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(54) **GLOVE FOR VISUALIZING A WRIST INSTRUMENT**

(57) A glove is described which has an opening at a cuff which allows the user to visualise a wrist instrument such as a watch. The opening is delimited by an elastic drawstring capable of wrapping the display of a wrist instrument.

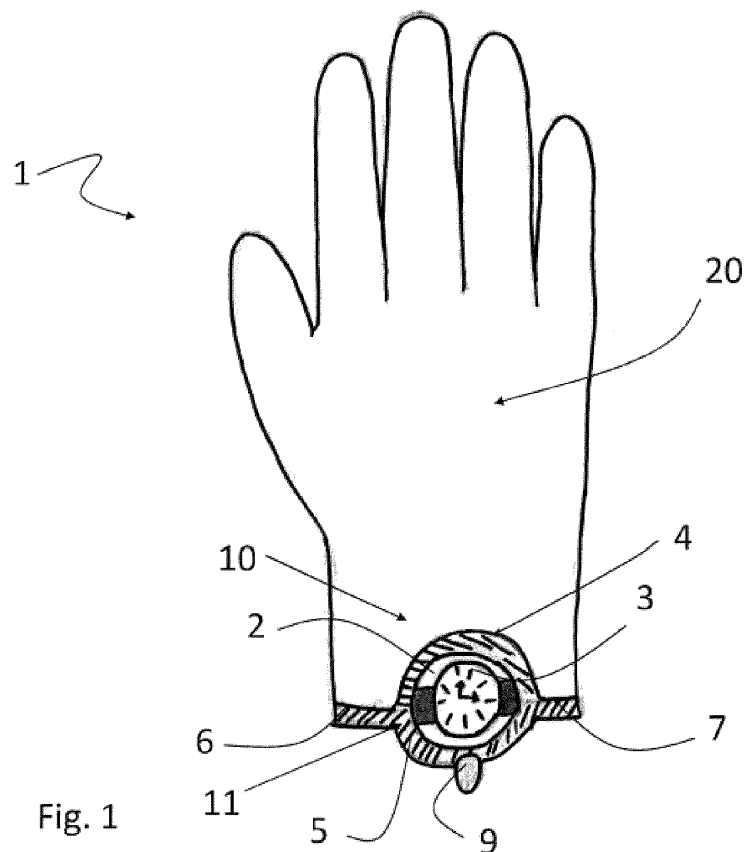


Fig. 1

Description

Field of application

[0001] The present invention relates to a glove, in particular the present invention relates to a glove having an opening at one cuff which allows the user to visualise a wrist instrument.

Prior art

[0002] A major problem faced by people who wear gloves is how to visualise the display of a wrist instrument such as a watch, altimeter or heart rate monitor without having to remove the glove itself.

[0003] This need is particularly felt by athletes who need to use gloves as protective clothing but also need to be able to consult wrist instruments such as stopwatches in order to monitor sports performance.

[0004] Typically, in order to visualise the display of a wrist instrument when wearing a glove, it is necessary to at least partially remove the glove. This operation is annoying, especially in conditions of low outside temperature, and can be difficult if the user's hands are engaged for example with ski poles.

[0005] To at least partially overcome this problem, gloves have been proposed which have an opening arranged on the dorsal area of the glove through which the user can visualise the instrument display.

[0006] These gloves are essentially made by removing a flap from the dorsal surface of the glove near the wrist joint. Unfortunately, these gloves can only be used with a small number of devices as said opening is typically made in one size. Consequently, only devices with a display size comparable to the size of the opening itself can be accommodated therein.

[0007] Typically, when the display is smaller than the opening, the watch may come out from the opening, possibly positioning itself below a dorsal area of the glove in an area of non-visibility or reduced visibility, thus making it very difficult or even impossible to read the display.

[0008] In addition, if the instrument display is smaller than the opening itself, there will inevitably be clearance or gaps between the display and the edges of the opening. These gaps can increase heat loss to the outside and can compromise the waterproofness of the glove therefore posing serious limits to the use of the glove on rainy and/or particularly cold days.

[0009] The correct coupling of the glove opening with the wrist instrument display is a technical problem which is particularly felt nowadays especially following the development of smartwatches which take on very different shapes and sizes depending on the watch model and brand.

[0010] Therefore in the light of the disadvantages of the prior known, it is desirable to find a glove which allows the user to visualise a wrist instrument without requiring the action of having to remove the glove and which is

capable to adapt to the shape and size of the wrist instrument display.

Summary of the invention

[0011] The object of the present invention is to make a glove adapted to overcome the drawbacks of the known art. Such an object is achieved with a glove in accordance with claim 1.

[0012] The glove comprises:

- a cuff;
- an opening in the dorsal area of the cuff, said opening is large enough to contain the display of a wrist instrument;
- a drawstring having a first end and a second end sewn onto the dorsal area of the cuff and a central unsewn area on said dorsal (central) area of the cuff;
- a cut portion obtained in the dorsal area of the cuff;

wherein:

said opening is delimited by said elastic drawstring and by said cut-out.

[0013] Another aspect of the present invention is to provide a glove with a very simple structure, of high durability, easy to wear and of competitive production cost.

[0014] Advantageously, the presence of an elastic drawstring sewn onto the dorsal surface of the glove gives to the glove the ability to adapt to the most varied shapes and sizes of displays by virtue of its elasticity. In particular, the elastic drawstring when placed around the display is capable of imparting a compression force on the display itself, thus preventing the latter from escaping from the opening.

[0015] Advantageously, the elastic drawstring being of limited size with respect to the glove can be made of a high-quality material which is particularly resistant to breakage caused for example by excessive pulling imparted by user on the strap.

[0016] Even more advantageously since the cuff is sewn only on the dorsal surface of the glove and there are no seams on the palm area, the sensation of discomfort caused by friction and rubbing between the seam and the skin can be limited or even prevented.

Preferred embodiments

[0017] In accordance with a particularly preferred embodiment of the present invention, the glove can be made of a very robust fabric which is resistant to sunlight, washing and perspiration and durable over time.

[0018] Preferably the glove is made of a technical fabric designed with technological materials to withstand demanding conditions such as high-altitude weather, or to be used during competitive or amateur sporting activities.

[0019] According to a particularly preferred embodiment the elastic drawstring is made of a synthetic fibre possibly coupled to an elastomer.

[0020] The elastic drawstring can have thickness ranging from a few mm to a few centimetres depending on the application of use of the glove.

[0021] In particular, a cycling glove could have a very small cuff area and a very small elastic drawstring whereas a winter motorbike glove could have a cuff area which is more extensive at the wrist joint and therefore characterized by a larger drawstring.

[0022] Preferably, the synthetic fibre is made of polyester or polyamide or polypropylene or acrylic or obtained from a mixture of the above.

[0023] In accordance with a particularly preferred embodiment of the present invention, the elastomer comprises a polyurethane polymer preferably of the elastam, spandex or lycra type.

[0024] Advantageously the addition of an elastomer imparts a high degree of elasticity and adequate mechanical tensile strength so that the watch display is wrapped and brought under compression and prevents its escaping from the opening without however causing excessive tension or pressure on the watch.

[0025] In particular, the elastomer is capable of conferring a certain elasticity to the drawstring so that it can be stretched when subjected to pulling and can then return to its rest position several times without any deformations remaining when no stress is applied.

[0026] In accordance with an alternative embodiment of the present invention the glove could be made of textile fibre alone or without the aid of an elastomer. In this case the textile fibre could be treated through a texturing process adapted to give the fibre its own elasticity.

[0027] Additionally, the glove could be made of or covered with waterproof substrates.

[0028] In a particularly preferred embodiment, the cut portion is delimited by a strip or ribbon applied in high frequency and arranged in a crescent shape.

[0029] Preferably said strip applied in high frequency has a hatch line arranged along the centreline of said strip. Advantageously, said hatch line acts as a guide allowing an accurate cutting or removal of said portion from the dorsal area of the cuff. The presence of the cutting area makes the glove extremely adaptable for use with any wrist device.

[0030] Preferably said adhesive strip is made of polyurethane and is applied using production methods well known to those skilled in the art.

[0031] Merely by way of example, but not limited to the scope of protection of the present invention, the strip impregnated with an adhesive could be applied hot with the aid of a roller capable of imparting a certain temperature and pressure ratio between the fabric of the glove and the strip itself thereby "activating" the adhesion between the two substrates.

[0032] According to a particularly preferred embodiment the elastic drawstring comprises a puller configured

to pull the drawstring and thereby facilitate the insertion of the display of said wrist instrument within said opening.

[0033] Preferably said opening is configured for viewing a watch, preferably of the smartwatch type.

[0034] The glove can comprise a further layer of fabric sewn onto the palm surface, said fabric layer can be used to increase the roughness of the palm surface and thus facilitate gripping and holding of objects. The seams of the fabric layer can be made close to the side surfaces of the fingers in order to improve the fit of the glove.

[0035] In accordance with a particularly preferred embodiment of the present invention, the glove can comprise a first and second padding area on the palm area of the glove. Preferably, said first padding area is located near the upper palm arch and the second padding area can be arranged near the scaphoid bone.

[0036] Advantageously, the padded area can be used to improve grip and also make the sensation of hand contact with an object more pleasant. Additionally, the padding area can be used to improve the mechanical strength of the glove.

[0037] In accordance with a particularly preferred embodiment the glove can comprise a second puller lying in the palm area at the cuff to improve the wearability of the glove.

[0038] The glove could further comprise a pocket positioned on the dorsal area of the glove. Said pocket could be used to hold cards, ski passes or other small items, making the glove multifunctional.

[0039] In accordance with another embodiment of the present invention the pocket can comprise a bag-shaped cover partially removable from said pocket and capable of being fitted over said glove. Said cover can be made of a technical fabric which is resistant to moisture, to wind and capable of limiting heat dissipation outside the glove.

[0040] In accordance with a particular preferred embodiment of the present invention one or more fingertips of the fingers of the glove are made of or coated with one or more conductive substrates which allow the user to interact with a touchscreen without having to remove the glove.

[0041] Preferably, such conductive substrates comprise carbon microtubes, or silver microfibres or microfibres made of polyesters or polyamides, or alternatively polyurethane or polyvinyl chloride foams or layers mixed with the above.

Figures

[0042]

Fig. 1 schematically shows the dorsal area of a right glove.

Fig. 2 schematically shows the dorsal area of a left glove.

Fig. 3 schematically shows the palm area of a right

glove.

Fig. 4 schematically shows the palm area of a right glove in accordance with another embodiment of the present invention.

Detailed description of the figures

[0043] Fig. 1 shows a right glove in accordance with an embodiment of the present invention. The glove 1 comprises four fingers, a thumb, a dorsal area 20 and a palm area 21.

[0044] The glove ends with a sleeve-shaped cuff 10 which extends over the wrist joint when the glove is worn.

[0045] In Fig. 1 it is possible to appreciate the presence of an opening 2 obtained in the dorsal area of the cuff, this opening is arranged to contain the display 3 of a watch.

[0046] The glove 1 further comprises a pulled, elastic drawstring 11 having a first end 7 and a second end 6 sewn onto the dorsal area of the cuff 10 and a central area 5 not sewn onto said dorsal area.

[0047] The glove further comprises a strip 4 applied in high frequency delimiting said opening 2 and a puller 9 arranged on the elastic drawstring to pull the elastic drawstring and facilitate the insertion of the wrist instrument display within the opening 2.

[0048] Fig. 2 shows the dorsal area of a left glove where it is possible to appreciate the presence of the cut portion 8 arranged in the central area of the cuff 10. Said cut portion is partially removed along the hatch line 12 coinciding with the centreline of the portion of the strip 4 applied in high frequency.

[0049] In Fig. 2 it is also possible to appreciate the presence of the elastic drawstring in a resting position (i.e. not pulled as in the previous embodiment).

[0050] Fig. 3 shows the palm area 21 of a right glove. The figure shows the presence of a first padding area 13 and of a second padding area 14 and the presence of a second puller 15.

[0051] Fig. 4 shows the palm area of a right glove in accordance with an alternative embodiment of the present invention.

[0052] The glove also has an opening 2 for the insertion of the wrist instrument and has an elastic drawstring 11 sewn onto the dorsal area of the cuff near the side ends 6 and 7.

[0053] In the figure it can be appreciated that the elastic drawstring has a greater hem 30 and a greater extension than the drawstring of the previous configuration.

Claims

1. Glove (1) comprising:

a cuff (10);
an opening (2) obtained in the dorsal area of the

cuff, said opening being of a size such as to accommodate the display (3) of a wrist instrument; an elastic drawstring (11) having a first end (7) and a second end (6) sewn onto the dorsal area of the cuff (10) and a central area (5) not sewn onto said dorsal area of the cuff; a cut portion (8) obtained in the dorsal area of the cuff (10),
wherein:
said opening (2) is delimited by said elastic drawstring (11) and by said cut portion (8).

2. Glove (1) according to claim 1, wherein the elastic drawstring (11) is made of a synthetic fibre possibly coupled to an elastomer.

3. Glove (1) according to claim 2, wherein said synthetic fibre is made of polyester or polyamide or polypropylene or acrylic or by a mixture of the above.

4. Glove according to claim 2 or 3, wherein said elastomer comprises a polyurethane polymer preferably of the elastam, spandex or lycra type.

5. Glove (1) according to any one of the preceding claims, wherein said cut portion (8) is delimited by a strip or ribbon (4) applied in high frequency and arranged in a crescent shape, and wherein said strip (4) has a hatch line (12) along the centreline.

6. Glove (1) according to any one of the preceding claims, wherein said cut portion (8) is removable by a user by cutting or tearing along said hatch line (12).

7. Glove (1) according to any one of the preceding claims, wherein the elastic drawstring (11) comprises a puller (9) configured to pull the drawstring and facilitate the insertion of the display of said wrist instrument within said opening (2).

8. Glove (1) according to any one of the preceding claims, wherein said opening (2) is configured for viewing the display of a watch, preferably of the smartwatch type.

9. Glove according to any one of the preceding claims, wherein the glove comprises a first padding area (13) and a second padding area (14) arranged on the palm area of the glove.

10. Glove according to any one of the preceding claims, wherein the glove comprises a second puller (15) lying in the palm area of the glove in correspondence with the cuff.

11. Glove according to any one of the preceding claims, wherein the glove further comprises a pocket located on the dorsal area of the glove.

12. Glove according to claim 11, wherein said pocket further comprises a cover partially removable from said pocket and wearable on said glove.
13. Glove according to any one of the preceding claims, wherein one or more fingertips of the fingers of the glove are made of or covered with one or more conductive substrates allowing to interact with a touch-screen.
14. Glove according to claim 13, wherein said conductive substrates comprise carbon microtubes or silver microfibres or microfibres made of polyesters or polyamides or alternatively foams or layers of polyurethane or polyvinyl chloride added with the above.

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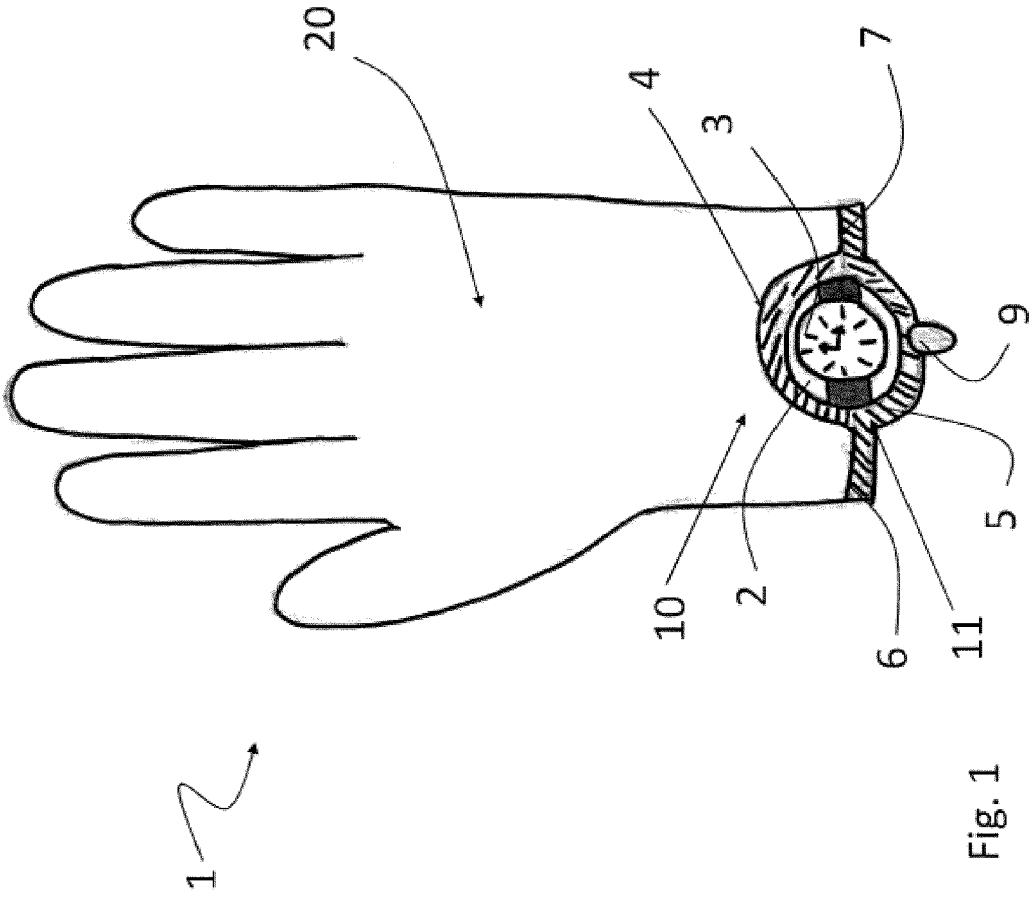
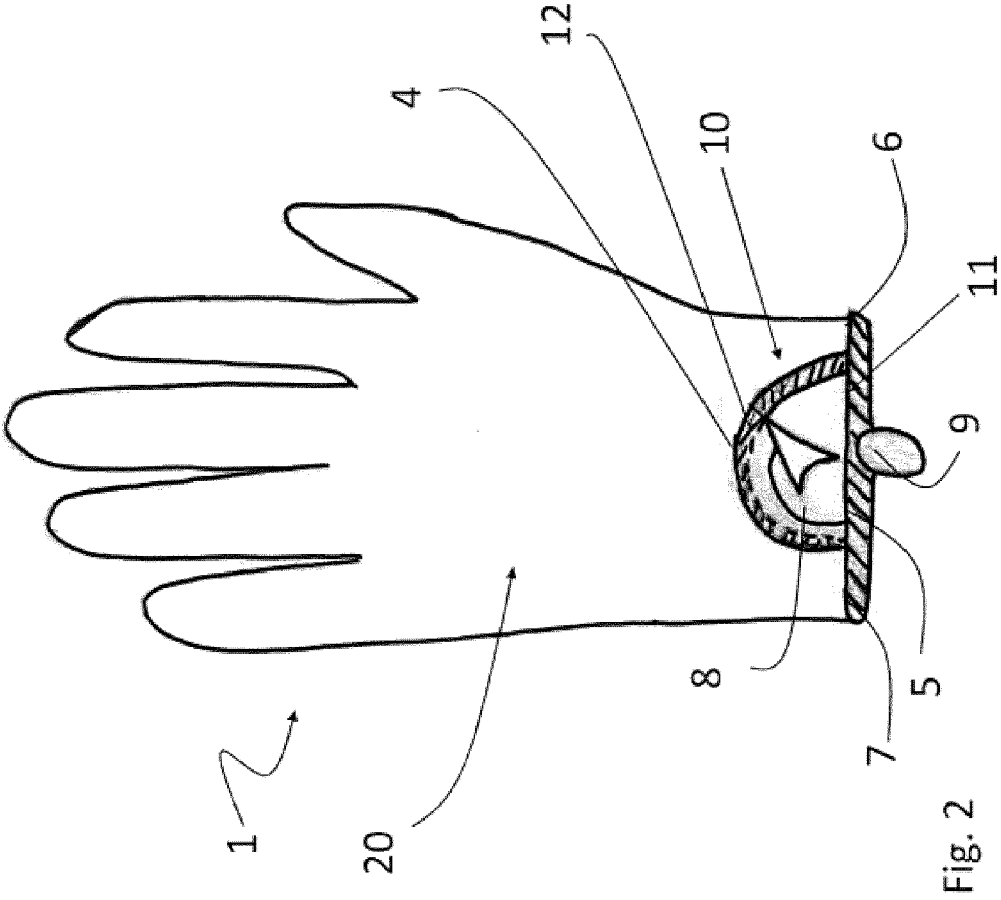


Fig. 1



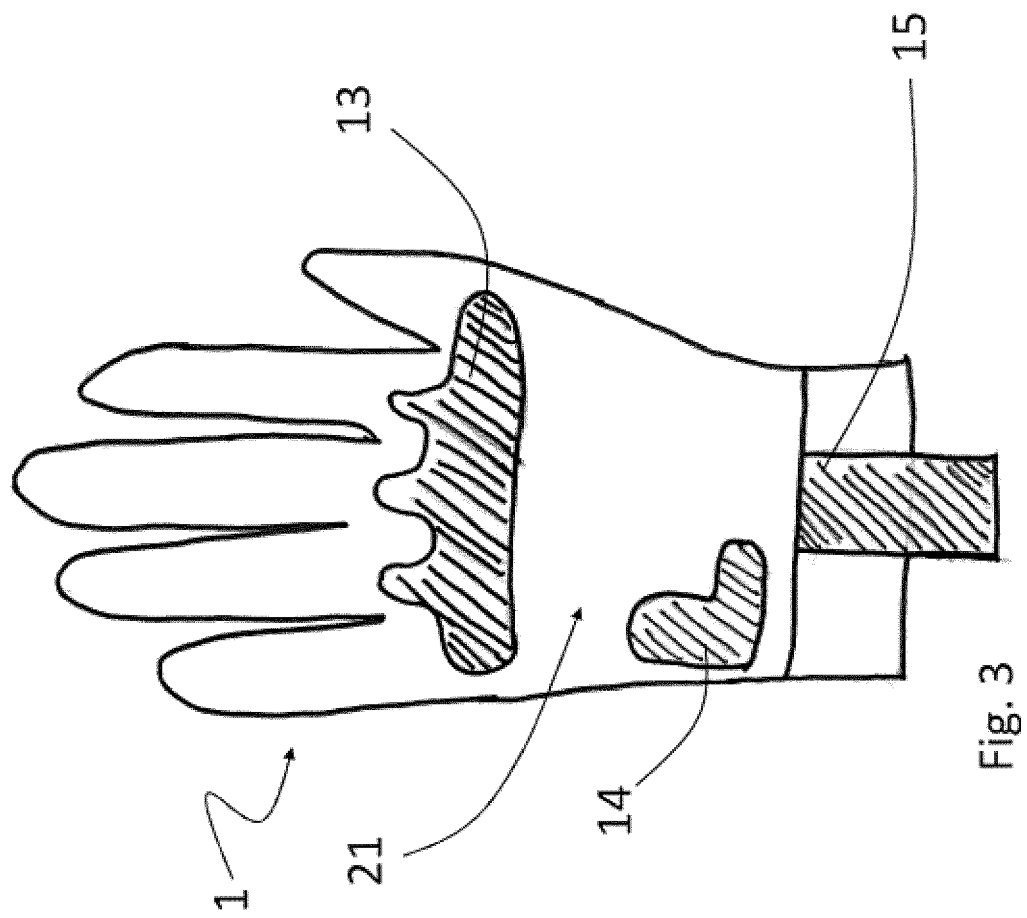
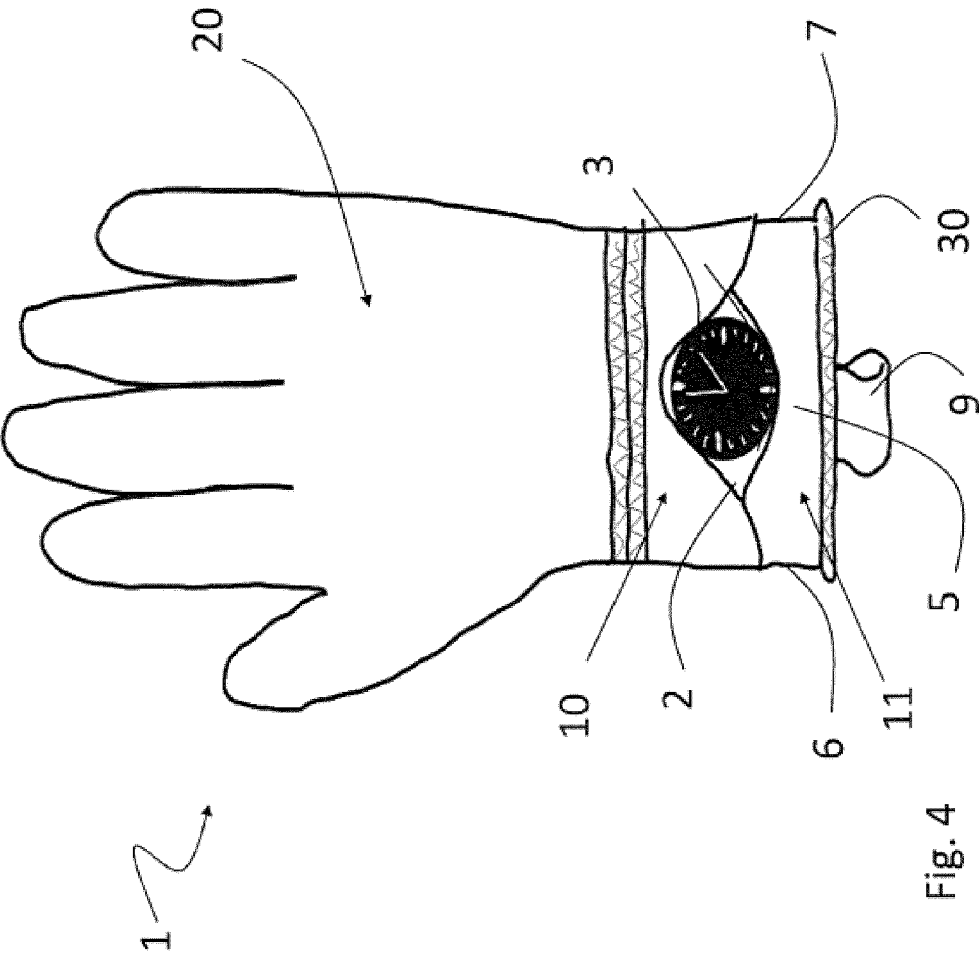


Fig. 3





EUROPEAN SEARCH REPORT

Application Number

EP 22 16 4933

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EPO FORM 1503 03.82 (P04C01)

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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A	DE 10 2014 101254 A1 (W & R GMBH [DE]) 6 August 2015 (2015-08-06) * figure 1 *	1-14	
A	US 10 117 472 B2 (FIT FOUR LLC [US]) 6 November 2018 (2018-11-06) * figures 1-3 *	1-14	
			TECHNICAL FIELDS SEARCHED (IPC)
			A41D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 25 August 2022	Examiner van Voorst, Frank
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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 22 16 4933

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25-08-2022

10	Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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