



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
16.10.2024 Bulletin 2024/42

(51) International Patent Classification (IPC):
A63B 21/00 ^(2006.01) **A63B 21/055** ^(2006.01)

(21) Application number: **24167866.3**

(52) Cooperative Patent Classification (CPC):
A63B 21/00043; A63B 21/0552; A63B 21/0557;
A63B 21/4034; A63B 2214/00

(22) Date of filing: **29.03.2024**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL
NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA
Designated Validation States:
GE KH MA MD TN

(71) Applicant: **Technogym S.p.A.**
47521 Cesena, Forlì'-Cesena (IT)

(72) Inventor: **CASAGRANDE, Simone**
47521 CESENA (IT)

(74) Representative: **Lavoix**
62, rue de Bonnel
69448 Lyon Cedex 03 (FR)

(30) Priority: **13.04.2023 IT 202300007131**

(54) **ELASTIC FOR WORKOUTS, AND METHOD FOR PERFORMING A WORKOUT USING SUCH ELASTIC**

(57) An elastic (1) for workouts, comprising a body at least in part elastically stretchable that includes:
- a central portion (2);
- a first end portion (5) that extends from a first end (3) of the central portion (2) and is configured so as to be attached to an attachment surface (50);
- a second end portion (7) that extends from a second

end (4) of the central portion (2) opposite the said first end (3);
characterised in that the said second end portion (7) comprises a first closed loop (8) and a second closed loop (9) that are arranged in sequence and adjacent to each other.

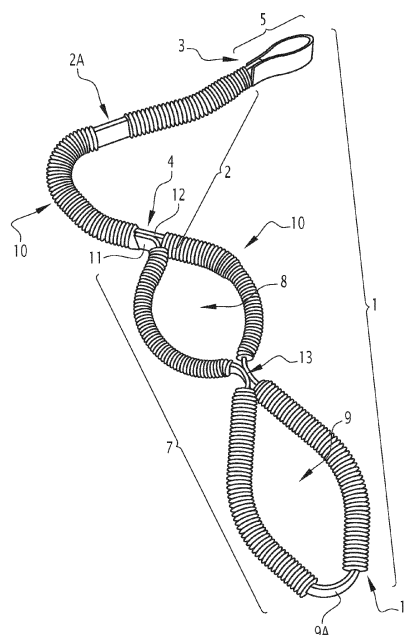


FIG.1

Description

[0001] The present invention relates to an elastic for workouts, and a method for performing a workout using such an elastic.

[0002] The elastic according to the invention can be used for example for performing preliminary training in preparation for outdoor activities, such as for instance sailing, mountaineering, trekking, and more generally in the fitness field.

[0003] In the present invention, the term elastic is intended to be understood in the broadest possible sense and as including pieces of training apparatus and equipment that comprise an elastically stretchable body such as, by way of non-limiting examples, in the form of ribbon, or strap, or band, or tubular, such as the so-called "elastic bands".

[0004] As is well known, in the fitness field use is made of various types of apparatus and equipment designed for effectively working out various muscle groups.

[0005] Among these, there are elastics that are used for strength training and toning of a number of specific muscle groups, for example the arms, legs and feet.

[0006] Generally, such elastics comprise or consist of a flexible body made of elastically stretchable material.

[0007] For example, when in use, such elastics are secured at one end to an attachment point, and at the opposite end they are manually gripped or tethered or secured in some manner to the foot or ankle of a user, depending on the exercise to be performed.

[0008] For these purposes, the structure of the elastics needs to, on the one hand, allow for adequate versatility of use and, on the other hand, offer adequate strength, stability and precision in use so that it proves to be adequately effective in training.

[0009] At present, known types of elastics, while substantially meeting these requirements, nevertheless exhibit certain aspects susceptible of improvement.

[0010] For example, in some types of exercises, the end of the elastic is manually wrapped around the ankle or around the foot such that it represents a seemingly rather improvised and crude solution, which may result in an attachment that is neither optimal nor comfortable.

[0011] Therefore, it is an object of the present invention to provide an improved elastic as compared to the known state of the art, and in particular one that serves to achieve greater versatility and comfort in use.

[0012] This object, and others that will eventually become apparent from the following description, are achieved by means of an elastic for workouts according to claim 1.

[0013] Furthermore, this object, as well as others that will eventually become apparent from the following description, are achieved by means of a method according to claim 13.

[0014] Particular embodiments of the invention form the subject matter of the dependent claims, the contents of which are intended to be considered an integral part

of this description.

[0015] Further characteristic features and advantages of the invention will become apparent from the detailed description that follows here below, which is provided purely by way of non-limiting example, with reference to the accompanying drawings, wherein :

Figure 1 is a perspective view that illustrates one possible embodiment of an elastic for workouts according to the present invention;

Figure 2 is a flow diagram that schematically illustrates a method according to the invention for using the elastic shown in Figure 1 during workout sessions;

Figures 3 and 4 graphically illustrate a possible embodiment for implementing some of the phases of the method according to the invention.

[0016] It should also be noted that, for the purposes of clearly and concisely describing the present invention, the drawings may not necessarily be to scale and some characteristic features of the description may be shown in a somewhat schematic form.

[0017] Furthermore, when the term "configured", or "adapted", or "shaped", or a similar term is eventually used in the present document, in reference to any component in its entirety, or to any part of a component, or to a combination of components, it shall be understood that such term refers to and includes correspondingly the structure and/or configuration and/or shape and/or positioning.

[0018] In addition, when the term "substantial" or "substantially" is used herein, it is to be understood as including any construction-related variations or tolerances inherent in the construction of a device or part thereof, or an actual variation of plus or minus 5% from that which is indicated as the reference value or position, and when the terms "transverse/transversal" or "transversely" are used herein, they are to be understood as including a direction that is not parallel to the reference part(s) or direction(s)/axis to which they refer, and perpendicularity is to be considered a specific case of transverse direction.

[0019] Figure 1 illustrates one possible embodiment of an elastic for workouts according to the present invention, indicated by the overall reference number 1.

[0020] As illustrated, the elastic 1 comprises a body at least in part elastically stretchable that includes:

- a central portion 2, for example with a substantially rectilinear extension in an undeformed or rest position;
- a first end portion 5 that extends from a first end 3 of the central portion 2 and is configured to be attached to an attachment surface 50;
- a second end portion 7 that extends from a second end 4 of the central portion 2 opposite the first end 3.

[0021] The attachment surface 50 may be constituted

of any surface that is suitable for securing one end of the elastic, for example a bench, a hook fixed to a wall, a bar, a frame, etc.

[0022] Conveniently, in the elastic 1 according to the invention, the second end portion 7 comprises a first closed loop 8 and a second closed loop 9 that are arranged in sequence and adjacent to each other.

[0023] In particular, the two loops 7 and 8 are arranged relative to each other in a manner to form a configuration substantially 8(height)-shaped.

[0024] In one possible embodiment, at least one of said central portion 2, said first closed loop 8 and second closed loop 9 comprises at least one portion having a corrugated or bellows structure.

[0025] In particular, in one possible embodiment and as illustrated in more detail in Figure 1, at least one of said central portion 2, and said first closed loop 8 and second closed loop 9, comprises an internal part or core, that is made of an elastomeric material, for example rubber or latex, and having an appropriate cross section suitable for the given use, for example a tubular cross section, and an external sheath 10 that is disposed around the core.

[0026] Preferably, both the central portion 2 and the two loops 8 and 9 comprise an internal portion or core, that is made of an elastomeric material, for example rubber or latex, and having an appropriate cross section suitable for the given use, for instance a tubular cross section, and an external sheath 10.

[0027] The external sheath 10 usefully has a length greater than the length of the core that it surrounds and comprises, for example, a corrugated or bellows structure which is made of fabric.

[0028] This combination makes it possible, for example, to obtain, on the one hand, an adequate degree of elasticity and extensibility of the elastic 1, while on the other hand, also imposing a limit on the maximum extension of the elastic 1 by means of the external sheath 10, so as to mitigate the possibility of undesired rupture of the elastic 1 itself.

[0029] In the embodiment illustrated in Figure 1, for the sake of greater descriptive clarity, one portion of the external sheath 10 has been omitted at a part of the central portion 2 and at a part of the second loop 9, so as to prominently depict two corresponding sections of the core, indicated therein by the corresponding reference numbers 2A and 9A.

[0030] In one other possible embodiment, at least one part of the first closed loop 8 and/or the second closed loop 9 comprises a body made entirely of an elastomeric material, for example latex or rubber, and may have any appropriate cross section suitable for the purpose, for example round, square, hollow, tubular, et cetera.

[0031] Preferably, in the said other embodiment, both the first loop 8 and the second loop 9 are made entirely of an elastomeric material.

[0032] In addition, in this other possible embodiment, at least one part of the central portion 2, preferably all of

it, comprises a body made entirely of an elastomeric material, for example latex or rubber, and may have any appropriate cross section suitable for the purpose, for example round, square, hollow, tubular, et cetera.

[0033] In a further possible embodiment, at least one part of the first closed loop 8 and/or of the second closed loop 9 comprises a body made of elastic material integrated with fabric, and may have any appropriate cross section suitable for the purpose, for example round, square, hollow, tubular, etc.

[0034] Preferably, in this further possible embodiment, both the first loop 8 and the second loop 9 are made entirely of elastic material integrated with fabric.

[0035] In addition, in this further possible embodiment, at least one part of the central portion 2, preferably all of it, comprises a body made entirely of elastic material integrated with fabric, and may have any appropriate cross section suitable for the purpose, for example round, square, hollow, tubular, etc.

[0036] In all of the embodiments described here above, for example the central portion 2 and the two loops 8 and 9 may be fabricated as one single piece or as a plurality of separate pieces connected to each other.

[0037] For example, in the embodiment illustrated in Figure 1, the core of the central portion 2 and the second end portion 7 that comprises said first closed loop 8 and second closed loop 9, is as a whole fabricated as one single piece, for example from an elastomeric material.

[0038] In particular, according to one possible embodiment, said single piece made of elastomeric material comprises or is constituted of an elastomeric body having the desired cross section and that includes a first section forming the central portion 2, and a second section, forming the second end portion 7, which extends from the first section and is folded back on itself towards the first section forming the central portion 2.

[0039] Furthermore, a first joint, indicated in Figure 1 by the reference number 12, is arranged so as to join one end 11 of the second section at the second end 4 of the central portion 2 so as to preliminarily form a loop, and a second joint 13 is arranged at a predetermined distance from the first joint 12, and joins between them two branches of the loop thereby forming said first and second loops 8, 9.

[0040] The zones of the joints 12 and 13, which in Figure 1 are illustrated as not being covered by the sheath 10, nevertheless may indeed also be covered by portions of sheath 10.

[0041] Alternatively, at least the central portion 2 and the end portion 7 of the elastic 1 including the two loops 8 and 9 having the shape of an "8 (height)", may be moulded in one single piece made of elastomeric material, for example rubber, in a manner so as to also create the configuration of the two loops that form the 8-shaped configuration.

[0042] Alternatively, it is possible to fabricate the central portion 2 for example as one single piece which is then joined, at its end 4, to the first loop 8.

[0043] In turn, the first loop 8 and the second loop 9 may be fabricated as one single piece, or as two separate parts and then joined to each other at the second joint 13.

[0044] With regard to the sheath 10, it may also be fabricated as one single piece, which is fitted over the core before imparting to the elastic 1, and in particular the end portion 7, the double loop form described above.

[0045] Alternatively, the sheath 10 also may be fabricated as multiple separate pieces.

[0046] In the illustrated exemplary embodiment, the first end portion 5 is, for example, made of a material that is different from that used for the central portion 2 and the second end portion 7.

[0047] For example, the first end portion 5 may be made by means of a strip of textile material which is folded back on itself and jointed at its free ends to the first end 3 of the central portion 2.

[0048] In this way, the first end portion 5 assumes, for example, an eyelet or loop configuration.

[0049] In particular, at least one of the first and second joints 12 and 13, preferably both, comprise or are formed by means of a respective seam.

[0050] Alternatively, depending on the application, the various joints described herein above may be realized by making use of one or more buttons, clips, screwed brackets, welds.

[0051] Figure 2 illustrates a use method 100 for performing a workout using an elastic, the method 100 comprising at least:

- a first phase 110 which comprises providing an elastic 1 for workouts, of the type previously described, and in particular as defined in the attached claims;
- a second phase 120 which comprises attaching the first end portion 5 of the elastic 1 to an attachment surface 50.

[0052] For example, in this phase, the second end portion, e.g. configured as an eyelet or loop, may be arranged around the attachment surface 50; then, by making the second end portion 7 and the central portion 2 of the elastic 1 pass through the eyelet, and then drawing them out, there is obtained a sort of loop that tightens firmly around the attachment surface 50 itself, which thus constitutes the anchoring point.

[0053] The method 100 further comprises:

- a third phase 130 which comprises manually gripping, by a user 60, or alternatively attaching at least a portion of the second end portion 7 of the elastic 1 to at least a portion of the body of the user 60;
- a fourth phase 140 which comprises performing, by the user 60, a workout using the previously gripped or attached elastic 1.

[0054] In particular, according to a preferred embodiment, the third phase 130 comprises:

- arranging at least a portion of the second end portion 7 of the elastic 1, in particular the inner loop, namely the first loop 8, around an ankle 62 of the user 60;
- passing, inside the first loop 8, the second loop 9, tightening at least said first loop 8 around the ankle 62 of the user 60;
- inserting the front part of the foot 64 of the user 60 inside the second loop 9, with this second loop, once released by the user 6, elastically tightening around and adhering to the foot 64 itself.

[0055] In practice it has been found that the elastic 1 and the method 100 according to the invention allow achieving the predetermined object in that they allow greater versatility and comfort in use.

[0056] In particular, the realization of an elastic 1 comprising one end that can be attached to an attachment surface, with the opposite end having a double loop, makes it possible to obtain two hand grip points located at different distances from the attachment point of the elastic.

[0057] In this way, it is possible to perform, for example, stretching exercises with different stretching ranges; in particular, it is possible to use the grip closer to the attachment point in order to perform exercises for working out the biceps, and it is possible to use the grip located further away in order to perform exercises for extending the arms above the head.

[0058] Conveniently, the 8-shaped configuration of the second end portion 7 makes it possible, in particular, to secure the elastic 1 to the foot of a user in a stable and comfortable manner, as compared to other types of attachment options such as ankle straps, for performing fitness exercises such as lateral/frontal lunges in various positions.

[0059] Clearly, without prejudice to the principle of the invention, the embodiments and particular details of implementation may vary widely with respect to that which have been described and illustrated purely by way of non-limiting examples, however without thereby departing from the scope of protection of the present invention as defined in particular by the appended claims. For example, the first end portion 5 may be implemented in a different manner from that described here above, for instance as one single piece together with the rest of the body of the elastic 1; the central portion and/or the loops 8 and 9 may in turn be implemented as multiple separate pieces; the phases of the method 100 may be executed in a different order from that described here above, etc.

Claims

1. Elastic (1) for workouts, comprising a body at least in part elastically stretchable that includes:

- a central portion (2);
- a first end portion (5) that extends from a first

end portion (3) of the central portion (2) and is configured to be attached to an attachment surface (50);

- a second end portion (7) that protrudes from a second end (4) of the central portion (2) opposite said first end (3);

characterized in that said second end portion (7) comprises a first closed loop (8) and a second closed loop (9) arranged in sequence and adjacent to each other.

2. Elastic (1) for workouts according to claim 1, wherein at least one of said first closed loop (8), second closed loop (9) and central portion (2) comprises at least one portion having a corrugated or bellows structure.

3. Elastic (1) for workouts according to claim 1 or 2, wherein at least a portion of said central portion (2) and said first closed loop (8) and second closed loop (9) comprises a core (2A, 9A), and an outer sheath (10) that is disposed around at least a portion of the core.

4. Elastic (1) for workouts according to claim 3, wherein the core of said central portion (2) and said second end portion (7) comprising said first closed loop (8) and second closed loop (9) comprises a single body of elastomeric material or of elastic material integrated with fabric.

5. Elastic (1) for workouts according to claim 4, wherein said single body of elastomeric material or of elastic material integrated with fabric comprises a body having a first section forming the core of said central portion (2), and a second section, forming the core of said second end portion (7), which extends from the first section and is folded back on itself toward said central portion (2), and wherein a first joint (12) is arranged so as to join an end (11) of the second section at said second end (4) of the central portion (2) so as to preliminarily form a loop, and a second joint (13) is arranged at a predetermined distance from the first junction (12) and joins between them two branches of the loop thereby forming the core of said first and second loops (8, 9).

6. Elastic (1) for workouts according to claim 4, wherein the core of said central portion (2) and second end portion (7) comprising said first closed loop (8) and second closed loop (9) are formed of a single molded piece of elastomeric material.

7. Elastic (1) for workouts according to claim 3, wherein the core of said central portion (2) and said second end portion (7) comprising said first closed loop (8) and second closed loop (9) comprises a plurality of

bodies of elastomeric material or elastic material integrated with fabric, and one or more joints (12, 13), each joint being configured to join together two bodies of said plurality of bodies.

8. Elastic (1) for workouts, according to claim 1, wherein said central portion (2) and said second end portion (7) comprising said first closed loop (8) and second closed loop (9) comprise a single body of elastomeric material or elastic material integrated with fabric.

9. Elastic (1) for workouts according to claim 8, wherein said single body of elastomeric material or elastic material integrated with fabric comprises a body having a first section forming said central portion (2), and a second section, forming said second end portion (7), which extends from said first section and is folded back on itself toward said central portion (2), and in which a first joint (12) is arranged so as to join an end (11) of the second section at said second end (4) of the central portion (2) so as to preliminarily form a loop, and a second joint (13) is arranged at a predetermined distance from the first joint (12) and joins between them two branches of the loop thereby forming said first and second loops (8, 9).

10. Elastic (1) for workouts according to claim 8, wherein at least said central portion (2) and said second end portion (7) comprising said first closed loop (8) and second closed loop (9) are made of a single molded piece of elastomeric material.

11. Elastic (1) for workouts according to claim 1, wherein said central portion (2) and said second end portion (7) comprising said first closed loop (8) and second closed loop (9) comprises a plurality of bodies of elastomeric material or elastic material integrated with fabric, and one or more joints (12, 13), each joint being configured to join together two bodies of said plurality of bodies.

12. Elastic (1) for workouts according to one or more of claims 5, 7, 9, and 11, wherein at least one of said first and second joints or said one or more joints (12, 13) comprise or are made by means of a seam, or one or more buttons, or one or more clips, or one or more screwed brackets, or at least one weld.

13. Method (100) of performing a workout using an elastic, **characterized by** comprising at least:

- a first phase (110) which comprises providing an elastic (1) for workouts, according to one or more of the preceding claims;
- a second phase (120) which comprises attaching the first end portion (5) of the elastic (1) to an attachment surface (50);

- a third phase (130) which comprises manually grasping, by a user (60), or attaching at least a portion of said second end portion (7) of the elastic (1) to at least a portion of the body of the user (60);
- a fourth phase (140) which comprises performing, by the user (60), a workout using the previously grasped or attached elastic (1).

5

14. Method (100) according to claim 13, wherein said third phase (130) comprises:

10

- arranging at least a portion of the second end portion (7) of the elastic (1) around an ankle (62) of said user (60);
- passing, inside the first loop (8), the second loop (9) tightening at least said first loop (8) around the ankle (62) of said user (60);
- inserting the front part of the foot (64) of said user (60) inside the second loop (9) with the second loop (8) elastically tightening around and adhering to the foot (64).

15

20

25

30

35

40

45

50

55

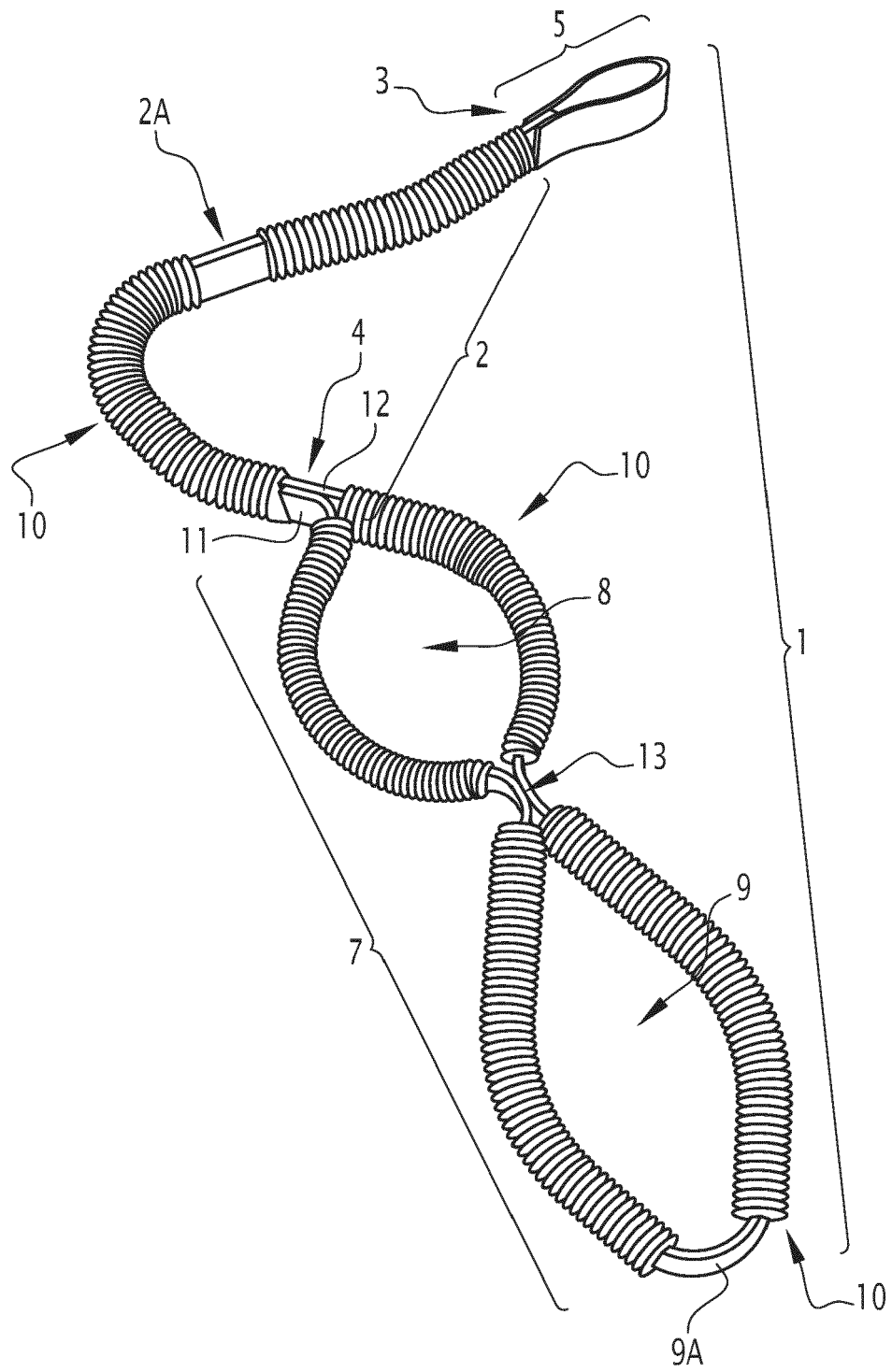


FIG.1

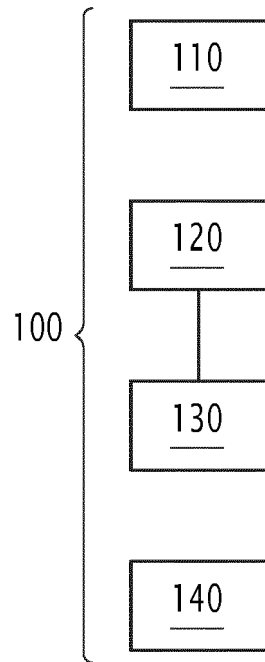


FIG.2

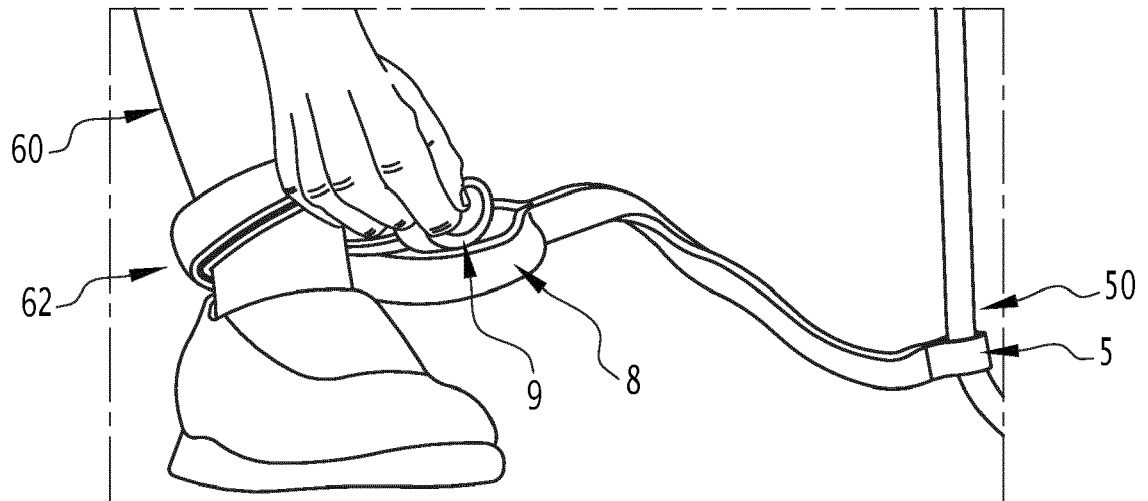


FIG.3

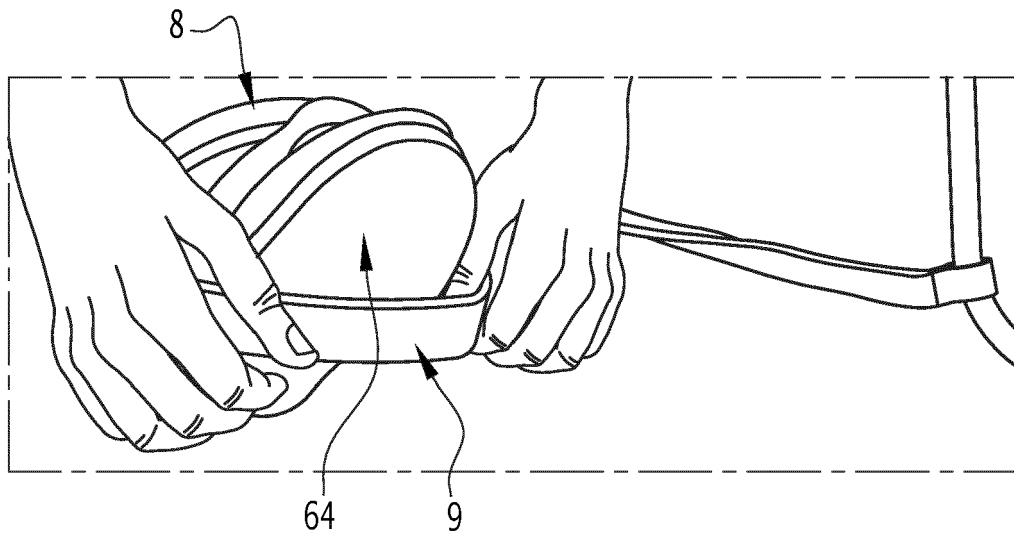


FIG.4



EUROPEAN SEARCH REPORT

Application Number

EP 24 16 7866

5

10

15

20

25

30

35

40

45

50

55

1

EPO FORM 1503 03.82 (P04C01)

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	FR 2 958 553 A1 (SVELTUS [FR]) 14 October 2011 (2011-10-14)	1,3,4,7, 11-13	INV. A63B21/00
A	* page 2, line 3 - page 9, line 19; figures 1-4 *	5,6,14	A63B21/055

X	KR 2022 0105436 A (KIM SE JIN [KR]) 27 July 2022 (2022-07-27)	1,2,8,9, 11-13	
	* paragraph [0001] - paragraph [0049]; figures 1,2 *		

X	US 2014/274601 A1 (CROWELL JASON ALAN [US] ET AL) 18 September 2014 (2014-09-18)	1,2, 8-10,13	
	* paragraph [0017] - paragraph [0032]; figures 1-5 *		

X	EP 3 199 209 A1 (NNSQUARE GBR [DE]) 2 August 2017 (2017-08-02)	1,11-13	
	* paragraph [0027] - paragraph [0044]; figures 1-10 *		

X	DE 87 11 403 U1 (J.H.SANCHEZ GIRALDEZ) 3 December 1987 (1987-12-03)	1,2,13	TECHNICAL FIELDS SEARCHED (IPC)
	* paragraph [0057] - paragraph [0116]; figures 1-22 *		A63B

The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 1 August 2024	Examiner Jekabsons, Armands
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 24 16 7866

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

01-08-2024

10

15

20

25

30

35

40

45

50

55

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR 2958553 A1	14-10-2011	FR 2958553 A1	14-10-2011
		WO 2011128749 A1	20-10-2011

KR 20220105436 A	27-07-2022	NONE	

US 2014274601 A1	18-09-2014	BR 112015023411 A2	22-08-2017
		CN 105102077 A	25-11-2015
		DK 2969061 T3	16-07-2018
		EP 2969061 A1	20-01-2016
		ES 2672740 T3	15-06-2018
		HK 1218406 A1	17-02-2017
		JP 6362671 B2	25-07-2018
		JP 2016512066 A	25-04-2016
		KR 20160012988 A	03-02-2016
		MY 168403 A	01-11-2018
		PT 2969061 T	12-06-2018
		TR 201809651 T4	23-07-2018
		US 2014274601 A1	18-09-2014
		WO 2014158588 A1	02-10-2014

EP 3199209 A1	02-08-2017	NONE	

DE 8711403 U1	03-12-1987	NONE	
