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(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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Declarations under Rule 4.17:

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

— *with international search report (Art. 21(3))*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:
2 July 2015

(54) Title: GRADUATED COMPRESSION DEVICE FOR THE TREATMENT OF CIRCULATORY DISORDERS

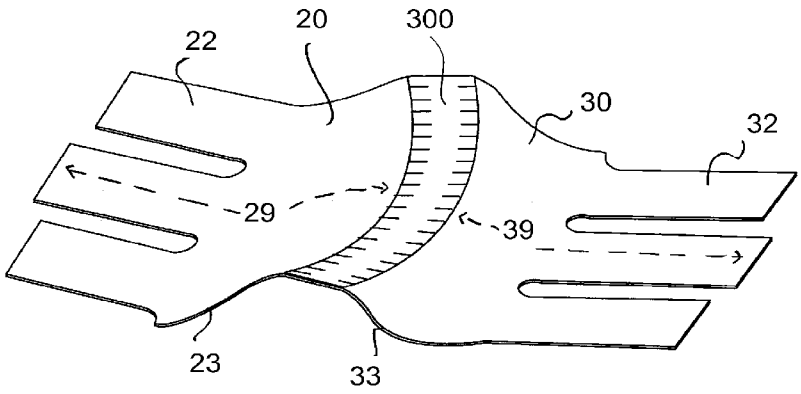


FIG. 15C

(57) Abstract: A therapeutic compression garment made from body and band portions wherein at least one of the body and spine portions is narrower or wider across its mid-section than at either or both of its top and bottom edges such that the garment assumes a non-planar shape when the body and spine portions are attached together.

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I: Claims 1-14 are directed toward a therapeutic compression garment, comprising wherein at least one of the body and spine portions is narrower or wider across its mid-section than at either or both of its top and bottom edges such that the garment assumes a non-planar shape when the body and spine portions are attached together.

Group II: Claims 15-19 are directed toward a therapeutic compression garment, comprising at least one guide band connected to the body portion, wherein the guide band is dimensioned to wrap together with the body portion around the body limb.

-***-Please See Extra Sheet-***-

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61F 5/01, 13/00, 13/06 (2015.01)
CPC - A61F 5/0102, 13/08, 13/085

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)

IPC(8): A61B 17/12; A61F 5/01, 13/00, 13/06, 13/08 (2015.01)
CPC: A61F 5/0102, 5/0111, 13/041, 13/06, 13/062, 13/08, 13/085; USPC: 2/255, 256, 455; 602/61, 63, 75

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)

PatSeer (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); DialogPRO; PubMed/Medline; Google/Google Scholar; Search terms used: Therap*, compress*, heat*, cool*, treat*, garment, cloth*, wrap*, body, portion, bands, non-planar*, 3-D, three, dimens*, stitch*, sew*, central, connector*, top, bottom, edges, measure*, indicia*, fastener*, hook*, strap*

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 7329232 B2 (LIPSHAW, MA et al.) February 12, 2008; figures 5, 8; 10, 11, 15; column 3, lines 57-59; column 5, lines 42-44; column 6, lines 41-44; column 10, line 61-67; column 11, lines 1-8; column 13, lines 55-61; column 14, lines 5-13	1, 3-14 --------- 2
X	US 2012/0179084 A1 (LIPSHAW, M et al.) July 12, 2012; abstract; figures 18A-18D, 21, 22A-22B; paragraphs [0087], [0092]; claim 1	15, 19
Y	US 2011/0125183 A1 (LIPSHAW, M et al.) May 26, 2011; abstract; figures 1A-5B; paragraph [0039], [0040], [0042]-[0042]	2, 15-18
Y	US 2009/0112129 A1 (LEE, J) April 30, 2009; figures 2A/3A; paragraph [0032]-[0033]	15-18

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
14 April 2015 (14.04.2015)	30 APR 2015
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. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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-***-Continued from Box No III - Observations where unity of invention is lacking-***-

The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical features of Group I include wherein at least one of the body and spine portions is narrower or wider across its mid-section than at either or both of its top and bottom edges such that the garment assumes a non-planar shape when the body and spine portions are attached together, which are not present in Group II; the special technical features of Group II include wherein the spine portion is releasable attached onto the body portion such that the spine portion is positionable at different locations on the body portion; and at least one guide band connected to the body portion, wherein the guide band is dimensioned to wrap together with the body portion around the body limb, which are not present in Group I.

The common technical features of Groups I and II are a therapeutic compression garment, comprising: a body portion having a plurality of bands extending from one side; and a spine portion having a plurality of bands extending from one side, wherein the bands extending from the body portion and the bands extending from the spine portion attach the body and spine portions together when the body and spine portions are wrapped around a body limb.

These common technical features are disclosed by US 2011/0125183 A1 to Lipshaw et al. (hereinafter 'Lipshaw'). Lipshaw discloses a therapeutic compression garment (claim 1), comprising: a body portion having a plurality of bands extending from one side (claim 1); and a spine portion having a plurality of bands extending from one side (claim 1), wherein the bands extending from the body portion and the bands extending from the spine portion attach the body and spine portions together when the body and spine portions are wrapped around a body limb (claim 1).

Since the common technical features are previously disclosed by the Lipshaw reference, the common features are not special and so Groups I and II lack unity.