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(54) **Connection element for connecting skis and ski poles**

(57) An assembly (100) comprising two skis (201, 202) and two ski poles (203, 204), the assembly further comprising a connection element (102) coupling the skis and the ski poles, the connection element comprising:
- a connection element body (104);
- a ski connection module (110) connecting the two skis to the connection element body;
- a ski pole connection module (103) connecting the two ski poles to the connection element body;
wherein the skis and the ski poles are positioned on opposite sides of the connection element.

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Title: Connection element for connecting skis and ski poles

TECHNICAL FIELD

The aspects and embodiment thereof relate to the field of skis, ski poles, and connection elements for connecting skis and ski poles.

BACKGROUND

Skiing has been a popular sport and leisure activity for centuries. Ski poles are an important part of skiing, providing balance and stability. Typically, a person skiing requires two skis and two ski poles. Because of their shape, skis and ski poles can be difficult to carry by a single person.

Solutions have been proposed to connect two skis and two ski poles together to form a single assembly which can be carried around. In particular, the assembly comprises a connection element which allows the ski poles to be used as a handle for carrying around the skis. As such, the skis are suspended below the ski poles via the connection element, and the connection element is positioned such that it is positioned above the ski poles – to prevent the weight of the skis from disconnecting the ski poles from the connection elements.

SUMMARY

It is an object of the present disclosure to provide for an improved connection element for connecting one or more, in particular two, ski poles to one or more, in particular two, skis. Improvements are preferred in terms of ease-of-use, in particular how convenient skis and/or ski poles can be connected and/or disconnected from the connection element, and/or in terms of safety of the connection element. A further object of the present disclosure is to provide for a connection element for connecting one or more, in particular two, ski pole-like bodies, such as walking poles, to another body, such as a backpack.

A first aspect provides an assembly comprising two skis and two ski poles, the assembly further comprising a connection element coupling the skis and the ski poles, the connection element comprising a connection element body, a ski connection module connecting the two skis to the connection element body, a ski pole connection

module connecting the two ski poles to the connection element body, wherein the skis and the ski poles are positioned on opposite sides of the connection element.

The assembly allows a user to carry the skis for example on their shoulder, and thereby also carrying the ski poles which are connected to the skis via the connection element.

When the ski poles and skis are disconnected from the connection element, preferably, no further elements used to form the connection between the ski poles and the skis remain connected to the ski poles and skis.

Preferably, the assembly comprises at most one connection element coupling the skis and the ski poles. As such, the user is only required to carry around a single connection element for example while skiing.

The connection element may be positioned at a distance from the centre of gravity the skis. In the known connection elements, the skis are suspended below the ski poles and as such the connection elements have to be positioned at the centre of gravity of the skis for stabilities. However, in the assembly according to the first aspect, the skis are preferably supported on the shoulder of the user and optionally supported by one hand of the user. This allows the connection element to be positioned at a distance from the centre of gravity the skis, which in turn may increase the convenience with which the assembly can be formed or disassembled. Additionally or alternatively, the connection element may be positioned at a distance from the centre of gravity the ski poles.

In any embodiment of the assembly disclosed herein, and for any connection element disclosed herein, the connection element may comprise a protrusion protruding away from the connection element body, which protrusion is at least partially positioned in-between the two skis. The protrusion may prevent or reduce movement between the skis and the connection element. A movement of the connection element and the skis may otherwise be caused for example by the weight of the ski poles, which are typically in use positioned above the skis, with the connection element in-between the ski poles and the skis. However, it is also envisioned that in use the ski poles are positioned below the skis, or even alongside the skis.

When a connection element comprises the protrusion, the protrusion may extend from the connection element body up to a distance corresponding to at most

half of a width of the skis, in particular at most a quarter of the width of the skis or even at most 15% of the width of the skis. In general, a shorter protrusion is preferred as this reduces the volumetric footprint of the connection element. A smaller connection element may increase safety during skiing for example when the connection element is carried in the pocket of a jacket and the skier would accidentally fall onto the connection element. The protrusion may for example protrude at most 50 mm, at most 30 mm or even at most 20 mm from the connection element body.

Any ski connection module disclosed herein may comprise a ski connection member which is wrapped around the skis. This may allow for a convenient manner for the use to connect the skis to the connection element. Furthermore, in particular when the ski connection member is adjustable in length, many different sizes of skis may be connected to a single size of connection element. The ski connection member may comprise one or more flexible strips, such as one or more flexible bands, rope-like elements, webbing, bands, belts, or any other type of flexible strip.

When in use the ski connection member forms a closed shape encircling a volume, and the skis and part of the connection element body may be positioned in the volume encircled by the ski connection member. Preferably, the volume encircled is adjustable. The ski connection member can pass through the connection element body, one time or multiple times. To this end, for example, one or more passages may be provided through the connection element body.

In any connection element disclosed herein, the ski pole connection module may be formed by two snap-fit sections of the connection element body, each of the snap-fit sections forming a space into which a respective one of the ski poles is positioned. Alternatively, for example the ski pole connection module may be arranged to clamp the ski poles to the connection element body.

When snap-fit sections of the connection element body form a space into which a respective one of the ski poles may be positioned, an opening may be provided into each of the spaces. Preferably, but not necessarily, the openings face away from the skis. This allows the ski poles to be supported or even cradled by the connection element, for example when in use the skis are carrier on the shoulder of the user, with the ski poles positioned above or below the skis.

When the connection element comprises the protrusion and openings into spaces of snap-fit sections, the openings may face in a generally opposite direction as a direction in which the protrusion protrudes away from the connection element body.

Additionally or alternatively, at least part of the ski connection module may be positioned between the spaces formed by the ski pole connection module. This may allow for a compact design of the connection element.

A second aspect provides a connection element for connecting two ski poles and two skis, the connection element comprising a connection element body, a ski connection module for connecting the two skis to the connection element body, and a ski pole connection module for connecting the two ski poles to the connection element body.

For any connection element of the present disclosure, preferably the ski connection module and ski pole connection module face in opposing direction. This allows the skis and the ski poles to in use be positioned on opposite sides of the connection element.

It will be appreciated that the present disclosure contemplates connection elements with any combination of features disclosed for connection elements comprised by any assembly according to the first aspect.

A third aspect provides an assembly comprising a backpack and two walking poles, the assembly comprising a backpack, two walking poles, and a connection element connecting the walking poles to the backpack, the connection element comprising:

- a connection element body;
- a walking pole connection module connecting the two walking poles to the connection element body;
- a backpack connection module connecting the backpack to the connection element body;

wherein the backpack and the walking poles are positioned on opposite sides of the connection element, and a flexible strip, such as a webbing, extends through a passage or tunnel through the connection element body.

It will be appreciated that any feature disclosed in conjunction with the connection element according to the second aspect may be readily applied to a connection element used in the assembly according to the third aspect.

BRIEF DESCRIPTION OF THE FIGURES

In the figures,

Fig. 1A shows part of an assembly;

Fig. 1B shows a schematic section view of the assembly of Fig. 1A;

Figs. 2A and 2B schematically show an example of a connection element for coupling skis and ski poles, respectively in an isometric view and a side view;

Figs. 3A-3C show an embodiment of a connection element body;

Figs. 4A-4C show another embodiment of a connection element body;

Figs. 5 and 6 show a user carrying an assembly of skis and ski poles; and

Fig. 7 shows another assembly.

DETAILED DESCRIPTION OF THE FIGURES

Fig. 1A shows part of an assembly 100 comprising two skis 201, 202 and two ski poles 203, 204, the assembly further comprising a connection element 102 coupling the skis and the ski poles. Fig. 1B shows a schematic section view of the assembly 100, with the skis 201, 202 and ski poles 203, 204 shown hatched.

As can be seen in Figs. 1A-1B, the connection element 102 allows the skis and the ski poles to be carried together, for example by placing the skis on a user's shoulder, with the ski poles positioned above or below the skis. In general, it may be preferred to only use a single connection element 102 coupling the skis and the ski poles, instead of using multiple separate connection elements 102 – although the use of multiple separate connection elements 102 is also envisioned by the present disclosure. However, when only a single connection element 102 is used, the user has to carry around less items, for example while skiing. As an option depicted in Fig. 1A, part of the ski poles, such as at least part of the handles, can extend beyond the skis. However, in other embodiments the ski poles do not extend beyond the skis – for example depending on the length of the skis and the ski poles.

As depicted in Fig. 1A, the connection element 102 may be positioned near an outer end of the skis 201, 202 – or at least at a distance from a centre of

gravity of the skis 201, 202. Alternatively or additionally, the connection element 102 is positioned near the handles of the ski poles 202, 203 – or at least at a distance from a centre of gravity of the ski poles. This applies to any embodiment of the assembly 100 disclosed herein using any connection element 102.

Fig. 1B shows the connection element 102, which comprises a connection element body 104, a ski connection module 110 for connecting two skis to the connection element body 104, and a ski pole connection module 106, 108 for connecting two ski poles to the connection element body 104. The connection element body 104 may generally be formed a single monolithic body, or may conceivably be formed by two or more elements which are connected, for example using a threaded connection, glued connection, welded connection, clamped connection, and/or any other type of connection.

As a particular option, applicable to any connection element 102 disclosed herein, and depicted for example in Fig. 1B, the connection element 102 comprises a protrusion 112 protruding away from the connection element body 104. In use, for example when the assembly 100 of Fig. 1B is formed, the protrusion 112 is positioned in-between the two skis. The protrusion 112 aims to prevent or restrict movement of the connection element 102 relative to the skis 201, 202. In particular, the protrusion 112 can prevent the connection element 102 from rotating about a rotation axis generally parallel to the elongation axis of the skis.

The inventor has found that the protrusion 112 does not need to be as long as the width of the skis 201, 202. Instead, the protrusion 112 may extend from the connection element body 104 up to a particular distance which is smaller than the width of the skis. In particular, the distance may correspond to at most half of a width of the skis, in particular at most a quarter of the width of the skis or even at most 15% of the width of the skis. The smaller the distance, in general the easier it will become to store the connection element 102 when not in use, for example in a pocket of jacket or trousers or in a backpack, in particular while skiing.

For any embodiment of the connection element disclosed herein, the ski connection module 110 may comprise or even be formed as a ski connection member 114 arranged to be wrapped around the skis, as for example depicted in Figs. 1A and 1B. When the ski connection member 114 is connected to the connection element

body 104 and the ski connection member 114 is wrapped around the skis 201, 202, the skis can be held in place relative to the connection element body 104.

It will be appreciated that being wrapped around in the context of the present disclosure does not necessarily mean that the ski connection member is fully wrapped around the entire circumference of the skis. Instead, the ski connection member may be partially wrapped – or, in other words, partially wound – around the outer circumference of the skis.

In general, whenever a ski connection member 114 is used for the ski connection module 110, the ski connection member 114 may form a closed shape encircling a volume 116. Inside this volume 116, in use, the skis and part of the connection element body 104 can be positioned. The skis and the connection element body 104 can as such become trapped by the ski connecting member 114, which ski connecting member 114 thus restricts or prevents movement between the skis and the connection element body 104.

It will be appreciated that when part of the connection element body 104 is positioned inside the volume 116 encircled by the ski connection member 114, part of the ski connection member 114 can pass through the connection element 104 – as schematically shown by the dashed part of the ski connection member 114 in Fig. 1B.

For any ski connection member 114 disclosed herein, the ski connection member 114 may be formed by a single body. Alternatively, the ski connection member 114 may be formed by multiple distinct bodies, such as two bodies, which can be connected to form a continuous ski connection member 114 which can be wrapped around the skis. A body can be formed as a belt, strap, band and/or any other strip of flexible material.

Preferably, but not necessarily, a snap-fit connection is used to connect the ski poles to the connection element body. In particular, one snap-fit connection is used per ski poles, and as such the connection element 102 typically comprises two snap-fit connection as the ski pole connection module.

Fig. 1B shows an example of the assembly 100 in which a first of the ski poles 203 is connected using a first snap-fit connection, and a second of the ski poles 204 is connected using a second snap-fit connection. Both snap-fit connections are formed using the ski pole connection module 103 of the connection element 102.

The ski pole connection module 103 can be formed by two snap-fit sections 106, 108 of the connection element body 104. Each of the snap-fit sections 106, 108 forms a space 107, 109 into which a ski pole can be positioned. An opening 111, 113 is provided into both spaces 107, 109 through which a ski pole can be moved in order to position the ski pole in a space, and/or through which a ski pole can be moved in order to remove the ski pole from the space.

When a ski pole is moved into a space of a snap-fit section, preferably the snap-fit section is elastically deformed, for example in a generally hinging motion. As such, a snap-fit connection can be formed between the snap-fit section and the ski pole.

As an option depicted in Fig. 1B, at least part of the strap 114 – or conceivably any other ski connection module 110 – and/or the skis may be positioned between the spaces 107, 109 formed by the snap-fit section 106, 108. This may allow for a more compact design of the connection element 102.

Figs. 2A and 2B schematically show an example of a connection element 102 for coupling skis and ski poles, respectively in an isometric view and a side view.

As a particular example, applicable also to any other embodiment of the connection element 102 disclosed herein, the ski connection member 114 shown in Figs. 2A and 2B is a strap 114 with a buckle 118 at one end, and one or more apertures 120 through the strap 114 with which the buckle 118 can be connected. The ski connection member 114 can be a ski strap. It will be appreciated that instead of the buckle and the apertures, other connections are envisioned to connect the ski connection member 114 with itself. For example, one or more of a hook-and-loop connection, ratchet connection, a clamped connection, a cam buckle, or any type of connection may be used.

Preferably, the length of the circumference of the ski connection member 114 when forming the closed shape can be adjusted, for example to accommodate different sizes of skis.

Figs. 3A-3C show an example of a connection element body 104, which can be generally comprised by any connection element 112 disclosed herein, respectively in an isometric view, front view, and a section view. Options disclosed in conjunction with Figs. 3A-3C can be readily applied to any other connection

element body 114 disclosed herein. The connection element body 104 is in Figs. 3A-3C depicted with the snap-fit section 106, 108.

As an option, but not necessarily, the connection element body 104 is formed as a single monolithic body. To allow a flexible strip to be used as a ski connection member, two passages 130 are allowing passage of the flexible strip through the connection element body 104. In Fig. 3C, the flexible strip is schematically indicated with curved line 114.

When the connection element body 104 comprises one or more snap-fit sections 106,108, such as for example depicted in Figs. 3A-3C, one or more recessed sections 132 may be comprised by the connection element body 104 to allow elastic deformation of the snap-fit sections 106, 108. The recessed sections 132 are preferably positioned at an opposite side of the connection element body 104 than the spaces 107, 109. Additionally or alternatively, support ribs 134 may be comprised by the connection element body 104 to locally increase stiffness.

Figs. 4A-4C show another example of a connection element body 104, which can be generally comprised by any connection element 112 disclosed herein, respectively in an isometric view, front view, and a section view.

As an option disclosed in Figs. 4A-4C, the connection element body 104 can be formed from multiple connected bodies, for example a first body 104' and a second body 104". The first body 104' may comprise the snap-fit sections 106, 108. As a further option best visible in the section view of Fig. 4C, the protrusion 112 may protrude from the second body 104".

To connect the first body 104' and 104", as a particular option, a set of screws 140 may be used. Alternatively, any other threaded connection, a clamped connection, a glued connection, or any other type of connection or combination thereof may be used.

As is best visible in the section view of Fig. 4C, a tunnel 143 as an example of a passage may be formed between the first body 104'. As schematically shown, a ski connection member 114 may be passed through the tunnel 143. In particular, the use of a separate first body 104' and second body 104" allows the ski connection member 114 to be positioned between the first body 104' and second body 104" before connecting the first body and the second body.

As a preferred option, although not necessarily, applicable to any connection element body 104 disclosed herein, one or more air passages can be provided through the connection element body, forming a whistle. In particular, an air entrance 144 is formed into the connection element body 104, in particular in the second body 104", and one or more air exits 146 are formed into the connection element body, in particular in the second body 104". When an air flow 148 is constituted through the connection element body 104, between the air entrance 144 and the exits 146, a whistling sound may be produced. A whistle may aid a skier who is in an emergency and required assistance.

Fig. 5 shows an example of a user carrying an assembly 100 comprising two skis 201, 202 and two ski poles 203, 204. Advantageously, the skis and ski poles are coupled using a connection element 102, which may be any connection element of the present disclosure. The connection element couples the skis and ski poles such that the assembly can be carried on a shoulder of the user, optionally supported with one hand of the user – leaving the other hand free to perform other actions.

The ski poles may be oriented with the handles downward – as shown in Fig. 5 – but conceivable also with the handles upward. In use, one or both skis and/or one or both ski poles may be directly supported on the shoulder, in any combination thereof. Additionally or alternatively, in use, the connection element 102 can be positioned below the shoulder – as shown in Fig. 5 – or above the shoulder.

Fig. 6 shows another example of a user carrying an assembly 100 comprising two skis 201, 202 and two ski poles 203, 204. Advantageously, the skis and ski poles are coupled using a connection element 102, which may be any connection element of the present disclosure. In the example of Fig. 6, the user holds the skis in one hand, and by virtue of the ski poles being connected to the skis via the connection element 102, the ski poles are indirectly also carried by the user – leaving the other hand free for other actions. Furthermore, when the assembly 100 is carried in a generally vertical orientation, a chance of accidentally hitting other objects or persons with the assembly 100 when the user rotates is reduced.

Both from Figs. 5 and 6, it becomes apparent that the connection element according to present disclosure allows an assembly 100 to be formed which requires only a single connection element 102, connecting the skis and ski poles at a single

location. This connection location may be positioned at a distance from the centre of gravity of the skis and the centre of gravity of the ski poles.

As for example visible in Fig. 6, when the skis and ski poles are positioned on opposite sides of the connection element 102, the ski poles and skis can be conveniently disconnected from the connection element 102.

Fig. 7 shows an assembly 300 of a backpack 302 and two walking poles 306, 308. A connection element 102 is comprised by the assembly 300, to connect the walking poles 306, 308 to the backpack 302. The connection element 102 can be any connection element according to the present disclosure, wherein the connection element is connectable to a backpack instead of or in addition to skis.

Often, backpacks comprise webbing, straps, bands, or other flexible strips. A flexible strip 304 of the backpack can be connected the connection element 102, for example by passing the flexible strip 304 through a tunnel 143 or one or more passages 130 through the connection element 102 – similar to the ski connection member 114. The walking poles 306, 308 can be connected to the connection element 102 in a similar manner as ski poles can be connected to the connection element 102, for example using the snap-fit connections. It will thus be understood that the ski pole connection module can be used as a walking pole connection module.

Conclusies

1. Een samenstel (100) omvattende twee ski's (201, 202) en twee skistokken (203, 204), het samenstel verder omvattende een verbindingselement (102) welke de ski's en de skistokken koppelt, het verbindingselement omvattende:

- een verbindingselementlichaam (104);
- een skiverbindingsmodule (110) welke de twee ski's met het verbindingselementlichaam verbindt;
- een skistokverbindingsmodule (103) welke de twee skistokken met het verbindingselementlichaam verbindt;

waarin de ski's en de skistokken op tegenoverstaande zijdes van het verbindingselement gepositioneerd zijn.

2. Samenstel volgens conclusie 1, waarin het samenstel op zijn meest een verbindingselement omvat welke de ski's en de skistokken koppelt.

3. Samenstel volgens een van de voorgaande conclusies, waarin het verbindingselement op een afstand van het zwaartepunt van de ski's is gepositioneerd.

4. Samenstel volgens een van de voorgaande conclusies, waarin het verbindingselement op een afstand van het zwaartepunt van de skistokken is gepositioneerd.

5. Samenstel volgens een van de voorgaande conclusies, waarin het verbindingselement een uitstulping (112) omvat welke uitstrekt weg van het verbindingselementlichaam (104), welke uitstulping ten minste deels tussen de twee ski's is gepositioneerd.

6. Samenstel volgens conclusie 5, waarin de uitstulping (112) zich uitstrekt weg van het verbindingselementlichaam (104) tot een afstand welke overeenkomt met op zijn meest de helft van een breedte van de ski's, in het bijzonder op zijn meest een kwart van de breedte van de ski's of zelf op zijn meest 15% van de breedte van de ski's.

7. Samenstel volgens een van de voorgaande conclusies, waarin de skiverbindingsmodule (110) een skiverbindingsdeel (114) omvat welke om de ski's is gewikkeld.

8. Samenstel volgens conclusie 7, waarin het skiverbindingsdeel een gesloten vorm vormt welke een volume (116) omcirkelt, en de ski's en ten minste deel van het verbindingselementlichaam (104) gepositioneerd zijn in het volume omcirkelt door het skiverbindingsdeel.

9. Samenstel volgens conclusie 7 of 8, waarin het skiverbindingsdeel door het verbindingselementlichaam heen passeert.

10. Samenstel volgens een van de voorgaande conclusies, waarin de skistokverbindingsmodule (103) gevormd wordt door twee snap-fit-delen (106, 108) van het verbindingselementlichaam (104), elk van de snap-fit-delen (106, 108) een ruimte (107, 109) vormend waarin een respectievelijke ene van de skistokken is gepositioneerd.

11. Samenstel volgens conclusie 10, waarin een opening (111, 113) voorzien is elke van de ruimtes (107, 109) in.

12. Samenstel volgens conclusie 11, waarin de openingen (111, 113) weg kijken van de ski's.

13. Samenstel volgens conclusie 11 of 12, voor zover afhankelijk van conclusie 5, waarin de openingen (111, 113) in hoofdzaak in tegenovergestelde richtingen gericht zijn als een richting waarin de uitstulping (112) weg strekt van het verbindingselementlichaam (104).

14. Samenstel volgens een van de conclusies 10-13, waarin ten minste deel van de skiverbindingsmodule (110) gepositioneerd is tussen de ruimtes (107, 109) gevormd door de skistokverbindingsmodule (103).

15. Verbindingselement voor verbinden van twee skistokken en twee ski's, het verbindingselement omvattende:
- een verbindingselementlichaam (104);
- een skiverbindingsmodule (110) ingericht voor verbinden van de twee ski's met het verbindingselementlichaam;
- een skistokverbindingsmodule (103) ingericht voor verbinden van de twee skistokken met het verbindingselementlichaam;
waarin de skiverbindingsmodule en de skistokverbindingsmodule in tegenoverstelde richtingen zijn gericht.

16. Verbindingselement volgens conclusie 15, verder omvattende een uitstulping welke zich uitstrekt weg van het verbindingselementlichaam, welke uitstulping is ingericht om ten minste deels tussen twee ski's te worden gepositioneerd.

17. Verbindingselement volgens conclusie 16, waarin de uitstulping zich weg strekt van het verbindingselementlichaam tot een afstand tot 30 mm.

18. Verbindingselement volgens een van de conclusies 15-17, waarin de skiverbindingsmodule een skiverbindingsdeel (114) omvat welke is ingericht om om de ski's te worden gewikkeld.

19. Verbindingselement volgens conclusie 18, waarin het skiverbindingsdeel door het verbindingselementlichaam passeert.

20. Verbindingselement volgens conclusie 18 of 19, waarin het skiverbindingsdeel een flexibele strip omvat, zoals een skistrap.

21. Verbindingselement volgens een van de conclusies 15-20, verder omvattende een of meer luchtpassages door het verbindingselementlichaam welke een fluit vormen.

22. Samenstel omvattende een rugzak en twee wandelstokken, het samenstel omvattende een rugzak, twee wandelstokken, en een verbindingselement welke de wandelstokken met de rugzak verbindt, het verbindingselement omvattende:

- een verbindingselementlichaam;
- een wandelstokverbindingsmodule welke de twee wandelstokken met het verbindingselementlichaam verbindt;
- een rugzakverbindingsmodule welke de rugzak aan het verbindingselementlichaam verbindt;

waarin de rugzak en de wandelstokken gepositioneerd zijn op tegenovergestelde zijdes van het verbindingselement, en een flexibele strip, zoals een riem, door een passage of tunnel door het verbindingselementlichaam heen steekt.

23. Verbindingselement geschikt voor gebruik in een samenstel volgens een van de conclusies 1-14 en/of 22.

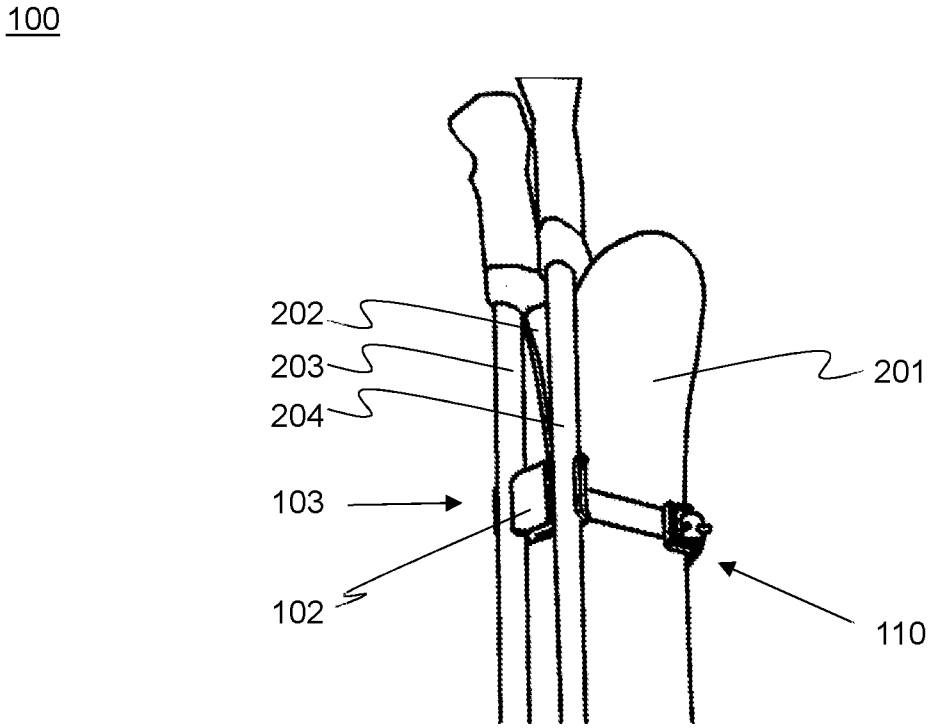
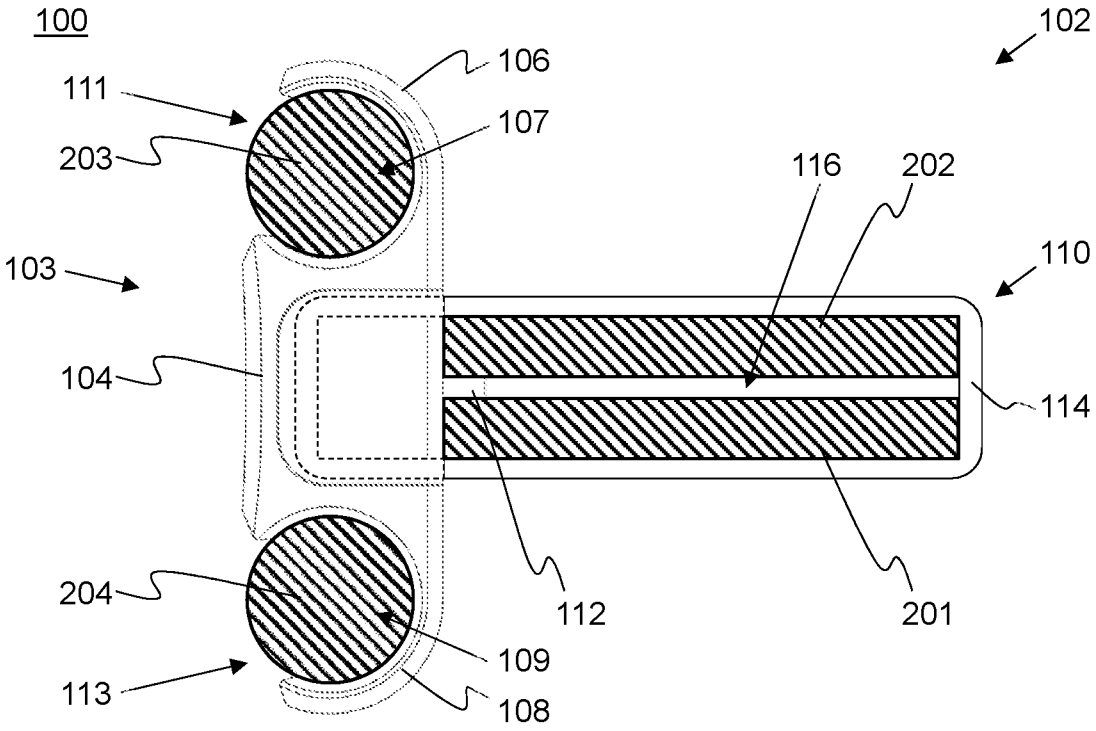

100
202
203
204
103
102
201
110

FIG 1A


100
102
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111
107
203
116
202
110
103
104
114
204
112
201
109
113
108

FIG 1B

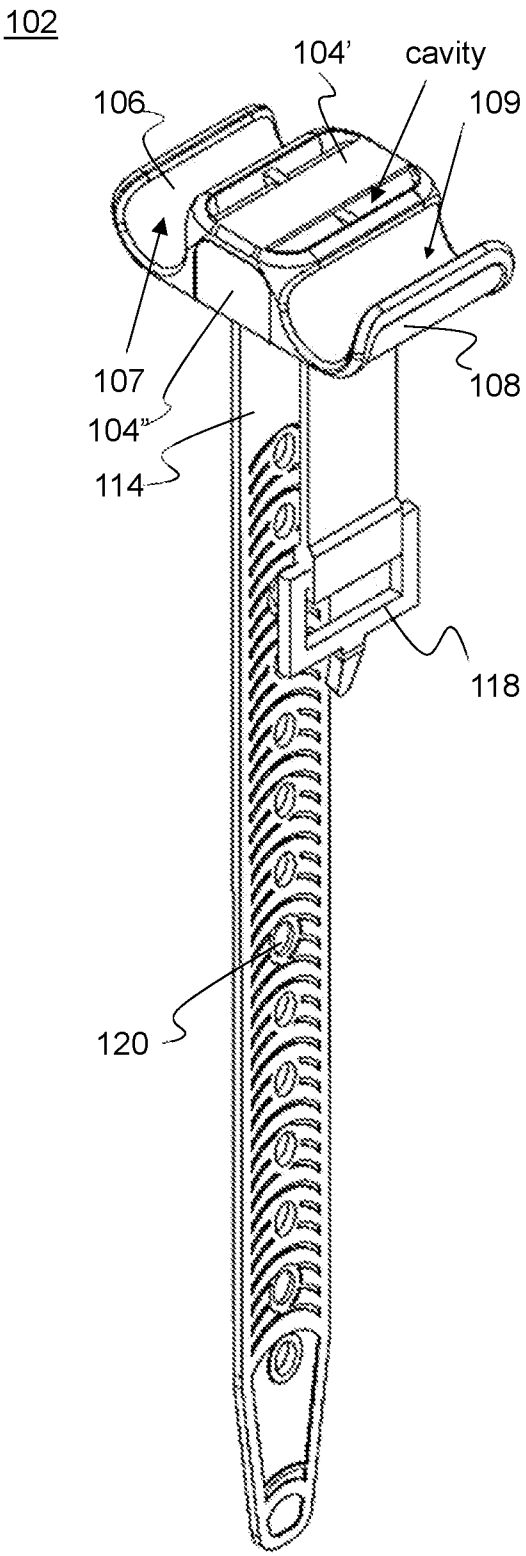
102
104'
cavity
106
109
107
104"
114
108
118
120

FIG 2A

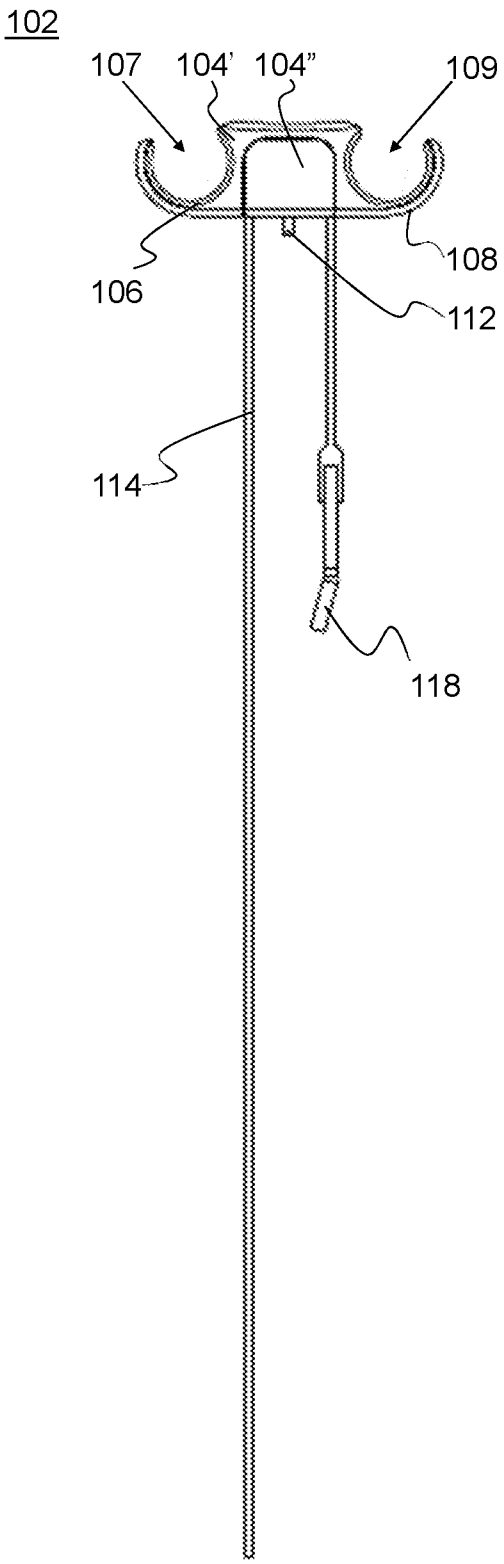
102
107
104'
104"
109
108
106
112
114
118

FIG 2B

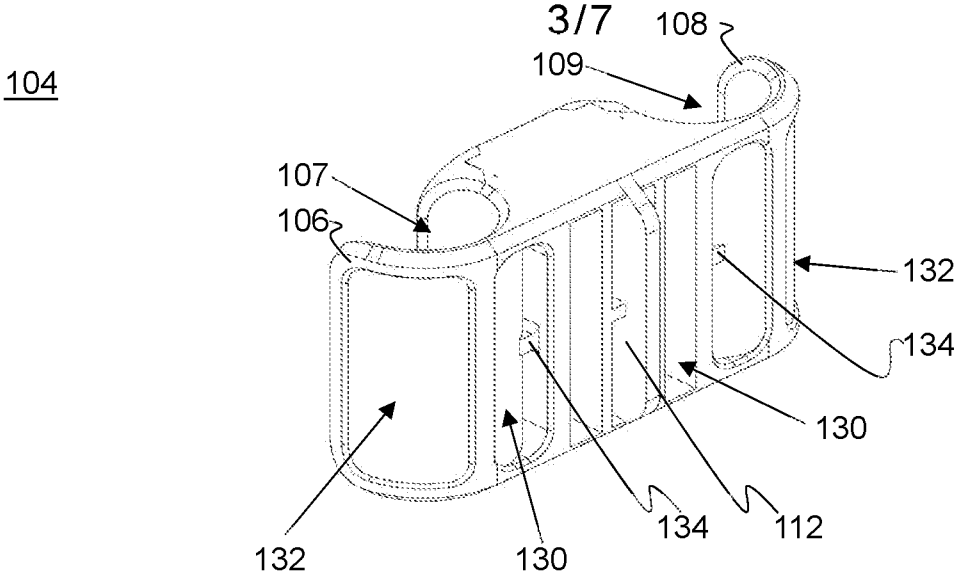

FIG 3A

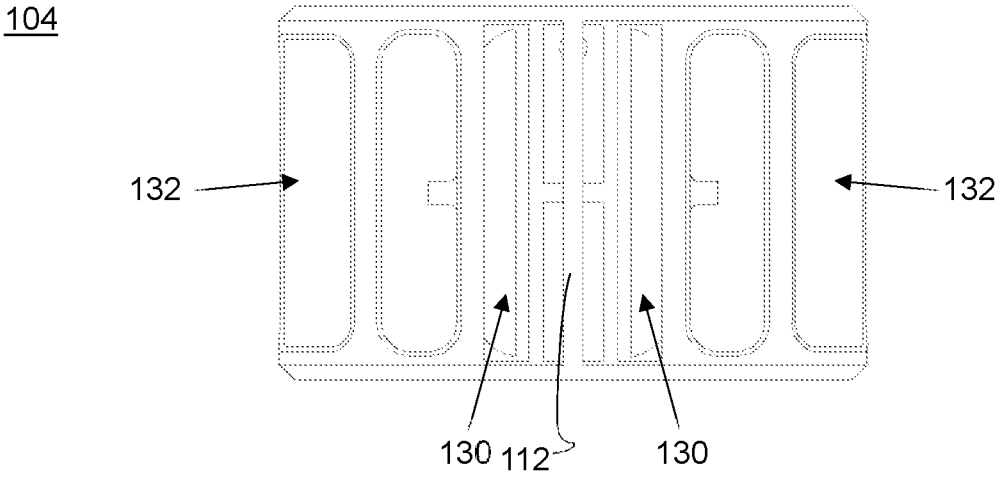

FIG 3B

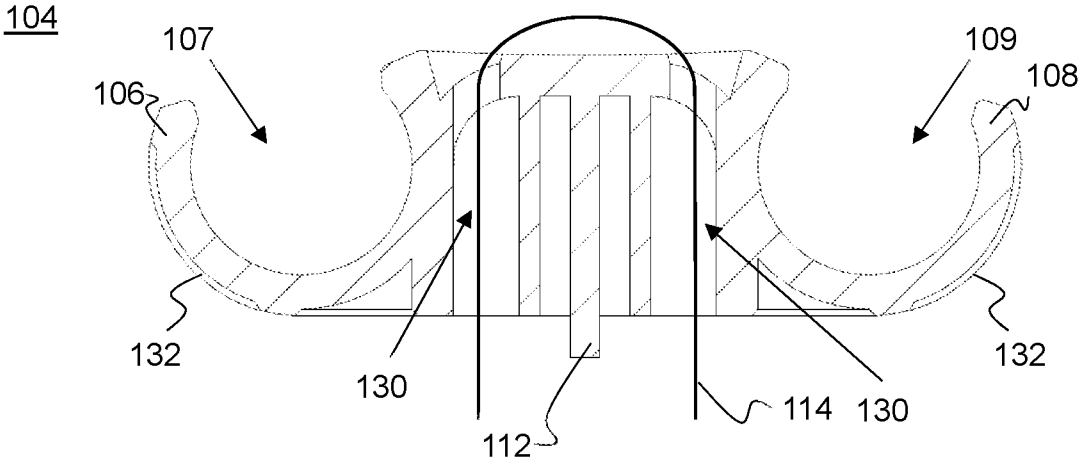

FIG 3C

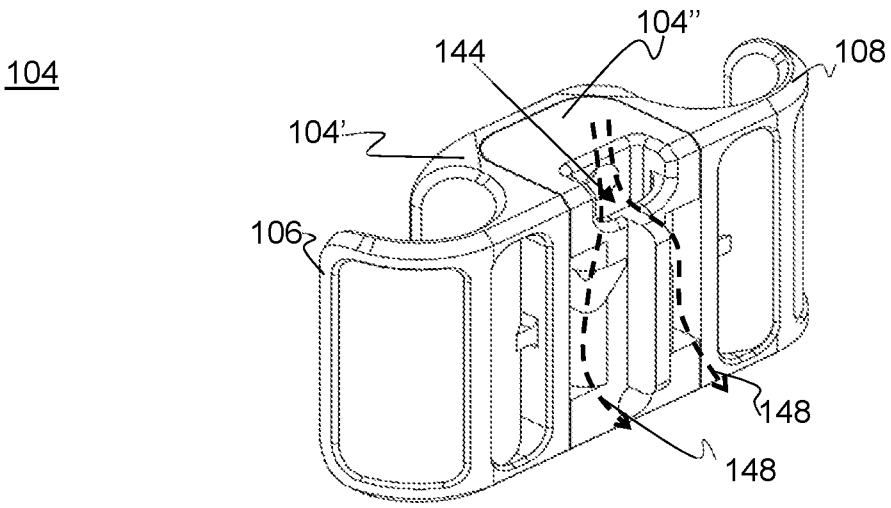

FIG 4A

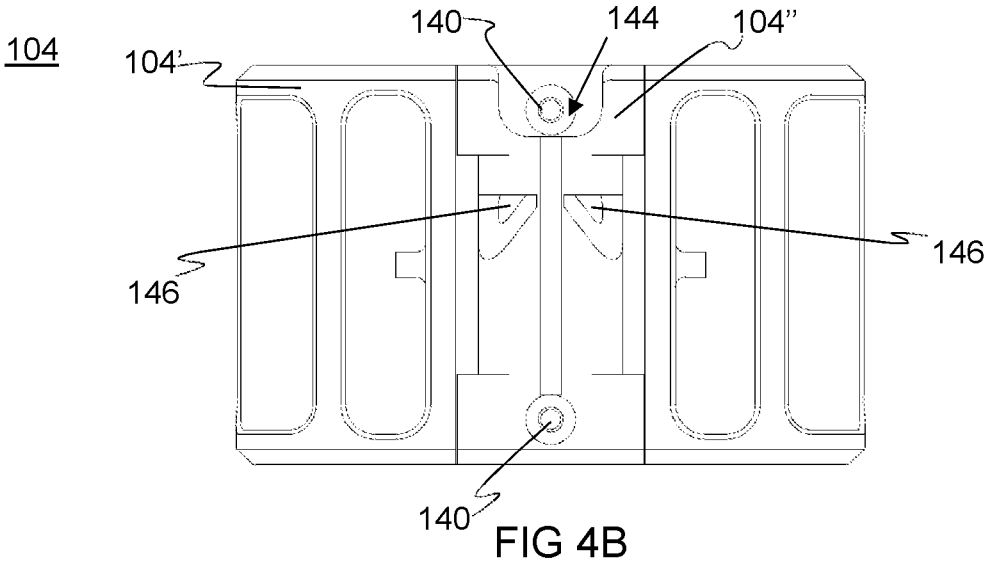

FIG 4B

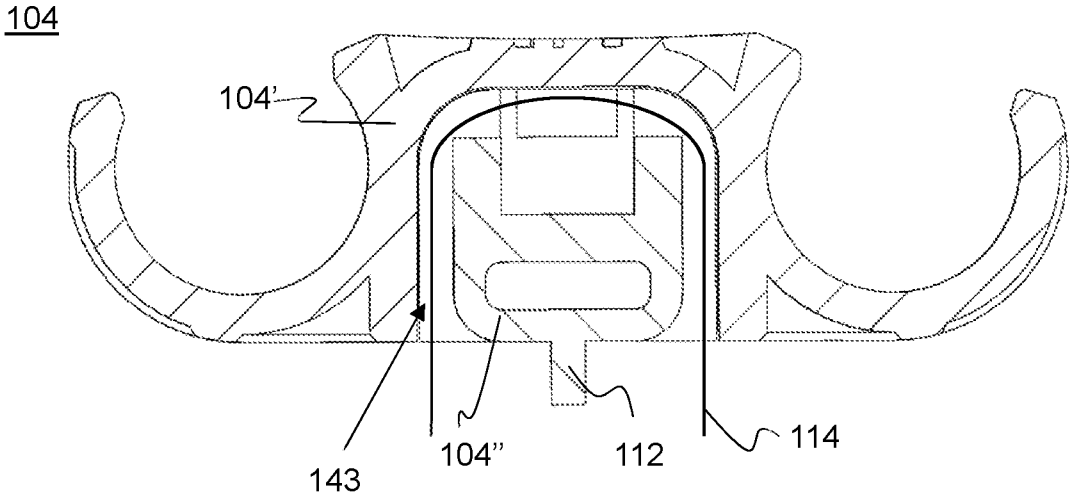

FIG 4C

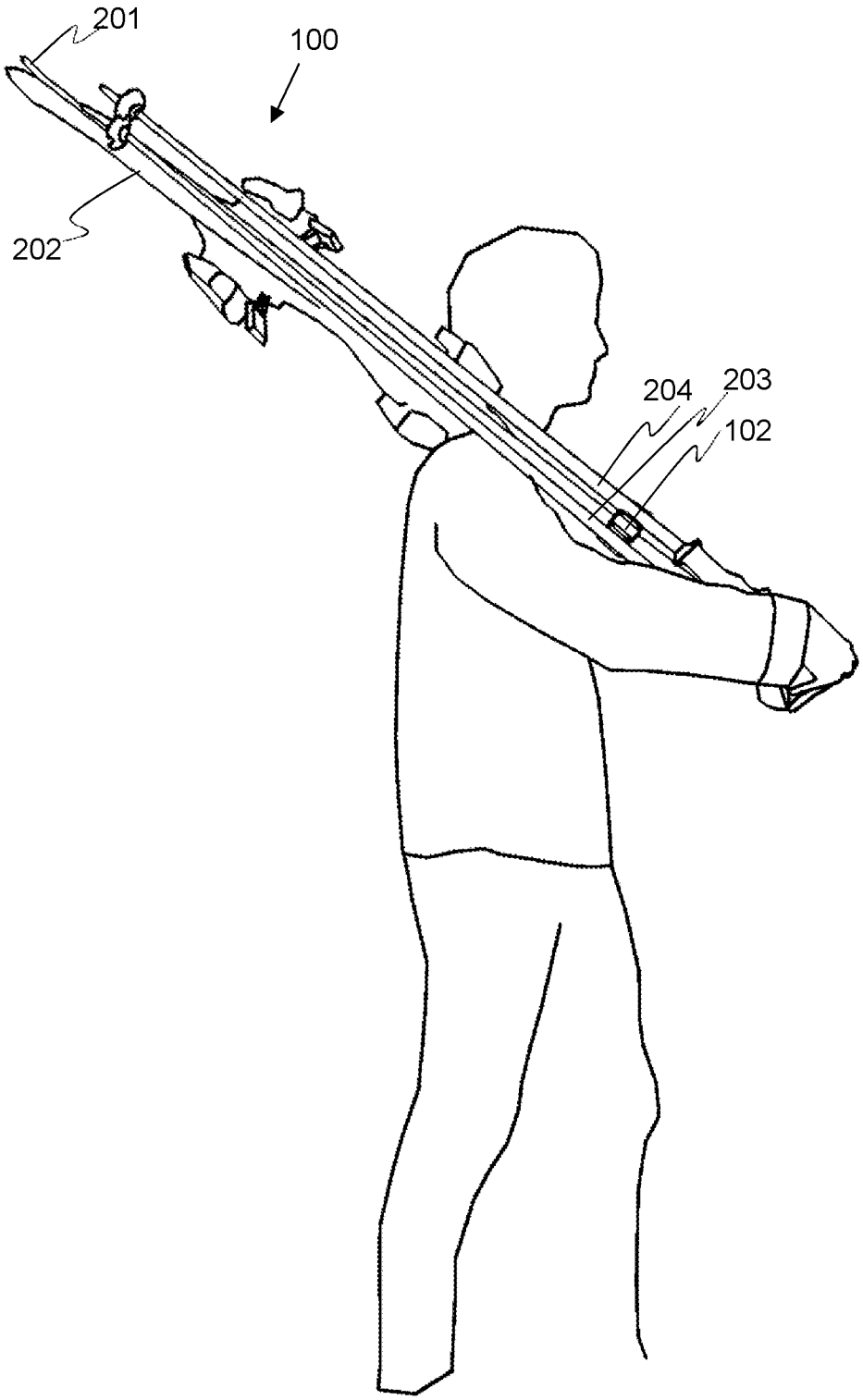

FIG 5

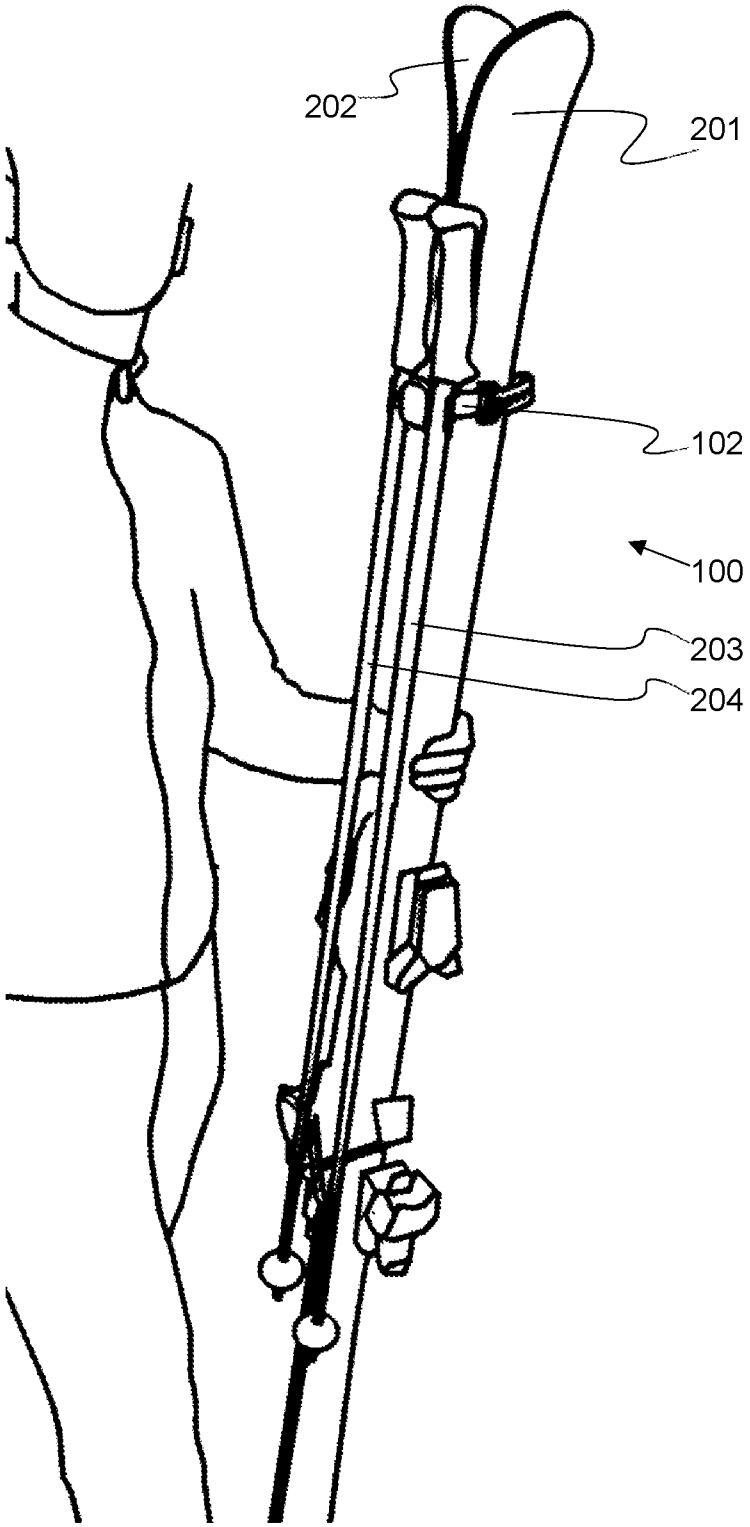

FIG 6

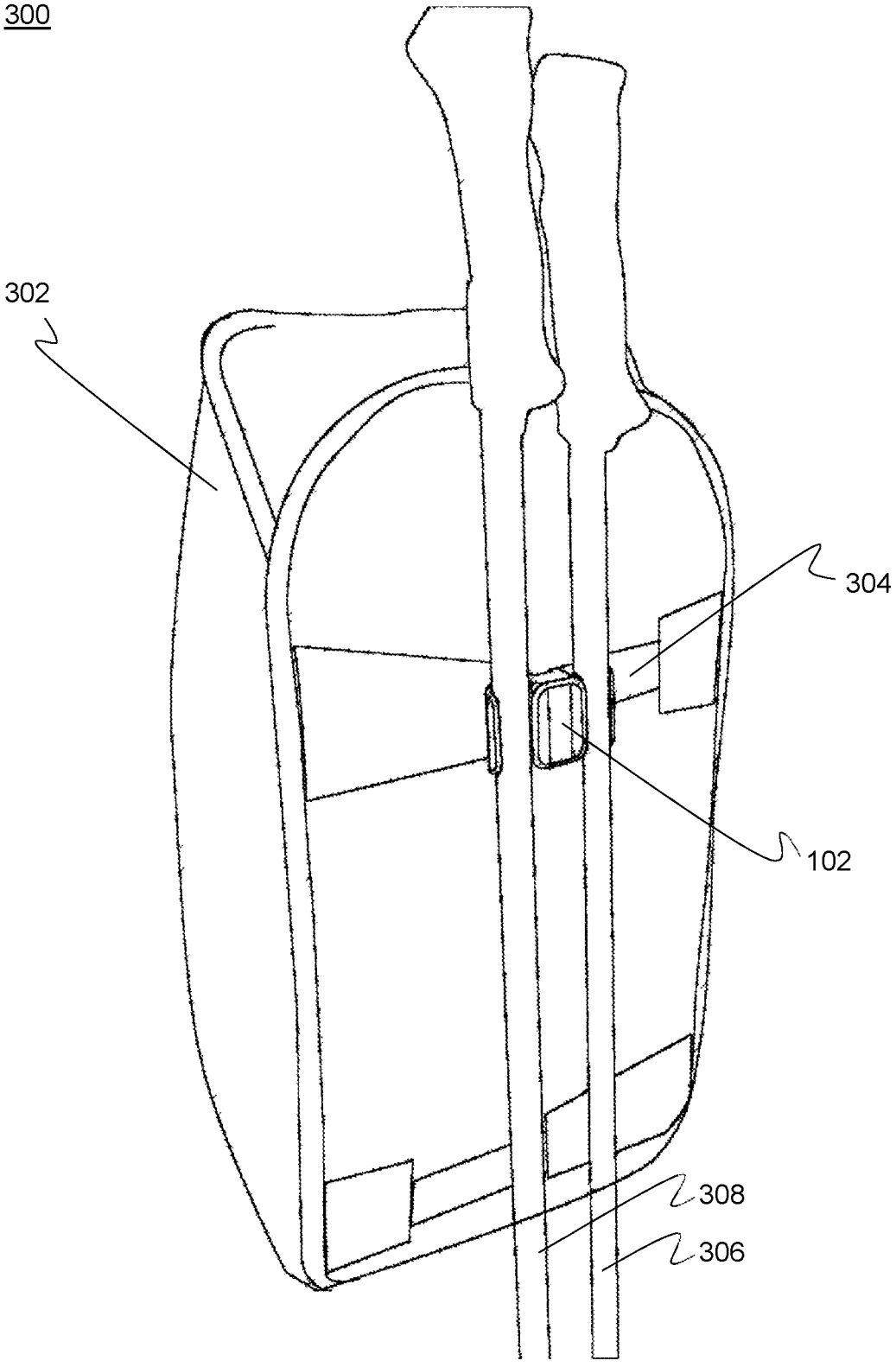

FIG 7

SAMENWERKINGSVERDRAG (PCT)

RAPPORT BETREFFENDE NIEUWHEIDSONDERZOEK VAN INTERNATIONAAL TYPE

IDENTIFICATIE VAN DE NATIONALE AANVRAGE	KENMERK VAN DE AANVRAGER OF VAN DE GEMACHTIGDE
Nederlands aanvraag nr. **2034113**	Indieningsdatum **08-02-2023**
	Ingeroepen voorrangsdatum
Aanvrager (Naam) **Ruben Lévi Boelhouwers**	
Datum van het verzoek voor een onderzoek van internationaal type **25-02-2023**	Door de Instantie voor Internationaal Onderzoek aan het verzoek voor een onderzoek van internationaal type toegekend nr. **SN83324**

I. CLASSIFICATIE VAN HET ONDERWERP (bij toepassing van verschillende classificaties, alle classificatiesymbolen opgeven)

Volgens de internationale classificatie (IPC)

Zie onderzoeksrapport

II. ONDERZOCHTE GEBIEDEN VAN DE TECHNIEK

Onderzochte minimumdocumentatie

Classificatiesysteem	Classificatiesymbolen
IPC	**Zie onderzoeksrapport**

Onderzochte andere documentatie dan de minimum documentatie, voor zover dergelijke documenten in de onderzochte gebieden zijn opgenomen

III.	☐	**GEEN ONDERZOEK MOGELIJK VOOR BEPAALDE CONCLUSIES**	(opmerkingen op aanvullingsblad)
IV.	☐	**GEBREK AAN EENHEID VAN UITVINDING**	(opmerkingen op aanvullingsblad)

ONDERZOEKSRAPPORT BETREFFENDE HET RESULTAAT VAN HET ONDERZOEK NAAR DE STAND VAN DE TECHNIEK VAN HET INTERNATIONALE TYPE

Nummer van het verzoek om een onderzoek naar de stand van de techniek
NL 2034113

A. CLASSIFICATIE VAN HET ONDERWERP

INV. A63C11/02 A63C11/22 G10K5/00 A47F7/00 A45B1/00 A45F5/02

ADD.

Volgens de Internationale Classificatie van octrooien (IPC) of zowel volgens de nationale classificatie als volgens de IPC.

B. ONDERZOCHTE GEBIEDEN VAN DE TECHNIEK

Onderzochte miminum documentatie (classificatie gevolgd door classificatiesymbolen)

A63C G10K A47F A45F A45B

Onderzochte andere documentatie dan de mimimum documentatie, voor dergelijke documenten, voor zover dergelijke documenten in de onderzochte gebieden zijn opgenomen

Tijdens het onderzoek geraadpleegde elektronische gegevensbestanden (naam van de gegevensbestanden en, waar uitvoerbaar, gebruikte trefwoorden)

EPO-Internal, WPI Data

C. VAN BELANG GEACHTE DOCUMENTEN

Categorie °	Geciteerde documenten, eventueel met aanduiding van speciaal van belang zijnde passages	Van belang voor conclusie nr.
X	US 5 094 479 A (SHIELDS MICHAEL P [US]) 10 maart 1992 (1992-03-10)	1-12, 14-20
Y	* kolom 2, regel 35 - kolom 4, regel 38; figuren *	13

X	DE 94 07 730 U1 (OBERSCHELP BEATE [DE]) 21 juli 1994 (1994-07-21) * het gehele document *	1-12, 14-20

X	JP S54 164673 U (UNKOWN) 19 november 1979 (1979-11-19)	1-5, 7-12,15, 16,18-20
Y	* samenvatting; figuren *	13

	-/--	

[X] Verdere documenten worden vermeld in het vervolg van vak C.

[X] Leden van dezelfde octrooifamilie zijn vermeld in een bijlage

° Speciale categorieën van aangehaalde documenten

"A" niet tot de categorie X of Y behorende literatuur die de stand van de techniek beschrijft

"D" in de octrooiaanvrage vermeld

"E" eerdere octrooi(aanvrage), gepubliceerd op of na de indieningsdatum, waarin dezelfde uitvinding wordt beschreven

"L" om andere redenen vermelde literatuur

"O" niet-schriftelijke stand van de techniek

"P" tussen de voorrangsdatum en de indieningsdatum gepubliceerde literatuur

"T" na de indieningsdatum of de voorrangsdatum gepubliceerde literatuur die niet bezwarend is voor de octrooiaanvrage, maar wordt vermeld ter verheldering van de theorie of het principe dat ten grondslag ligt aan de uitvinding

"X" de conclusie wordt als niet nieuw of niet inventief beschouwd ten opzichte van deze literatuur

"Y" de conclusie wordt als niet inventief beschouwd ten opzichte van de combinatie van deze literatuur met andere geciteerde literatuur van dezelfde categorie, waarbij de combinatie voor de vakman voor de hand liggend wordt geacht

"&" lid van dezelfde octrooifamilie of overeenkomstige octrooipublicatie

Datum waarop het onderzoek naar de stand van de techniek van internationaal type werd voltooid	Verzenddatum van het rapport van het onderzoek naar de stand van de techniek van internationaal type
7 september 2023	

Naam en adres van de instantie	De bevoegde ambtenaar
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	**Endrizzi, Silvio**

1

ONDERZOEKSRAPPORT BETREFFENDE HET RESULTAAT VAN HET ONDERZOEK NAAR DE STAND VAN DE TECHNIEK VAN HET INTERNATIONALE TYPE

Nummer van het verzoek om een onderzoek naar de stand van de techniek
NL 2034113

C.(Vervolg). VAN BELANG GEACHTE DOCUMENTEN

Categorie °	Geciteerde documenten, eventueel met aanduiding van speciaal van belang zijnde passages	Van belang voor conclusie nr.
X	WO 2011/101220 A1 (ZENCOM TELECOMM LTD [GB]; PITTARD JAMES [GB] ET AL.) 25 augustus 2011 (2011-08-25)	1-4, 7-12,15, 18-20
Y	* bladzijde 7, regel 11 - bladzijde 18, regel 4; figuren *	13
X	US 4 190 182 A (HICKEY DANA [US]) 26 februari 1980 (1980-02-26) * figuren *	1-5, 10-13, 15,16
X	US 2007/235478 A1 (GUIDETTI PASCAL [FR]) 11 oktober 2007 (2007-10-11) * alineas [0033], [0058] - [0060]; figuren *	22,23
X	DE 203 12 463 U1 (EBERHARD GOEBEL GMBH & CO [DE]) 11 december 2003 (2003-12-11) * alinea [0022]; figuren *	22,23
Y	DE 90 16 701 U1 (LENHART KLAUS) 14 maart 1991 (1991-03-14) * het gehele document *	22,23
Y	DE 20 2010 010309 U1 (KOMPERDELL SPORTARTIKEL GES M B H [AT]) 25 november 2010 (2010-11-25) * alinea [0022] - alinea [0035]; figuren *	22,23

ONDERZOEKSRAPPORT BETREFFENDE HET RESULTAAT VAN HET ONDERZOEK NAAR DE STAND VAN DE TECHNIEK VAN HET INTERNATIONALE TYPE

Informatie over leden van dezelfde octrooifamilie

Nummer van het verzoek om een onderzoek naar de stand van de techniek

NL 2034113

In het rapport genoemd octrooigeschrift	Datum van publicatie	Overeenkomend(e) geschrift(en)	Datum van publicatie
US 5094479	A 10-03-1992	AU 6928291 A	25-07-1991
		CA 2034386 A1	19-07-1991
		EP 0442606 A2	21-08-1991
		JP H04212390 A	03-08-1992
		US 5094479 A	10-03-1992
DE 9407730	U1 21-07-1994	GEEN	
JP S54164673	U 19-11-1979	GEEN	
WO 2011101220	A1 25-08-2011	GEEN	
US 4190182	A 26-02-1980	GEEN	
US 2007235478	A1 11-10-2007	CA 2551139 A1	11-08-2005
		EP 1699313 A1	13-09-2006
		FR 2864434 A1	01-07-2005
		US 2007235478 A1	11-10-2007
		WO 2005072558 A1	11-08-2005
DE 20312463	U1 11-12-2003	DE 20312463 U1	11-12-2003
		WO 2005016065 A1	24-02-2005
DE 9016701	U1 14-03-1991	GEEN	
DE 202010010309	U1 25-11-2010	AT 11782 U1	15-05-2011
		DE 202010010309 U1	25-11-2010

WRITTEN OPINION

File No.	Filing date *(day/month/year)*	Priority date *(day/month/year)*	Application No.
SN83324	08.02.2023		NL2034113

International Patent Classification (IPC)
INV. A63C11/02 A63C11/22 G10K5/00 A47F7/00 A45B1/00 A45F5/02

Applicant
Ruben Lévi Boelhouwers

This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the application
- ☒ Box No. VIII Certain observations on the application

	Examiner
	Endrizzi, Silvio

Application number

WRITTEN OPINION

NL2034113

Box No. I Basis of this opinion

1. This opinion has been established on the basis of the latest set of claims filed before the start of the search.

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the application, this opinion has been established on the basis of a sequence listing:

   a. ☐ forming part of the application as filed.

   b. ☐ furnished subsequent to the filing date for the purposes of search,

      ☐ accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the application as filed.

3. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the application, this opinion has been established to the extent that a meaningful opinion could be formed without a WIPO Standard ST.26 compliant sequence listing.

4. Additional comments:

Box No. V Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty	Yes:	Claims	17, 21
	No:	Claims	1-16, 18-20, 22, 23
Inventive step	Yes:	Claims	21
	No:	Claims	1-20, 22, 23
Industrial applicability	Yes:	Claims	1-23
	No:	Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the application

see separate sheet

Box No. VIII Certain observations on the application

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 Reference is made to the following documents:

D1 US 5 094 479 A (SHIELDS MICHAEL P [US]) 10 maart 1992 (1992-03-10)

D2 DE 94 07 730 U1 (OBERSCHELP BEATE [DE]) 21 juli 1994 (1994-07-21)

D3 JP S54 164673 U 19 november 1979 (1979-11-19)

D4 WO 2011/101220 A1 (ZENCOM TELECOMM LTD [GB]; PITTARD JAMES [GB] ET AL.) 25 augustus 2011 (2011-08-25)

D5 US 4 190 182 A (HICKEY DANA [US]) 26 februari 1980 (1980-02-26)

D6 US 2007/235478 A1 (GUIDETTI PASCAL [FR]) 11 oktober 2007 (2007-10-11)

D7 DE 203 12 463 U1 (EBERHARD GOEBEL GMBH & CO [DE]) 11 december 2003 (2003-12-11)

D8 DE 90 16 701 U1 14 maart 1991 (1991-03-14)

D9 DE 20 2010 010309 U1 (KOMPERDELL SPORTARTIKEL GES M B H [AT]) 25 november 2010 (2010-11-25)

2 The present application does not meet the criteria of patentability, because the subject-matter of claims 1, 15 and 22 is not new.

2.1 D1 discloses:

> Een samenstel (figs 1-6) omvattende twee ski's (figs 1-6; 50) en twee skistokken (figs 1-6; 34), het samenstel (figs 1-6) verder omvattende een verbindingselement (figs 1-6; 10) welke de ski's (figs 1-6; 50) en de skistokken (figs 1-6; 34) koppelt, het verbindingselement (figs 1-6; 10)

omvattende:
- een verbindingselementlichaam (figs 1-6; 12);
- een skiverbindingsmodule (figs 1-6; 18) welke de twee ski's (figs 1-6; 50) met het verbindingselementlichaam (figs 1-6; 22) verbindt;
- een skistokverbindingsmodule (figs 1-6; 14) welke de twee skistokken (figs 1-6; 34) met het verbindingselementlichaam (figs 1-6; 12) verbindt; waarin de ski's (figs 1-6; 50) en de skistokken (figs 1-6; 34) op tegenoverstaande zijdes (see for ex. figs 1, 4-5) van het verbindingselement (figs 1-6; 10) gepositioneerd zijn.

The subject-matter of claim 1 is therefore not new.

2.2 Please note that documents D2-D5 also disclose all the features of independent claim 1.

2.3 D1 further discloses a:

Verbindingselement (figs 1-6; 10) voor verbinden van twee skistokken (figs 1-6; 34) en twee ski's (figs 1-6; 50), het verbindingselement (figs 1-6; 10) omvattende:
- een verbindingselementlichaam (figs 1-6; 12);
- een skiverbindingsmodule (figs 1-6; 18) ingericht voor verbinden van de twee ski's (figs 1-6; 50) met het verbindingselementlichaam (figs 1-6; 12);
- een skistokverbindingsmodule (figs 1-6; 14) ingericht voor verbinden van de twee skistokken (figs 1-6; 34) met het verbindingselementlichaam (figs 1-6; 12); waarin de skiverbindingsmodule (figs 1-6; 18) en de skistokverbindingsmodule (figs 1-6; 14) in tegenoverstelde richtingen zijn gericht (see for ex. figs 1, 4-5).

The subject-matter of claim 15 is therefore not new.

2.4 Please note that documents D2-D5 also disclose all the features of independent claim 15.

2.5 D6 discloses:

Samenstel (figs 1-10) omvattende een rugzak (figs 1-10; 3) en twee wandelstokken (figs 1-10; 22; please see also [0040], [0059] and [0060]), het samenstel (figs 1-10) omvattende een rugzak (figs 1-10; 3), twee wandelstokken (figs 1-10; 22; [0059] and [0060]), en een verbindingselement (figs 1-10; 1) welke de wandelstokken (figs 1-10; 22; see also [0060]) met de rugzak (figs 1-10; 3) verbindt, het verbindingselement (figs 1-10; 1) omvattende:
- een verbindingselementlichaam (figs 1-10; 2);
- een wandelstokverbindingsmodule (figs 1-10; 10) welke de twee

wandelstokken (figs 1-10; 22; see also [0060]) met het verbindingselementlichaam (figs 1-10; 2) verbindt;
- een rugzakverbindingsmodule (figs 1-10; 4) welke de rugzak (figs 1-10; 3) aan het verbindingselementlichaam (figs 1-10; 2) verbindt; waarin de rugzak (figs 1-10; 3) en de wandelstokken (figs 1-10; 22; see also [0060]) gepositioneerd zijn op tegenovergestelde zijdes van het verbindingselement (figs 1-10; 1), en een flexibele strip (figs 1-10; 5), zoals een riem, door een passage (figs 1-10; 4) of tunnel door het verbindingselementlichaam (figs 1-10; 2) heen steekt.

The subject-matter of claim 22 is therefore not new.

2.6 Please note that document D7 also discloses all the features of independent claim 22.

2.7 It is also considered that the present application does not meet the criteria of patentability, because the subject-matter of claim 22 does not involve an inventive step, with respect to D8 combined with the teachings of D9.

3 Dependent claims 2-14, 16-20 and 22 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of novelty and/or inventive step:

- for claims 2-4: see for ex. fig.1 on D1;

- for claims 5-6, 16-17: see for ex. (28) in D1;

- for claims 7-9, 18-20: see for ex. (12), (18), (28), (44), (48) and (62) in figs 4-5 of D1;

- for claims 10-12: see for ex. (32) in D1;

- for claim 13: see for ex. (16) in D4 or (32) in D5;

- for claim 14: see for ex. (18) in D1;

-for claim 22: see for ex. (10) in D1.

3.1 The combination of the features of dependent claim 21 is neither known from, nor rendered obvious by, the available prior art.

4 Claims 1-22 have industrial applicability in the field of connecting elements for skies and sticks.

Re Item VII

Certain defects in the application

5 In order to increase the intelligibility of the claims, all the features of all the claims should be provided with reference signs placed in parentheses.

Re Item VIII

Certain observations on the application

6 Claims 1, 15 and 22 have been drafted as separate independent claims. This introduces a lack of conciseness. Claim 15 should be renumbered as new claim 1 and claims 1 and 22 should be reformulated as dependent claims.

6.1 The scope of protection of claim 23 is unclear since it refers to just some of the features of claims 1 and 22.