(51) International Patent Classification:
A43B 3/28 (2006.01)  A43B 23/00 (2006.01)

(21) International Application Number:
PCT/US2016/053389

(22) International Filing Date:
23 September 2016 (23.09.2016)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:


(74) Agent: MERONI, Charles, F., Jr.; P.O. Box 309, Barrington, IL 60011 (US).


Declarations under Rule 4.17:
— of inventorship (Rule 4.17(iv))

(54) Title: FOOTWEAR-BASED GYMNASTICS TRAINING DEVICE AND METHOD

(57) Abstract: A footwear-based gymnastics-training device for enabling a user to temporarily retain the user's feet in a together position, the footwear-based gymnastics-training device. The device having a pair of footwear constructions, the pair of footwear constructions being a left foot construction and a right foot construction.
Published:

- with international search report (Art. 21(3))
FOOTWEAR-BASED GYMNASTICS TRAINING DEVICE AND METHOD

INVENTORS:
Matthew H. Kalina and Daniel Le S. Tangorra

FIELD OF THE INVENTION

[0001] The present invention relates generally to certain means for outfitting a user's feet for selectively enabling a temporary fastened relationship of the user's feet. More particularly, the present invention relates to a footwear-based gymnastics-training device and/or method for enabling a user to temporarily retain the user's feet in a together position.

BACKGROUND

[0002] The present invention essentially provides a footwear-based gymnastics-training device and/or method for enabling a user to temporarily retain the user's feet in a together position for proper technique/form during training exercise(s). Prior art that is improved upon in the present invention is discussed below.

[0003] United States Patent No. 5,038,413 ('413 Patent), which issued to Ursino, discloses certain Sock Fastening Means. The '413 Patent describes a fastening device for securing a pair of socks together includes a first fastener attached to one sock of the pair and a second fastener attached to the other sock of the pair, said fasteners being releasably engageable with one another. The fastening device prevents the loss of socks due to separation from one another and the inconsistent pairing of socks of a similar type.

[0004] United States Patent No. 5,321,855 ('855 Patent), which issued to Ciuffo, discloses a Fastening System for Pairing Socks, Hosiery and Gloves. The '855 Patent describes an improved hook and loop reusable and reclosable fastening system for pairing socks, hosiery and gloves. The fastening system is permanently attached to the socks and hosiery. A preferred embodiment includes an elastic or other stretchable backing material attached to each hook and loop panel preferably made up of thin separable strips which can move with the expansion and contraction of the sock and attachment material.

[0005] Another preferred embodiment includes several thin strips of the hook and loop panels attached directly to each sock, so that the sock itself can serve as a stretchable backing material. Another preferred embodiment is that each hook and loop panel,
respectively, is attached to a logo or decorative pattern on the sock to camouflage the particular hook and loop panel. The products, such as socks, hosiery, gloves and the like can be attached by the hook and loop attachment means for washing, drying and storage. The VELCRO type fasteners are able to withstand the high temperature and forces encountered during the washing and drying process.

[0006] United States Patent No. 5,699,557 (‘557 Patent), which issued to Johnson, discloses an Embroidered Applique Fastening System Clothing Articles. The ‘557 Patent describes a pair of fastening hook-and-loop patches, consisting of a flexible and decorative hook patch and a flexible and decorative loop patch is permanently attached to a mated pair of complementary items by embroidery which provides enhanced attachment and resistance to curling and inadvertent disassociation with the article of clothing.

[0007] The mated pairs of complementary items may include articles of clothing or other articles of manufacture. The decorative embroidered applique patches on a single pair of complementary items are unique and aid in matching assorted individual complementary items based on the shape and color of the fastening patch embroidered to the complementary item. The decorative nature of the patches is useful in attracting a child's attention to the fastening device, which results in the child's interest in participation in mating items, such as socks, which may be separated from their complementary mates.

[0008] United States Patent No. 5,740,558 (‘558 Patent), which issued to Messman, discloses certain Means for Attaching Articles Together. The ‘558 Patent describes a device for attaching flexible articles, such as clothing items having an edge. The device includes a flexible strip which includes an end with a sewable edge, and a second end having a fastening device. The device may be sown to an edge of the flexible article, such as a pair of socks, allowing the user to temporarily join a pair of socks, for example, by taking at least two of the flexible strips and stitching the sewable edge of each flexible strip to an edge of each of the socks of a pair of socks. This allows the fastening of the second end of one flexible strip to the second end of the other flexible strip, so that the clothing items may be secured together when they are not being worn.

[0009] United States Patent No. 5,918,318 (‘318 Patent), which issued to Jones, describes an Attachment Device for Clothing Items. The ‘318 Patent discloses an attachment device for releasably securing first and second clothing items which comprises a first tab and a second tab each including mating hook and loop fastening elements which are mounted to
respective clothing items in an orientation wherein the hook and loop fastening elements of the first tab engage and releasably connect to the hook and loop fastening elements of the second tab such that forces tending to separate the first and second clothing items during laundering result in the application of a shear force to the connected tabs.

[0010] United States Patent No. 5,970,524 ('524 Patent), which issued to Becker et al., describes a pair of separably joined socks or stockings. The '524 Patent discloses a pair of socks or stockings which may be joined together in a detachable fashion using a set heat-resistant, transparent fastening elements, in order to avoid sorting of the socks or stockings, e.g., after washing. Each of said fastening elements is firmly attached to a stocking or sock, preferably at its leg portion, in an area of the sock or stocking having a mesh density of at least 2000 MD, preferably at least 4000 MD.

[0011] United States Patent No. 6,032,294 ('294 Patent), which issued to Dean, describes a fastener for mating pairs of clothing items. The '294 Patent discloses a sock pair or glove pair having a first and a second sock or glove and at least one snap fastener. Each snap fastener has a male part, a female part, and two securing parts. At least one snap fastener is a retaining snap fastener. Each sock or glove has a U-shaped fabric tab folded over the upper or wrist edge of the sock or glove. The tab is retained on the sock or the glove by the male or the female part and one of the securing parts of the retaining snap fastener.

[0012] The retaining snap fastener is located at a fastener distance from the upper or wrist edge of the sock or glove. The fastener distance is at least the fastener width and may be up to 2.5 times the fastener width. At least one of the tabs has an indicia indicating the source of the sock or glove. The inner and outer distal edges of each tab preferably conform to the shape of the snap fastener holding the tab on. The glove or sock pair is comfortable, durable, and particularly suited for inexpensive mass production by machine. The pair can be easily mated when desired for laundering or storage.
BRIEF SUMMARY

[0013] To achieve the aforementioned and other readily apparent objectives, the present invention essentially provides a footwear-based gymastics-training device and/or method for enabling a user temporarily retain the user's feet in a together position for proper technique for form during training exercise(s). The footwear-based gymastics-training device and/or method according to the present invention may be said to preferably comprise a pair of footwear constructions. The pair(s) of footwear constructions according to the present invention each preferably comprise a left foot construction, and a right foot construction. The left and right foot constructions are outfittable upon the user's left and right feet.

[0014] Certain mateable temporary fastening means are cooperably associated with the left and right foot constructions for temporarily fastening the left and right foot constructions together when outfitted upon the user's left and right feet. The pair of footwear constructions together with the mateable temporary fastening means are thus cooperable for temporarily retaining the user's feet (and by extension the user's legs) in the together position for enhancing proper technique during training exercises.

[0015] The mateable temporary fastening means may be preferably exemplified by comprising or mateable hook and loop fastening structures or magnetic means for forced attraction or magnetically attractive fastening structures such as or exemplified by magnets. Any number of different types of footwear constructions are contemplated as may be based upon certain state of the art foundational feet-covering or foot-adorning footwear, including but not limited to closed-toe - closed-heel type foot constructions; open-toe - open-heel type foot constructions; foot-thong type foot constructions; and foot-thong with elastic heel band type foot constructions.

[0016] The left foot construction and the right foot construction may further preferably comprise certain construction-to-surface gripping means for increasing the coefficient of friction intermediate the left and right footwear constructions and an underlying training surface. The gripping means may be preferably exemplified by polymeric knob-like protrusions or polymeric raised ridge type constructions for increasing the coefficient of friction intermediate a wearer's footwear construction-adorned feet and an underlying training surface as exemplified by a gymnasium floor.
[0017] The left and right foot constructions according to the present invention each preferably comprise a media1, superficial, metatarsal-to-pha1ange junction sites cooperably associated with the mateable temporary fastening means. The mateable temporary fastening means are anatomically shaped so as to maximize the contact surface area and minimize foot-to-foot obstructions between the left and right footwear constructions. The mateable temporary fastening means extend anteriorly and posteriorly from the medial, superficial, metatarsal-to-pha1ange junction sites for enabling the user's left and right feet to anatomically and mateably adjust during training exercises.

[0018] A preferred embodiment of the invention is a footwear-based gymnastics-training method for enabling a user to temporarily retain the user's feet in a together position having the steps of providing a pair of footwear constructions, the pair of footwear constructions comprising a left foot construction and a right foot construction, equipping a user's left foot and a user's right foot with the left and right footwear constructions positioning the user's left foot and a user's right foot such that the left and right footwear constructions are in contact along a set of mateable temporary fastening means and performing a gymnastics training exercise while retaining the user's left and right feet in a together position via the mateable temporary fastening means.
DESCRIPTION OF THE DRAWINGS

[0019] The present invention may be better understood, and its numerous objects, features, and advantages made apparent to those skilled in the art by referencing the accompanying drawings.

[0020] Figure No. 1 is a diagrammatic top plan type depiction of a pair of laterally spaced human feet outfitted with a pair of first (closed toe - closed heel) footwear constructions according to the present invention.

[0021] Figure No. 1(a) is a reduced diagrammatic top plan type depiction of the pair of outfitted feet otherwise depicted in Figure No. 1 drawn together and mated at medial foot-to-foot junction site(s).

[0022] Figure No. 1(b) is a first enlarged fragmentary view of medial foot-to-foot junction site(s) from Figure No. 1(a) for further correspondence with Figure No. 1(d).

[0023] Figure No. 1(c) is a second enlarged fragmentary view of medial foot-to-foot junction site(s) from Figure No. 1(a) for further correspondence with Figure No. 1(e).

[0024] Figure No. 1(d) is a diagrammatic depiction of generic hook and loop type mateable fastening structures representative of the type of mateable fastening means from Figure No. Kb).

[0025] Figure No. 1(e) is a diagrammatic depiction of generic magnetic type mateable fastening structures representative of the type of mateable fastening means from Figure No. 1(c).

[0026] Figure No. 2 is a diagrammatic medial type view or depiction of a pair of laterally spaced human feet outfitted with a pair of first (closed toe - closed heel) footwear constructions according to the present invention.

[0027] Figure No. 3 is a diagrammatic top plan type depiction of a pair of laterally spaced human feet outfitted with a pair of second (open toe - open heel) footwear constructions according to the present invention.

[0028] Figure No. 3(a) is a reduced diagrammatic top plan type depiction of the pair of outfitted feet otherwise depicted in Figure No. 3 drawn together and mated at medial foot-to-foot junction site(s).

[0029] Figure No. 3(b) is a first enlarged fragmentary view of medial foot-to-foot junction site(s) from Figure No. 3(a) for further correspondence with Figure No. 3(d).
[0030] Figure No. 3(c) is a second enlarged fragmentary view of medial foot-to-foot junction site(s) from Figure No. 3(a) for further correspondence with Figure No. 3(e).

[0031] Figure No. 3(d) is a diagrammatic depiction of generic hook and loop type matable fastening structures representative of the type of matable fastening means from Figure No. 3(b).

[0032] Figure No. 3(e) is a diagrammatic depiction of generic magnetic type matable fastening structures representative of the type of matable fastening means from Figure No. 3(c).

[0033] Figure No. 4 is a diagrammatic medial type view or depiction of a pair of laterally spaced human feet outfitted with a pair of second (open toe - open heel) footwear constructions according to the present invention.

[0034] Figure No. 5 is a diagrammatic top plan type depiction of a pair of laterally spaced human feet outfitted with a pair of third (foot thong type) footwear constructions according to the present invention.

[0035] Figure No. 5(a) is a reduced diagrammatic top plan type depiction of the pair of outfitted feet otherwise depicted in Figure No. 5 drawn together and mated at medial foot-to-foot junction site(s).

[0036] Figure No. 5(b) is a first enlarged fragmentary view of medial foot-to-foot junction site(s) from Figure No. 5(a) for further correspondence with Figure No. 5(d).

[0037] Figure No. 5(c) is a second enlarged fragmentary view of medial foot-to-foot junction site(s) from Figure No. 5(a) for further correspondence with Figure No. 5(e).

[0038] Figure No. 5(d) is a diagrammatic depiction of generic hook and loop type matable fastening structures representative of the type of matable fastening means from Figure No. 5(b).

[0039] Figure No. 5(e) is a diagrammatic depiction of generic magnetic type matable fastening structures representative of the type of matable fastening means from Figure No. 5(c).

[0040] Figure No. 6 is a diagrammatic medial type view or depiction of a pair of laterally spaced human feet outfitted with a pair of third (foot thong type) footwear constructions according to the present invention.
Figure No. 7 is a diagrammatic medial type view or depiction of a pair of laterally spaced human feet outfitted with a pair of fourth (foot thong with elastic band type) footwear constructions according to the present invention.
DETAILED DESCRIPTION

[0042] Referring now to the drawings with more specificity, the preferred embodiments of the present invention primarily concern various types of footwear constructions as exemplified by several different types of footwear constructions as at 10, 20, and 30 in Figure Nos. 1 - 7 inclusive. Figure Nos. 1 and 2 depict a pair of human feet outfitted with a pair of first (closed toe - closed heel) footwear constructions 10 according to the present invention. Figure Nos. 3 and 4 depict a pair of second (open toe - open heel) footwear constructions 20 according to the present invention. Figure Nos. 5 and 6 depict a pair of third (foot thong type) footwear constructions 30 according to the present invention. Figure No. 7 depicts a pair of fourth (foot thong with elastic band) footwear constructions 30 according to the present invention.

[0043] The central aspect of the present invention is providing mateable temporary fastening means 60 at the medial portion of a footwear construction in superficial adjacency to the junction of the first metatarsal bone and the phalange section of the big toe as at site 40, which mateable temporary fastening means may extend anteriorly and posteriorly from site 40 as at 100 and 101 respectively, for enabling the user's left and right feet to anatomically and mateably adjust during training exercises. The mateable temporary fastening means 60 may be of a type that temporarily fastens the paired footwear constructions 10, 20, or 30 (as outfitted upon the human feet 50 inserted therein) together for training gymnastics and the like to maintain their feet 50 (and legs by extension) in a together position (i.e. the medial portions of the feet 50 being brought together such that those sites 40 in superficial adjacency to the junction of the first metatarsal bone and the phalange sections are touching one another) as generally depicted in Figure Nos. 1(a), 3(a), and 5(a).

[0044] It is contemplated that the mateable temporary fastening means 60 according to the present invention may be preferably exemplified by hook (as at 61) and loop (as at 62) fastening structure or means (VELCRO® brand), or certain magnetic means for magnetically attracting (as at force vectors 63) and holding opposed sites 40 in contact with one another as generally and comparatively depicted in Figure Nos. 1(b) - 1(e); 3(b) - 3(e); and 5(b) - 5(e). The mateable hook and loop fastening structure 61/62 and magnetic means for forced attraction as at force vectors 63 and provided by magnet constructions 64 may be preferably outfitted upon (stitched onto or otherwise fastened to) state of the art footwear constructions typified by closed-toe - closed-heel type footwear constructions as at 11;
open-toe - open heel type footwear constructions as at 21; foot thong type footwear constructions as at 31; or foot thong with band (70) type footwear constructions as at 71. In at least one preferred embodiment, band 70 is connected to footwear 30 at connection point 72.

[0045] The state of the art footwear constructions typified by closed-toe - closed-heel type footwear constructions as at 11; open-toe - open heel type footwear constructions as at 21; foot thong type footwear constructions as at 31; and/or foot thong with band type footwear constructions as at 71. may be further preferably outfitted with certain gripping means as exemplified by polymeric knob-like protrusions 65 or polymeric raised ridge type constructions as at 66 for increasing the coefficient of friction intermediate a wearer's construction-adorned feet 50 and an underlying (e.g. gymnasium) surface (not specifically illustrated).

[0046] It will be understood from a consideration of the drawings being submitted in support of these specifications that the left foot construction(s) 12, 22, and 32; and right foot constructions 13, 23, and 33 each comprise a medial, superficial, metatarsal-to-phalange junction site upon which site the sites 40 appear, and thus the mateable temporary fastening means are cooperably associated with the medial, superficial, metatarsal-to-phalange junction sites. The mateable temporary fastening means 60 are preferably anatomically shaped to conform to the medial, superficial, metatarsal-to-phalange junction sites so as to maximize effective contact surface area while minimizing left foot-to-right foot or foot-to-foot obstructions between the left footwear constructions 12, 22, and 32 versus and right footwear constructions 13, 23, and 33.

[0047] While the foregoing specifications set forth much specificity, the same should not be construed as setting forth limits to the invention but rather as setting forth certain preferred embodiments and features. For example, as prefaced hereinafore, it is contemplated that the present invention essentially provides a footwear-based gymnastics-training device and/or method for enabling a user to temporarily retain the user's feet in a together position for proper technique for form during training exercise(s).

[0048] The footwear-based gymnastics-training device and/or method according to the present invention may be said to preferably comprise a pair of footwear constructions as exemplified at 10, 20, and/or 30. The pair(s) of footwear constructions each preferably comprise a left foot construction as at 12, 22, and 32; and a right foot construction as at 13,
23, and 33. The left and right foot constructions are outfitted upon the user's left and right feet as at 50.

**[0049]** Certain mating temporary fastening means as at 60 are cooperably associated with the left and right foot constructions for temporarily fastening the left and right foot constructions together when outfitted upon the user's left and right feet. The pair of footwear constructions together with the mating temporary fastening means are thus cooperable for temporarily retaining the user's feet (and by extension the user's legs) in the together position (as generally depicted in Figures Nos. 1(a), 3(a), and 5(a) for enhancing proper technique during training exercises.

**[0050]** The mating temporary fastening means 60 may be preferably exemplified by comprising or mating hook and loop fastening structures as at 61/62 or magnetic means for forced attraction 63 or magnetically attractive fastening structures such as or exemplified by magnets as at 64. Any number of different types of footwear constructions are coemplated as may be based upon certain state of the art foundation feet-covering or foot-adorning footwear, including but not limited to closed-toe - closed-heel type foot constructions as generally depicted in Figure Nos. 1 and 2; open-toe - open-heel type foot constructions as generally depicted in Figure Nos. 3 and 4; foot-thong type foot constructions as generally depicted in Figure Nos. 5 and 6; and foot thong with elastic band footwear constructions as generally depicted in Figure No. 7.

**[0051]** The left foot construction and the right foot construction may further preferably comprise certain construction-to-surface gripping means for increasing the coefficient of friction intermediate the left and right footwear constructions and an underlying training surface. The gripping means may be preferably exemplified by polymeric knob-like protrusions 65 or polymeric raised ridge type constructions as at 66 for increasing the coefficient of friction intermediate a wearer's foot where construction-adorned feet 50 and an underlying training surface as exemplified by a gymnasium floor. The left and right foot constructions according to the present invention each preferably comprise a medial, superficial, metatarsal-to-phalangeal junction sites cooperably associated with the mating temporary fastening means. The mating temporary fastening means are anatomically shaped so as to maximize the contact surface area and minimize foot-to-foot obstructions between the left and right footwear constructions. The mating temporary fastening means extend anteriorly and posteriorly from the medial, superficial, metatarsal-to-phalangeal
junction sites for enabling the user's left and right feet to anatomically and materially adjust during training exercises.

[0052] The foregoing is illustrative of the present invention and is not to be construed as limiting thereof. Although exemplary embodiments of this invention have been described, those skilled in the art will readily appreciate that many modifications are possible in the exemplary embodiments without materially departing from the novel teachings and advantages of this invention. Accordingly, all such modifications are intended to be included within the scope of this invention as defined in the claims. The invention is defined by the following claims, with equivalents of the claims to be included therein.
I claim:

1. A footwear-based gymnastics-training device for enabling a user to temporarily retain the user's feet in a together position, the footwear-based gymnastics-training system, comprising:

   a pair of footwear constructions, the pair of footwear constructions comprising a left foot construction and a right foot construction, the left and right foot constructions being outftittable upon the user's left and right feet; and

   matable temporary fastening means cooperably associated with the left and right foot constructions for temporarily fastening the left and right foot constructions together when outfitted upon the user's left and right feet, the pair of footwear constructions and matable temporary fastening means thus being cooperable for temporarily retaining the user's feet in the together position.

2. The footwear-based gymnastics-training device of claim 1 wherein the matable temporary fastening means comprise matable hook and loop fastening structures.

3. The footwear-based gymnastics-training device of claim 1 wherein the matable temporary fastening means comprise magnetically attractive fastening structures.

4. The footwear-based gymnastics-training device of claim 1 wherein the left foot construction and the right foot construction are closed-toe - closed-heel type foot constructions.

5. The footwear-based gymnastics-training device of claim 1 wherein the left foot construction and the right foot construction are open-toe - open-heel type foot constructions.
6. The footwear-based gymnastics-training device of claim 1 wherein the left foot construction and the right foot construction are foot-thong foot constructions.

7. The footwear-based gymnastics-training device of claim 6 further comprising a band on each foot-thong foot constructions attached to the foot-thong constructions for securing the user’s feet.

8. The footwear-based gymnastics-training device of claim 1 wherein the left foot construction and the right foot construction are foot-thong with elastic band foot constructions.

9. The footwear-based gymnastics-training device of claim 1 wherein the left foot construction and the right foot construction comprising construction-to-surface gripping means for increasing the coefficient of friction intermediate the left and right footwear constructions and an underlying training surface.

10. The footwear-based gymnastics-training device of claim 1 wherein the left and right foot constructions each comprise a medial, superficial, metatarsal-to-phalange junction site, the matable temporary fastening means being cooperably associated with the medial, superficial, metatarsal-to-phalange junction sites.

11. The footwear-based gymnastics-training device of claim 10 wherein the matable temporary fastening means are anatomically shaped so as to maximize the contact surface area and minimize foot-to-foot obstructions between the left and right footwear constructions.

12. The footwear-based gymnastics-training device of claim 11 wherein the matable temporary fastening means extend anteriorly and posteriorly from the medial, superficial, metatarsal-to-phalange junction sites for enabling the user’s left and right feet to anatomically and matably adjust during training exercises.
13. A footwear-based gymnastics-training method for enabling a user to temporarily retain the user's feet in a together position, the footwear-based gymnastics-training method, comprising the steps of:

- providing a pair of footwear constructions, the pair of footwear constructions comprising a left foot construction and a right foot construction;
- outfitting the left foot construction and the right foot construction with matable temporary fastening means for temporarily fastening the left and right foot constructions together when outfitted upon a user's left and right feet;
- outfitting a user's left foot and a user's right foot with the matable temporarily fastening means-outfitted left and right foot constructions; and
- temporarily retaining the user's feet in the together position via the matable temporarily fastening means-outfitted left and right foot constructions.

14. The footwear-based gymnastics-training method of claim 13 wherein the matable temporarily fastening means comprise matable hook and loop fastening structures.

15. The footwear-based gymnastics-training method of claim 13 wherein the matable temporarily fastening means comprise magnetically attractive fastening structures.

16. The footwear-based gymnastics-training method of claim 13 wherein the left foot construction and the right foot construction are closed-toe - closed-heel type foot constructions.

17. The footwear-based gymnastics-training method of claim 13 wherein the left foot construction and the right foot construction are open-toe - open-heel type foot constructions.

18. The footwear-based gymnastics-training method of claim 13 wherein the left foot construction and the right foot construction are foot-thong foot constructions.
19. The footwear-based gymnastics-training method of claim 18 wherein each of the
foot-thong foot constructions further comprises a band on each foot-thong foot
constructions attached to the foot-thong constructions for securing the user’s feet.

20. A footwear-based gymnastics-training method for enabling a user to temporarily
retain the user’s feet in a together position, the footwear-based gymnastics-training
method, comprising the steps of:

- providing a pair of footwear constructions, the pair of footwear constructions
  comprising a left foot construction and a right foot construction;
- equipping a user’s left foot and a user’s right foot with the left and right foot
  constructions;
- positioning the user’s left foot and a user’s right foot such that the left and right foot
  constructions are in contact along a set of matable temporary fastening means; and
- performing a gymnastics training exercise while retaining the user’s left and right feet in
  a together position via the matable temporary fastening means.
## INTERNATIONAL SEARCH REPORT

### A. CLASSIFICATION OF SUBJECT MATTER

**IPC:** A43B 3/28( 2006.0 I), 3/30( 2006.0 I), 23/00( 2006.0 I)

**USPC:** 036/1 14

According to International Patent Classification (IPC) or to both national classification and IPC.

### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

| U.S. | 036/1 14 |

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched.

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

- US-PGPUB, USPAT, USOCR, EPO, JPO, DERMWENT: veico, socks, foot, another, attach, near, gymnastics.

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category *</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 4,747,779 A (GERSTUNG) 31 May 1988 (31.05.1998), see entire documents.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2, 13, 14, and 25</td>
</tr>
<tr>
<td>1-3, 5-15 and 17-25</td>
</tr>
<tr>
<td>1-4</td>
</tr>
<tr>
<td>1, 3-5 and 10-12</td>
</tr>
<tr>
<td>1-3, 5-15 and 17-25</td>
</tr>
<tr>
<td>1-3, 5-15 and 17-25</td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of Box C. See patent family annex.

### Date of the actual completion of the international search

19 October 2016 (19.10.2016)

### Date of mailing of the international search report

04 NOV 2016

### Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (571) 273-8300

Authorized officer
Tom Barrett

Telephone No. 571-272-4746

Form PCT/ISA/210 (second sheet) (April 2007)