure 4 is a front view of another embodiment of an athletic short according to the present invention.

Figure 5 is rear view of the athletic short of Figure 4;

25 Figure 6 is a front view of another embodiment of an athletic short according to the present invention;

Figure 7 is a rear view of the athletic short of Figure 6.

30

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to Figures 1 to 3, one embodiment of an athletic short according to the present invention is generally indicated at 1. The athletic short 1 consists of an athletic support generally indicated at 2 and a pair of leg panels 3,4.

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The athletic support 2 has a waistband 5 with a front side 6 and a rear side 7 and a support panel generally indicated at 8. The waistband 5 is sized to encircle a person's waist. The support panel 8 has a first body section 9 and a crotch section 10. The first body section 9, is also sized and shaped to encircle a person's waist and hips and has a top side 11 attached to a bottom edge 12 of waistband 5. A first end 13 of crotch section 10 is attached to the front side 14 of the bottom edge 15 of the first body section 9. A second end 16 of crotch section 10 is attached to the rear side 17 of the bottom edge 15 of the first body section 9. The ends 13, 16 of crotch section 10 are preferably centered on the front side 14 and rear side 17 respectively of the bottom edge 15 of the first body section 9.

15 In the embodiment shown the support panel 8 is made from a strong and stretchable fabric that provides the support required and will retain its original shape after being stretched, worn or repeatedly washed. In the embodiment illustrated the support panel 8 is made from a fabric comprising
20 a blend of a synthetic fiber and at least 10% of a stretchable fiber wherein the tensile strength of the fabric is sufficient to hold the genitals in place against the body. Preferably the stretchable fabric for the support panel 8 is made of a blend of a fiber selected from the group consisting of acetate, acrylic, lyocell, nylon, olefin, polyester and rayon fibers with more than
25 10% spandex or other elastic fibers such as rubber. The preferred fabric for support panel 8 is a four-way stretch, 85% nylon 15% spandex blend with 1x1 or 2x1 rib. The waistband 5 is made from a fabric with an equal or greater tensile strength than the support
30 panel 8. The support panel 8, by being made from a strong, stretchable fabric, will hold the genitals in place against the body when in use. It is important that both waistband 5 and support panel 8 are made from a fabric that while stretchable is very strong and resists pull. It is the reason the crotch
35 section 10 "locks" the genitals in place against the body. If the waistband 5 was just a regular stretchy fabric, such as used

on conventional underwear, with less tensile strength than support panel 8, it will not have the strength to hold the crotch section 10 to obtain the locking effect. When a rib fabric is used for support panel 8, the crotch section 10 can grip and hold a protective cup in place better than a flat weave. In the preferred embodiment when a four way stretch fabric is used for support panel 8, crotch section 10 pulls the cup into the crotch and "locks" it in place providing added comfort and protection over conventional athletic supports.

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The crotch section 10 has a front portion 18 sized and is shaped to contain the genitals and preferably to hold a protective cup if required. A rear portion 19 of crotch section 10 has a generally triangular configuration to cover the space between the buttocks but not restrict or impede movement of the legs. A strap portion 20 joins front portion 18 and rear portion 19 of crotch section 10. The strap section 20 is preferably about 1.5 to 2 inches wide. This preferred shape of the crotch section 10 is similar to that of a thong or G-string. A liner 21 may be provided on the inner surface 22 of crotch section 10. Liner 21 may be may be formed of a soft, stretchable fabric such as a cotton/Lycra blend or other soft, stretchable fabric for comfort. The liner performs primarily a comfort function and separates the ribbed crotch section 10 in the preferred embodiment from the skin. While the edges of liner 21 are attached to the sides 23,24 of crotch section 10, the top front edge 25 of liner 21 is unattached to permit a protective cup to be inserted if desired between the liner 21 and crotch section 10. A top flap maybe provided together with stitching along the bottom of the front portion 18 of crotch section 10 to retain the cup in place.

Waistband 5 is as noted above is preferably made from a strong, stretchable material and may be made of the same material as support panel 8 or other stretchable material such as such as braided, knitted, woven, waistband or sports elastic containing

rubber fibers to provide stretchability. Elastics can add stability to the waistband 5 and prevent it from rolling.

In the embodiment shown, the athletic short 1 is provided with leg panels 3,4. Each of the leg panels 3,4 has an upper edge 26,27 and an inside edge 28,29. The upper edge 26,27 of each leg panel 3,4 is attached to the bottom edge 15 of the first body section 9 of support panel 8. The inside edge 28,29 of each leg panel 3,4 is attached to one side 23,24 of crotch section 10. The leg panels 3,4 are preferably made from a lightweight two way or four way stretchy solid or mesh fabric. In the embodiment illustrated the leg panels are made of a fabric blend having less than 8% spandex. Use of a stretchy fabric prevents the leg panels 3,4 from being too tight on the person's legs.

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The length of the leg panels 3,4 may vary depending on the requirements of the activity from brief as shown in Figures 1 to 3 to full leg. In the embodiment shown the leg panels 3,4 keep the rear portion 19 and strap portion 20 of crotch section 10 from going into the crack between a person's buttocks. At the same time the strong, stretchable fabric of the crotch section 10 pulls the front portion 18 of the crotch section 10 to support the genitals and hold them in place against the body. This combination provides better protection and comfort than prior designs. The comfort of the design is further enhanced in the preferred embodiment by the elimination of seams in the crotch section by making it in one piece or the use of overly constrictive fabrics in the leg panels. To further enhance comfort the fabrics are preferably capable of moving moisture away from the body and are treated with a non-toxic bacterial agent to control unwanted bacteria to reduce rashes, itching, etc. to provide better hygiene. Performance fibers are typically breathable and move perspiration away from the body to the fabric's outer surface so it can evaporate quickly. Fabrics made with performance fibers are particularly suitable for the present invention.

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The athletic support 2 has a waistband 5 with a front side 6 and a rear side 7 and a support panel generally indicated at 8. The waistband 5 is sized to encircle a person's waist. The support panel 8 has a first body section 9 and a crotch section 10. The first body section 9, is also sized and shaped to encircle a person's waist and hips and has a top side 11 attached to a bottom edge 12 of waistband 5. A first end 13 of crotch section 10 is attached to the front side 14 of the bottom edge 15 of the first body section 9. A second end 16 of crotch section 10 is attached to the rear side 17 of the bottom edge 15 of the first body section 9. The ends 13,16 of crotch section 10 are preferably centered on the front side 14 and rear side 17 respectively of the bottom edge 15 of the first body section 9.

In the embodiment shown, the support panel 8 is made from a strong and stretchable fabric that provides the support required and will retain its original shape after being stretched, worn or repeatedly washed. In the embodiment illustrated the support panel 8 is made from a fabric comprising a blend of a synthetic fiber and at least 10% of a stretchable fiber wherein the tensile strength of the fabric is sufficient to hold the genitals in place against the body. Preferably the stretchable fabric for the support panel 8 is made of a blend of a fiber selected from the group consisting of acetate, acrylic, lyocell, nylon, olefin, polyester and rayon fibers with more than 10% spandex or other elastic fibers such as rubber. The preferred fabric for support panel 8 is a four-way stretch, 85% nylon 15% spandex blend with 1x1 or 2x1 rib weaves. Rib weave is a basic weave which produces ribs on the fabric.

The waistband 5 is made from a fabric with an equal or greater tensile strength than the support panel 8. The support panel 8, by being made from a strong, stretchable fabric, will hold the genitals in place against the body when in use. It is important that both waistband 5 and support panel 8 are made from a fabric that while stretchable is very strong and resists pull. It is the reason the crotch section 10 "locks" the genitals in place against the body. If the waistband 5 was just a regular stretchy fabric, such as used

generally indicated at 68. The support panel 68 has a first body section 69 and a crotch section 70. The first body section 69 has a top side 71 attached to a bottom edge 72 of waistband 65. A first end 73 of crotch section 70 is attached to the front side 74 of the bottom edge 75 of the first body section 69. A second end 76 of crotch section 70 is attached to the rear side 77 of the bottom edge 75 of the first body section 69. The ends 73, 76 of crotch section 70 are preferably centered on the front side 74 and rear side 77 respectively of the bottom edge 75 of the first body section 69.

The construction and design of athletic short 61 is substantially the same as the athletic shorts 1, 41 illustrated in Figures 1 to 3 and Figures 4 and 5 except that the leg panels 63, 64 are longer than for athletic short 1 but shorter than for athletic short 41. The leg panels 63, 64 of athletic short 61 extend to about mid thigh.

The athletic shorts of the present invention can be used for a variety of activities and sports including hockey, baseball, soccer, lacrosse, cycling, wrestling, basketball, track and field, volleyball, speed skating, football etc. where support and containment of the genitals is required while permitting freedom of movement of the legs. The present invention can be incorporated into a short as illustrated or incorporated into a body suit or other garments. The garments of the present invention can be designed to be worn under other equipment such as in sports like hockey or as part of the outer garment as in track and field or speed skating. Accessories can be attached to the athletic shorts of the present invention, again depending on the sport or activity for which they are intended. For example if designed for hockey, the athletic short can be provided with clips or other fastening means such as Velcro™ strips to hold up the hockey socks.

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Having illustrated and described a preferred embodiment of the invention and certain possible modifications thereto, it should be apparent to those of ordinary skill in the art that the invention permits of further modification in arrangement and detail. For example the waistband and first body section of the support panel of the athletic support can be combined into a single component. The front portion and rear portion of the crotch section are then adapted (extended) if necessary to connect to the bottom edge of the waistband. Similarly the upper edge of the leg panels would then attach to the bottom edge of the waistband. All such modifications are covered by the scope of the invention.

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. An athletic support having a waistband with a bottom edge having a front side and a back side and a support panel including a crotch section having a front portion sized and shaped to contain a person's genitals, a rear portion sized and shaped to cover the space between the buttocks but not restrict or impede movement of the person's legs and a strap portion joining the front portion and rear portion of said crotch section, a first front top edge of said support panel attached to the front side of the bottom edge of said waistband and a second rear top edge of said support panel attached to the rear side of the bottom edge of said waistband; wherein the support panel is formed from a fabric comprising a blend of a synthetic fiber and at least 10% of a stretchable fiber wherein the tensile strength of the fabric is sufficient to hold the genitals in place against the body when in use and the waistband is made from a fabric with an equal or greater tensile strength than the support panel.
2. An athletic support according to claim 1 wherein the support panel is made of a blend of a fiber selected from the group consisting of acetate, acrylic, lyocell, nylon, olefin, 25 polyester and rayon fibers with more than 10% spandex fibers.
3. An athletic support according to claim 2 wherein the support panel is made from a blend of fiber selected from the group consisting of nylon and polyester and at least 15% spandex fibers.
4. An athletic support according to claim 2 or 3 wherein the support panel is made from a knitted fabric having a rib weave.

5. An athletic support according to any one of claims 1 to 4 wherein said support panel has a first body section and a crotch section, said first body section having a top side attached to a bottom edge of said waistband; a first end of said crotch section is attached to a front side of the bottom edge of the first body section and a second end of said crotch section is attached to a rear side of the bottom edge of the first body section; the first and second ends of said crotch section are centered on the front side and rear side respectively of the bottom edge of the first body section.
6. An athletic support according to claim 5 wherein the support panel is made from a four-way stretch 85% nylon 15% Lycra blend rib weave.
7. An athletic support according to claim 5 or 6 wherein the front portion of the crotch section is sized and shaped to contain the genitals and to hold a protective cup, the rear portion of said crotch section has a generally triangular configuration to cover the space between the buttocks but not restrict or impede movement of the legs and the strap portion is about 1.5 to 2 inches wide.
8. An athletic support according to claim 7 wherein a liner is provided on an inner surface of said crotch section.
9. An athletic support according to claim 8 wherein edges of said liner are attached to sides of said crotch section and a top front edge of said liner is unattached to permit a protective cup to be inserted between the liner and the front portion of said crotch section.

10. An athletic short having an athletic support according to any one of claims 1 to 4 and a pair of leg panels, each of said leg panels having an upper edge and an inner edge, wherein a said upper edge of each leg panel is attached to the waistband and the inner edge of each leg panel is attached to one side of said crotch section of the support panel.
11. An athletic short having an athletic support according to any one of claims 5 to 9 and a pair of leg panels, each of said leg panels having an upper edge, and an inner edge, wherein said upper edge of each leg panel is attached to a bottom edge of the first body section of said support panel and the inner edge of each leg panel is attached to one side of said crotch section 10 of the support panel.
12. An athletic short according to claim 10 or 11 wherein said leg panels are made from a light-weight stretchable fabric.
13. An athletic short according to claim 10 or 11 wherein the light-weight stretchable fabric of said leg panels is a two way or four way stretchy solid or mesh fabric.
14. An athletic short according to claim 13 wherein the light-weight stretchable fabric of said leg panels is a blend having less than 8% spandex to prevent the leg panels from being too tight on a person's legs.
15. An athletic short according to any one of claims 10 to 14 wherein the length of the leg panels may be selected from brief, mid thigh, full thigh or full leg depending on the requirements of an activity.

16. An athletic short according to any one of claims 10 to 15 for use in an activity selected from the group consisting of hockey, baseball, soccer, lacrosse, cycling, wrestling, basketball, track and field, volleyball, speed skating and football.
17. An athletic short according to any one of claims 10 to 16 incorporated into a garment designed to be worn under other equipment.
18. An athletic short according to any one of claims 10 to 17 incorporated into a garment designed to be part of an outer garment.
19. A garment for providing protection and support for the genitals of a male wearer, the garment comprising: a waistband made of elastic and disposed to encircle the wearer's torso at or near his waist when the garment is in use; a support panel of different material from the waistband made of a weave of stretchable and non-stretchable fibers, the support panel being attached to the waistband so as to encircle the wearer's torso below the waistband when the garment is in use, thereby supporting the garment against the wearer's hips; a crotch elevating panel comprising a crotch seamlessly joined to a single strap portion, both made of a weave of stretchable and non-stretchable fibers, the crotch portion being attached to the support panel and shaped to contain the wearer's genitals, the strap portion connecting the crotch portion to the support panel at a position opposite to where the crotch portion is attached, the strap portion being sufficiently narrow so that when worn between the wearer's legs it does not impair their movement; and two leg panels, one each on the left and right side of the garment, the leg panels being made of a light-weight fabric and attached to the support panel and the crotch

and strap portions of the crotch elevating panel on each side of the garment so as to leave an opening for each leg of the wearer; wherein the crotch portion and the strap portion are disposed so that the crotch elevating panel draws the genitals of the wearer upwards from between the wearer's legs when the garment is in use, thereby holding and supporting the genitals against the wearer's pubic bone.

20. The garment of claim 19, wherein the support panel and the crotch elevating panel are made of a weave of an unstretchable fiber selected from acetate, acrylic, lyocell, nylon, olefin, polyester, and rayon, and the stretchable fiber spandex.
21. The garment of any one of claims 19 to 20, wherein the support panel and the crotch elevating panel are made from a weave of nylon with about 10% spandex and having a rib weave.
22. The garment of any one of claims 19 to 21, wherein the crotch portion of the crotch elevating panel is a single pouch-like seamless compartment.
23. The garment of any one of claims 19 to 22, wherein the crotch elevating panel is configured to contain a protective cup in a separate compartment.
24. The garment of any one of claims 19 to 23, wherein the crotch portion is lined.
25. The garment of any one of claims 19 to 24, wherein the leg panels are configured to keep the strap portion from going between the wearer's buttocks without preventing the crotch elevating panel from elevating and supporting the genitals of the wearer in the manner specified.

26. The garment of any one of claims 19 to 25, wherein the leg panels are made of a two way or four way stretchable solid or mesh fabric containing less than about 8% spandex.
27. The garment of any one of claims 19 to 26, wherein the leg panels are brief, mid thigh, or full thigh in length.
28. The garment of any one of claims 19 to 27, wherein the strap portion of the crotch elevating panel flares before its connection to the opposite side of the support panel so as to form a rear portion that does not impair movement of the wearer's legs or buttocks.
29. The garment of any one of claims 19 to 28, designed to be worn under other equipment.
30. The garment of any one of claims 19 to 28, which is part of an outer garment.
31. The garment of any one of claims 19 to 30, made of a performance fabric that moves perspiration away from the wearer's body to the fabric's outer surface.
32. The garment of any one of claims 19 to 31, adapted for use in an athletic activity selected from hockey, baseball, football, soccer, lacrosse, basketball, tennis, squash, track and field, cycling, speed skating, skiing, and wrestling.

33. A garment for providing support for the genitals of a male wearer during athletic activity, the garment comprising: a waistband made of elastic and disposed to encircle the wearer's torso at or near his waist when the garment is in use; a support panel made of a weave of stretchable and non-stretchable fibers, the support panel being attached to the waistband so as to encircle the wearer's torso below the waistband when the garment is in use, thereby supporting the garment against the wearer's hips; a one-piece crotch elevating panel made of a weave of stretchable and non-stretchable fibers, comprising a crotch portion joined to a single strap portion, the crotch portion being attached to the support panel and having a pouch-like seamless compartment, the strap portion connecting the crotch portion to the support panel at a position opposite to where the crotch portion is attached by way of a rear portion sized and shaped not to restrict or impede movement of the wearer's legs; and two leg panels being made of a light-weight fabric, and attached to the support panel and the crotch and strap portions of the crotch elevating panel one on each side of the garment so as to leave an opening for each leg of the wearer; wherein the crotch elevating panel is disposed to draw the genitals of the wearer upwards from between the wearer's legs when the garment is in use.

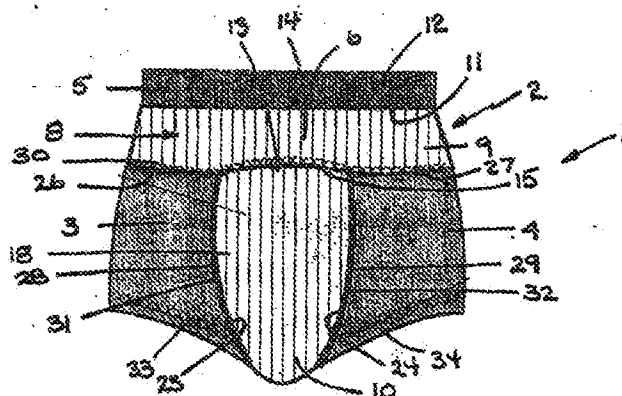


FIGURE 1

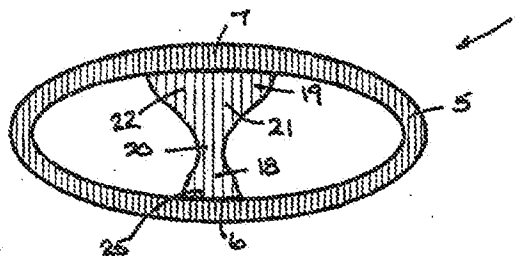


FIGURE 2

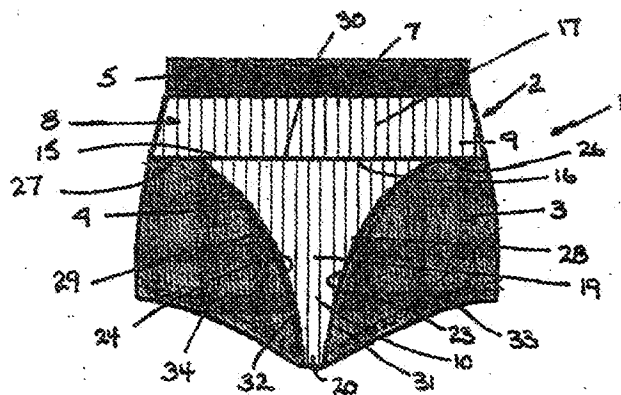


FIGURE 3

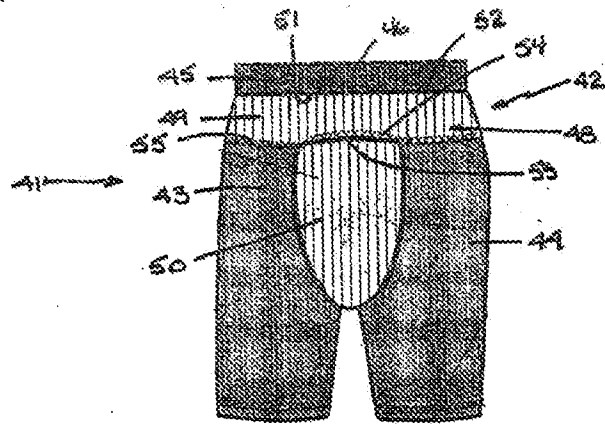


FIGURE 4

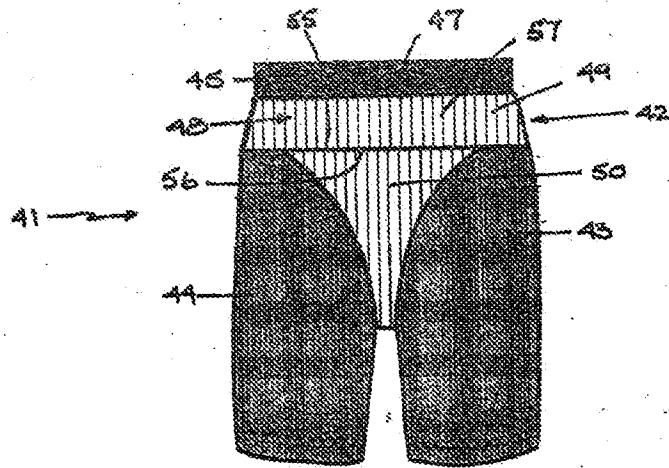


FIGURE 5

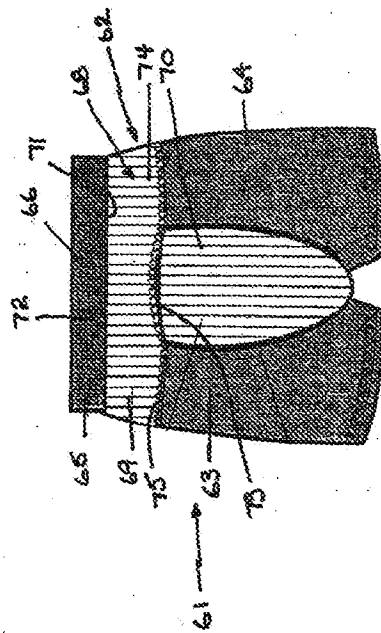


FIGURE 6

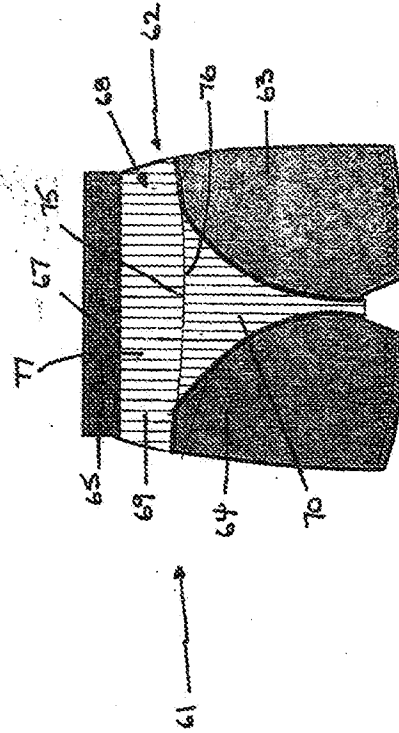
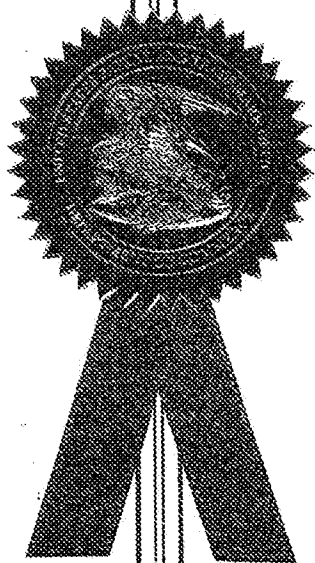


FIGURE 7

The
United
States
of
America



**The Director of the United States
Patent and Trademark Office**

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, or importing into the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

David J. Kyjko

Director of the United States Patent and Trademark Office

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MAINTENANCE FEE NOTICE

If the application for this patent was filed on or after December 12, 1980, maintenance fees are due three years and six months, seven years and six months, and eleven years and six months after the date of this grant, or within a grace period of six months thereafter upon payment of a surcharge as provided by law. The amount, number and timing of the maintenance fees required may be changed by law or regulation. Unless payment of the applicable maintenance fee is received in the United States Patent and Trademark Office on or before the date the fee is due or within a grace period of six months thereafter, the patent will expire as of the end of such grace period.

PATENT TERM NOTICE

If the application for this patent was filed on or after June 8, 1995, the term of this patent begins on the date on which this patent issues and ends twenty years from the filing date of the application or, if the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121, or 365(c), twenty years from the filing date of the earliest such application ("the twenty-year term"), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b), and any extension as provided by 35 U.S.C. 154(b) or 156 or any disclaimer under 35 U.S.C. 253.

If this application was filed prior to June 8, 1995, the term of this patent begins on the date on which this patent issues and ends on the later of seventeen years from the date of the grant of this patent or the twenty-year term set forth above for patents resulting from applications filed on or after June 8, 1995, subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b) and any extension as provided by 35 U.S.C. 156 or any disclaimer under 35 U.S.C. 253.

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US00774865B2

(12) **United States Patent**
Miller

(10) **Patent No.:** **US 7,774,865 B2**
(45) **Date of Patent:** **Aug. 17, 2010**

(54) **ATHLETIC SUPPORT GARMENT**

(76) **Inventor:** Regg Miller, 2024 Malbrook Road,
Oakville, Ontario (CA) L6J 1Y7

(*) **Notice:** Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 46 days.

(21) **Appl. No.:** 11/106,586

(22) **Filed:** Apr. 15, 2005

(65) **Prior Publication Data**
US 2005/0229293 A1 Oct. 20, 2005

(30) **Foreign Application Priority Data**
Apr. 15, 2004 (CA) 2464782

(51) **Int. Cl.**
A41B 9/02 (2006.01)
(52) **U.S. CL.** 2/403; 2/400
(58) **Field of Classification Search** 2/403, 2/400,
2/403, 405, 404, 78.1, 73, 109, 113
See application file for complete search history.

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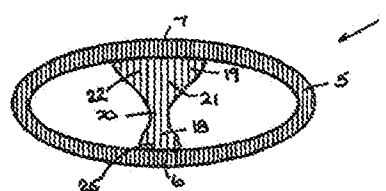
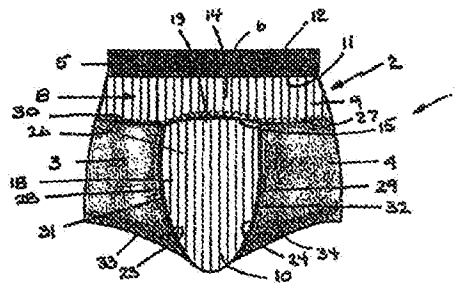
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Primary Examiner—Katherine Moran
Assistant Examiner—Richale L Quinn

(57) **ABSTRACT**

The present invention relates to athletic support garment having a support panel sized and shaped to encircle a person's waist or hips, and a crotch panel, the support panel having a front side, back side, top edge and bottom edge, the crotch panel having a front seamless portion sized and shaped to contain a person's genitals, a rear portion sized and shaped to cover the space between the buttocks but not restrict or impede movement of the person's legs and a strap portion joining the front portion and rear portion of the crotch panel, a first end of the crotch panel attached to the front side of the bottom edge of the support panel and a second end of the crotch panel attached to the rear side of the bottom edge of the support panel; wherein the support panel and crotch panel are formed from a fabric comprising a blend of a synthetic fiber and at least 10% of a stretchable fiber wherein the tensile strength of the fabric is sufficient to hold the genitals on top of and against the pubic bone above the crotch when in use.

15 Claims, 3 Drawing Sheets



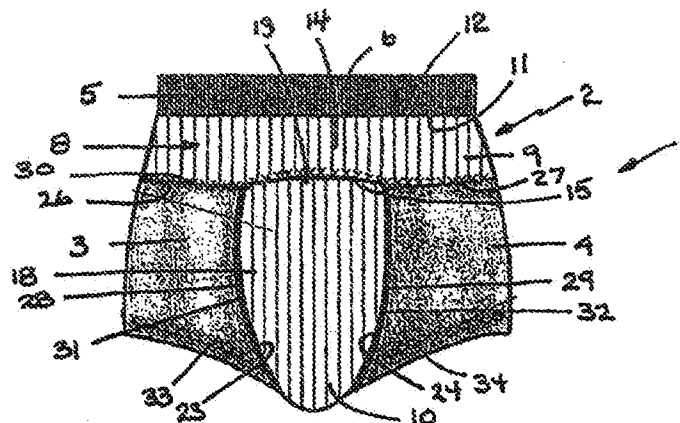


FIGURE 1

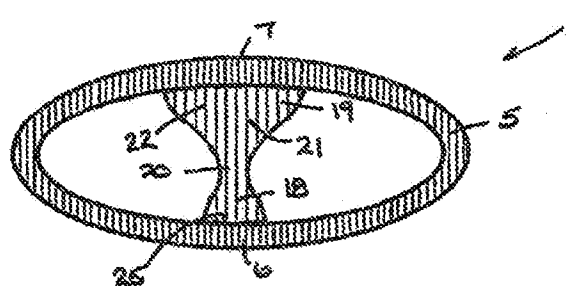


FIGURE 2

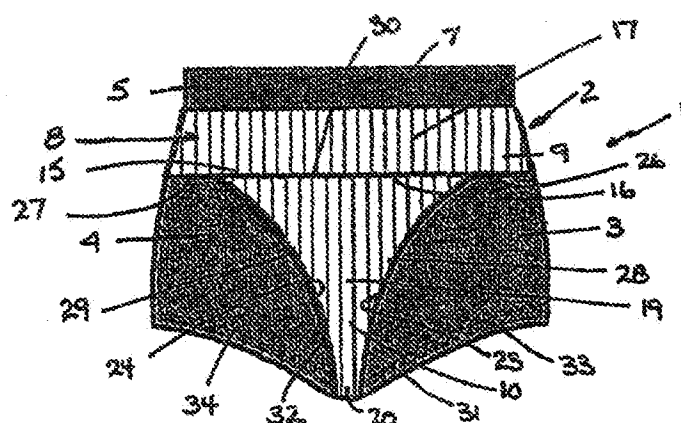


FIGURE 3

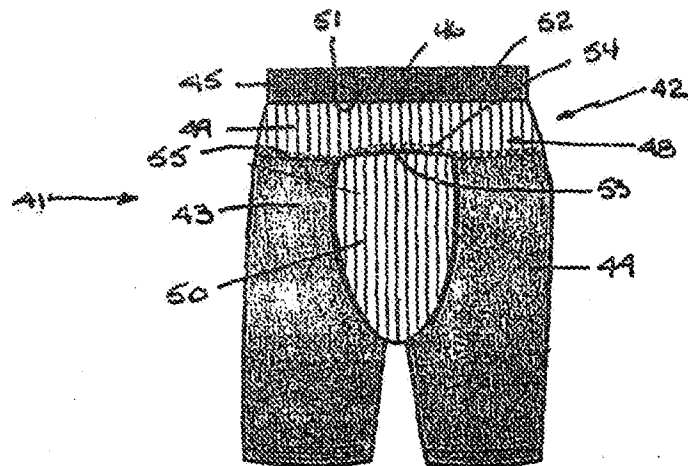


FIGURE 4

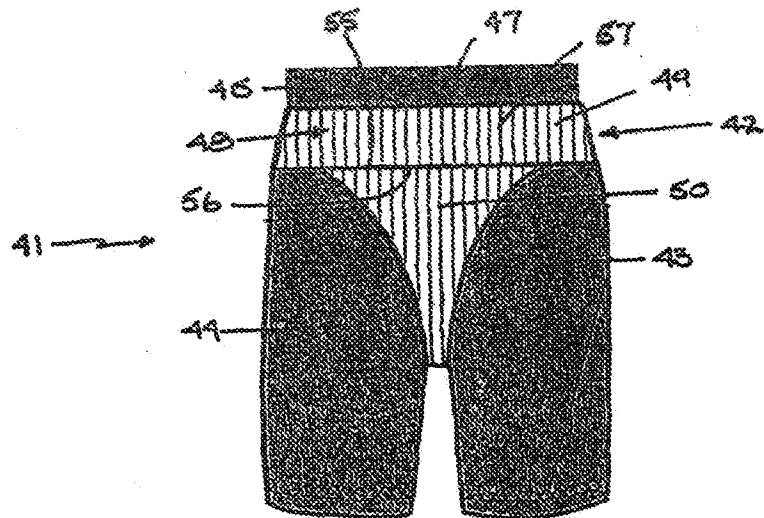


FIGURE 5

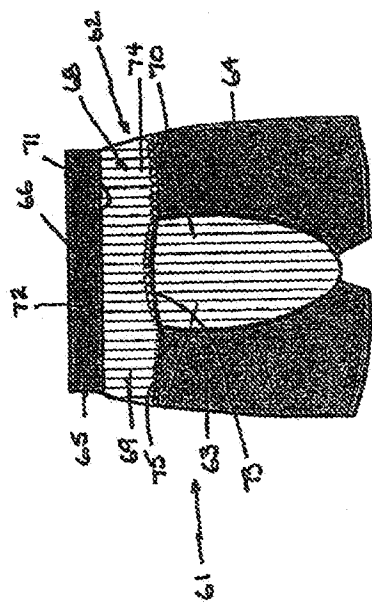


FIGURE 6

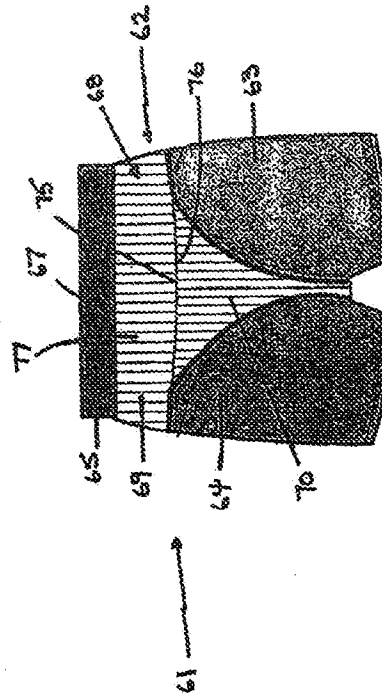


FIGURE 7

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ATHLETIC SUPPORT GARMENT

FIELD OF THE INVENTION

This invention relates to an athletic support garment for primarily men but may be used by women. In particular the present invention provides an athletic support garment that covers the male genitals. Moreover, the male genitals are held and supported over and against the pubic bone.

DESCRIPTION OF THE PRIOR ART

Athletic supports to protect and support the male genitals are known. Athletic supports are believed to be for all males that engage in sports or strenuous activity. It is believed that the athletic support helps relieve tension by keeping the male anatomy contained and keeping the testicles out of harm's way. In contact sports, such as ice hockey and kickboxing, additional protection is provided by a hard triangular protective cup that emulates the natural shape of the male's flaccid organs. However in most known athletic support devices the level of said support is minimal due to general loose fit of these devices. When a protective cup is added, the movement of the cup over the genitals limits the protection to frontal blows. There is little or no protection from blows underneath and from behind, hence, the invention of the banana cup and its relatives.

No matter how the genitals have been covered in the past, comfort has always been an issue for the above reasons. Most men agree, that current devices are not that comfortable.

A common design involves a waistband with a descending pouch and a pair of straps having one end attached to the bottom of the pouch and the other end attached to the waistband. U.S. Pat. No. 4,679,554, U.S. Pat. No. 4,989,594 and U.S. Pat. No. 5,003,972 show this type of athletic support. In this design the genitals are not held and supported over and against the pubic bone and a protective cup in the pouch can move around inhibiting certain freedom of movement and in some instances, even cause injury.

Other designs have focused on incorporating a protective triangular cup within a sport brief. Examples of this type of product are shown in U.S. Pat. No. 5,157,793 and U.S. Pat. No. 5,519,323. These products used stretchable fabrics typically a cotton/lycra combination. Because this design contains one uniform fabric throughout, it does not offer enough strength to hold and support the cup over and against the pubic bone to hold the genitals securely in place. The material permits the cup and/or genitals to move around not providing adequate support or protection. In addition the cotton/lycra fabric is not able to remember or go back to its original shape after being stretched by long workouts or heavy exertion, sweating or repeated washings over time.

Compression shorts, made from nylon and lycra or spandex, have recently replaced the typical athletic support in many non-contact sports and activities. The compression shorts stretch as the person moves and with the addition of "moisture management" fabrics help the garment breathe and wick moisture from the area, but do not address the loose fit and movement of the genitals causing concerns such as rubbing, chaffing and rashes.

SUMMARY OF THE INVENTION

It is an object of the invention to provide an athletic support garment having a design that elevates the genitals from between the athlete's legs and holds and supports them on top of and against the pubic bone in a single pouch-like seamless compartment.

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It is a further object of the invention to provide an athletic support garment that can accommodate a newly designed protective cup so there is no interaction with the cup and the top of the athlete's thighs, thereby freeing the athlete to extend his/her range of motion to the utmost while maintaining maximum support, excellent comfort and ultimate protection.

Thus in accordance with the present invention there is provided athletic support garment having a support panel sized and shaped to encircle a person's waist or hips, and a crotch panel, said support panel having a front side, back side, top edge and bottom edge, said crotch panel having a front seamless portion sized and shaped to contain a person's genitals, a rear portion sized and shaped to cover the space between the buttocks but not restrict or impede movement of the person's legs and a strap portion joining the front portion and rear portion of said crotch panel, a first end of said crotch panel attached to the front side of the bottom edge of said support panel and a second end of said crotch panel attached to the rear side of the bottom edge of said support panel; wherein the support panel and crotch panel are formed from a fabric comprising a blend of a synthetic fiber and at least 10% of a stretchable fiber wherein the tensile strength of the fabric is sufficient to hold the genitals on top of and against the pubic bone above the crotch when in use. In a preferred embodiment the athletic support garment preferably includes a waistband sized and shaped to encircle a person's waist, said waistband with a bottom edge attached to the top edge of said support panel and made from a fabric with an equal or greater tensile strength than the support panel and crotch panel. The support panel and crotch panel are preferably made of a blend of a fiber selected from the group consisting of acetate, acrylic, lyocell, nylon, olefin, polyester and rayon fibers with more than 10% spandex/lycra fibers and preferably between 15%-30% spandex/lycra fibers. The first and second ends of the crotch panel are preferably centered on the front side and rear side respectively of the support panel. The athletic support garments of the present invention preferably have a pair of leg panels. Each of the leg panels has an upper edge and an inner edge. Where the waistband and support panel are combined, the upper edge of each leg panel is attached to the support panel and the inner edge of each leg panel is attached to one side of the crotch panel. Where the support panel is separate from the waistband, the upper edge of each leg panel is attached to a bottom edge of the support panel and the inner edge of each leg panel is attached to one side of said crotch panel. The leg panels are preferably made from a light-weight stretchable fabric with less tensile strength than the fabric used for the support panel.

Further features of the invention will be described or will become apparent in the course of the following detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

In order that the invention may be more clearly understood, a preferred embodiment thereof will now be described in detail by way of example, with reference to the accompanying drawings, in which:

FIG. 1 is a front view of one embodiment of an athletic support garment in the form of briefs according to the present invention.

FIG. 2 is a top view of the athletic support garment of FIG. 1;

FIG. 3 is rear view of the athletic support garment of FIG. 1;

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FIG. 4 is a front view of another embodiment of an athletic support garment in the form of shorts with a long leg panel according to the present invention.

FIG. 5 is a rear view of the athletic support garment of FIG. 4.

FIG. 6 is a front view of another embodiment of an athletic support garment in the form of shorts with a short leg panel according to the present invention;

FIG. 7 is a rear view of the athletic support garment of FIG. 6.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIGS. 1 to 3, one embodiment of an athletic support garment according to the present invention in the form of a pair of briefs is generally indicated at 1. The athletic support garment 1 consists of an athletic support generally indicated at 2 and a pair of leg panels 3, 4. The athletic support 2 preferably has a waistband 5 with a front side 6 and a rear side 7. A support panel 8 adapted and sized to fit around a person's waist and/or hips is provided between the waistband 5 and a depending crotch panel 10. While the support panel 8 and waistband 5 are shown in the preferred embodiment as comprising two separate elements, the support panel and waistband could be formed as a single element without departing from the scope of the present invention. In the embodiment illustrated the support panel 8 has a body section 9. The body section 9 has a top side 11 attached to a bottom edge 12 of the waistband 5. A first end 13 of crotch panel 10 is attached to the front side 14 of the bottom edge 15 of the body section 9 of support panel 8. A second end 16 of crotch panel 10 is attached to the rear side 17 of the bottom edge 15 of the body section 9. The ends 13, 16 of crotch panel 10 are preferably centered on the front side 14 and rear side 17 respectively of the bottom edge 15 of the body section 9.

In the embodiment shown the support panel 8 and crotch panel 10 are made from a strong and stretchable fabric that provides the support required and will retain its original shape after being stretched, worn or repeatedly washed. In the embodiment illustrated the support panel 8 and crotch panel 10 are made from a fabric comprising a blend of a synthetic fiber and at least 10% of a stretchable fiber wherein the tensile strength of the fabric is sufficient to hold the genitals in place on top of and against the pubic bone above the crotch. Preferably the stretchable fabric for the support panel 8 and crotch panel 10 is made of a blend of a fiber selected from the group consisting of acetate, acrylic, lyocell, nylon, olefin, polyester and rayon fibers with more than 10% spandex fibers or other elastic fibers such as Lycra™ or rubber. The preferred fabric for support panel 8 and crotch panel 10 is a four-way stretch 85% nylon 15% spandex blend with 1x1 or 2x1 rib. The waistband 5 is made from a fabric with an equal or greater tensile strength than the support panel 8 and crotch panel 10. The support panel 8 and crotch panel 10, by being made from a strong, stretchable fabric, will hold the genitals in place on top of and against the pubic bone above the crotch when in use. It is important that both the waistband 5 and support panel 8 are made from a fabric that while stretchable is very strong and resist pull. It is the reason the crotch panel 10 "locks" the genitals in place on top of and against the pubic bone above the crotch. If the waistband 5 was made from just a regular stretchy fabric, such as used on conventional underwear, with less tensile strength than support panel 8, it will not have the strength to hold the crotch panel 10 to obtain the locking effect. When a rib fabric is used for support panel 8 and crotch panel 10, the crotch panel 10 can grip and hold a

protective cup in place better than a flat weave. In the preferred embodiment when a four way stretch fabric is used for support panel 8 and crotch panel 10, crotch panel 10 pulls the cup above the crotch locking it in place providing added comfort and protection over conventional athletic supports.

The crotch panel 10 has a front portion 18 sized and shaped to contain the genitals in a seamless pouch and preferably to hold a protective cup if required. A rear portion 19 of crotch panel 10 has a generally triangular configuration to cover the space between the buttocks but not restrict or impede movement of the legs. The extent to which the buttocks can be covered may vary without departing from the scope of the present invention provided the rear portion 19 does not restrict or impede movement of the legs. A strap portion 20 joins front portion 18 and rear portion 19 of crotch panel 10. The strap portion 20 can be similar to that of a thong or G-string or can mirror the front panel. A liner 21 may be provided on the inner surface 22 of crotch panel 10. Liner 21 may be formed of a soft, stretchable fabric such as a cotton/lycra blend or other soft performance stretchable fabrics for comfort. The liner performs primarily a comfort function and separates the ribbed crotch panel 10 in the preferred embodiment from the skin. While the edges of liner 21 are attached to the sides 23, 24 of crotch panel 10, the top front edge 25 of liner 21 is unattached to permit a protective cup to be inserted if desired between the liner 21 and crotch panel 10. A top flap or under liner may be provided together with stitching along the bottom of the front portion 18 of the crotch panel 10 to retain the cup in place.

The waistband 5 is, as noted above, is preferably made from a stretchy fabric preferably different than the material of the support panel 8 and crotch panel 10 and a stronger material such as braided, knitted or woven waistband or sports elastic containing rubber fibers to provide strength and stretchability. Elastics can add stability to the waistband and prevent it from rolling.

In the embodiment shown, the athletic support garment 1 is provided with leg panels 3, 4. Each of the leg panels 3, 4 has an upper edge 26, 27 and an inside edge 28, 29. The upper edge 26, 27 of each leg panel 3, 4 is attached to the bottom edge 15 of the body section 9 of support panel 8. The inside edge 28, 29 of each leg panel 3, 4 is attached to one side 23, 24 of crotch panel 10. The leg panels 3, 4 are preferably made from a light-weight two way or four way stretchy solid or mesh fabric. In the embodiment illustrated the leg panels are made of a fabric blend having less than 8% spandex. Use of a stretchy fabric prevents the leg panels 3, 4 from being too tight on the person's legs.

The length of the leg panels 3, 4 may vary depending on the requirements of the activity from brief as shown in FIGS. 1 to 3 to full leg. In the embodiment shown the leg panels 3, 4 keep the crotch panel 10 from going into the crack between the buttocks of a person. At the same time the strong, stretchable fabric of the crotch panel 10 pulls the front portion 18 of the crotch panel 10 to support the genitals and hold them in place on top of and against the pubic bone above the crotch. This combination provides better protection and comfort than prior designs. The comfort of the design is further enhanced in the preferred embodiment by the elimination of seams in the crotch panel by making it in one piece or the use of overly constrictive fabrics in the leg panels. To further enhance comfort the fabrics are preferably capable of moving moisture away from the body and are treated with a non-toxic bacterial agent to control unwanted bacteria to reduce rashes, itching, etc. to provide better hygiene. Performance fibers are typically breathable and move perspiration away from the body to

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the fabric's outer surface so it can evaporate quickly. Fabrics made with performance fibers are particularly suitable for the present invention.

The seams 30 along the bottom edge 15 of body section 9 of support panel 8 preferably use a flat lock stitch to permit the material to stretch without breaking the seam 30. The seams 31, 32 along the sides 23, 24 of crotch panel 10 are preferably reinforced with an elastic. The seams 33, 34 along the bottom edge 35, 36 of leg panels 3, 4 preferably use a flat lock stitch to permit the material to stretch without breaking the seams 33, 34.

FIGS. 4 and 5, illustrated a second embodiment of an athletic support garment generally indicated at 41. The athletic support garment 41 is in the form of a long-leg short having an athletic support generally indicated at 42 and a pair of leg panels 43, 44. The athletic support 42 preferably has a waistband 45 with a front side 46 and a rear side 47 and a support panel 48. The support panel 48 has a body section 49 having a top side 51 attached to a bottom edge 52 of waistband 45. A first end 53 of a crotch panel 50 is attached to the front side 54 of the bottom edge 55 of the body section 49. A second end 56 of the crotch panel 50 is attached to the rear side 57 of the bottom edge 55 of the body section 49. The ends 53, 56 of crotch panel 50 are preferably centered on the front side 54 and rear side 57 respectively of the bottom edge 55 of the body section 49.

The construction and design of athletic support garment 41 is substantially the same as the athletic support garment 1 illustrated in FIGS. 1 to 3 except that the leg panels 43, 44 are longer. The leg panels 43, 44 of athletic short 41 extend to just above the knee.

FIGS. 6 and 7, illustrate another embodiment of an athletic support garment generally indicated at 61. The athletic short 61 is in the form of a short-leg short having an athletic support generally indicated at 62 and a pair of leg panels 63, 64. The athletic support 62 preferably has a waistband 65 with a front side 66 and a rear side 67 and a support panel 68. The support panel 68 has a body section 69 having a top side 71 attached to a bottom edge 72 of the waistband 65. A first end 73 of a crotch panel 70 is attached to the front side 74 of the bottom edge 75 of the body section 69. A second end 76 of the crotch panel 70 is attached to the rear side 77 of the bottom edge 75 of the body section 69. The ends 73, 76 of crotch panel 70 are preferably centered on the front side 74 and rear side 77 respectively of the bottom edge 75 of the body section 69.

The construction and design of athletic support garment 61 is substantially the same as the athletic support garments 1, 41 illustrated in FIGS. 1 to 3 and FIGS. 4 and 5 except that the leg panels 63, 64 are longer than for athletic support garment 1 but shorter than for athletic support garment 41. The leg panels 63, 64 of athletic support garment 61 extend to about mid thigh.

The athletic support garments of the present invention can be used for a variety of sports including hockey, baseball, soccer, lacrosse, cycling, wrestling, basketball, track and field, speed skating, skiing, football etc. where support and containment of the male genitals is required while permitting freedom of movement of the legs. The present invention can be incorporated into a short as illustrated or incorporated into a body suit. The garments of the present invention can be designed to be worn under other equipment such as in sports like hockey or as part of the outer garment as in track and field or speed skating. Accessories can be attached to the athletic shorts of the present invention, again depending on the sport or activity for which they are intended. For example if designed for hockey, the athletic support garment can be

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provided with clips or other fastening means such as Velcro strips to hold up the hockey socks.

Having illustrated and described a preferred embodiment of the invention and certain possible modifications thereto, it should be apparent to those of ordinary skill in the art that the invention permits of further modification in arrangement and detail. For example the waistband and body section of the support panel of the athletic support garment can be combined into a single component. The front portion and rear portion of the crotch panel are then adapted (extended) if necessary to connect to the bottom edge of the waistband. Similarly the upper edge of the leg panels would then attach to the bottom edge of the waistband. All such modifications are covered by the scope of the invention.

The invention claimed is:

1. A garment for providing protection and support for the genitals of a male wearer, the garment comprising:
 - a waistband made of elastic and disposed to encircle the wearer's torso at or near his waist when the garment is in use;
 - a support panel of different material from the waistband made of a weave of stretchable and non-stretchable fibers, the support panel being attached to the waistband so as to encircle the wearer's torso below the waistband when the garment is in use, thereby supporting the garment against the wearer's hips;
 - a crotch elevating panel comprising a crotch seamlessly joined to a single strap portion, both made of a weave of stretchable and non-stretchable fibers, the crotch portion being attached to the support panel and shaped to contain the wearer's genitals, the strap portion connecting the crotch portion to the support panel at a position opposite to where the crotch portion is attached, the strap portion being sufficiently narrow so that when worn between the wearer's legs it does not impair their movement; and
 - two leg panels, one each on the left and right side of the garment, the leg panels being made of a light-weight fabric and attached to the support panel and the crotch and strap portions of the crotch elevating panel on each side of the garment so as to leave an opening for each leg of the wearer;
 wherein the crotch portion and the strap portion are disposed so that the crotch elevating panel draws the genitals of the wearer upwards from between the wearer's legs when the garment is in use, thereby holding and supporting the genitals against the wearer's pubic bone.
2. The garment of claim 1, wherein the support panel and the crotch elevating panel are made of a weave of an unstretchable fiber selected from acetate, acrylic, lyocell, nylon, olefin, polyester, and rayon, and the stretchable fiber spandex.
3. The garment of claim 1, wherein the support panel and the crotch elevating panel are made from a weave of nylon with about 10% spandex and having a 1x1 rib weave.
4. The garment of claim 1, wherein the crotch portion of the crotch elevating panel is a single pouch-like seamless compartment.
5. The garment of claim 1, wherein the crotch elevating panel is configured to contain a protective cup in a separate compartment.
6. The garment of claim 1, wherein the crotch portion is lined.
7. The garment of claim 1, wherein the leg panels are configured to keep the strap portion from going between the

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wearer's buttocks without preventing the crotch elevating panel from elevating and supporting the genitals of the wearer in the manner specified.

8. The garment of claim 1, wherein the leg panels are made of a two way or four way stretchable solid or mesh fabric 5 containing less than about 5% spandex.

9. The garment of claim 1, wherein the leg panels are brief, mid thigh, or full thigh in length.

10. The garment of claim 1, wherein the strap portion of the crotch elevating panel flares before its connection to the opposite side of the support panel so as to form a rear portion 10 that does not impair movement of the wearer's legs or buttocks.

11. The garment of claim 1, designed to be worn under 15 other equipment.

12. The garment of claim 1, which is part of an outer garment.

13. The garment of claim 1, made of a performance fabric that moves perspiration away from the wearer's body to the fabric's outer surface. 20

14. The garment of claim 1, adapted for use in an athletic activity selected from hockey, baseball, football, soccer, lacrosse, basketball, tennis, squash, track and field, cycling, speed skating, skiing, and wrestling. 25

15. A garment for providing support for the genitals of a male wearer during athletic activity, the garment comprising:

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a waistband made of elastic and disposed to encircle the wearer's torso at or near his waist when the garment is in use;

a support panel made of a weave of stretchable and non-stretchable fibers, the support panel being attached to the waistband so as to encircle the wearer's torso below the waistband when the garment is in use, thereby supporting the garment against the wearer's hips;

a one-piece crotch elevating panel made of a weave of stretchable and non-stretchable fibers, comprising a crotch portion joined to a single strap portion, the crotch portion being attached to the support panel and having a pouch-like seamless compartment, the strap portion connecting the crotch portion to the support panel at a position opposite to where the crotch portion is attached by way of a rear portion sized and shaped not to restrict or impede movement of the wearer's legs; and

two leg panels being made of a light-weight fabric, and attached to the support panel and the crotch and strap portions of the crotch elevating panel one on each side of the garment so as to leave an opening for each leg of the wearer;

wherein the crotch elevating panel is disposed to draw the genitals of the wearer upwards from between the wearer's legs when the garment is in use.

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