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(71) Applicant: **Autoliv Development AB**
447 83 Vårgårda (SE)

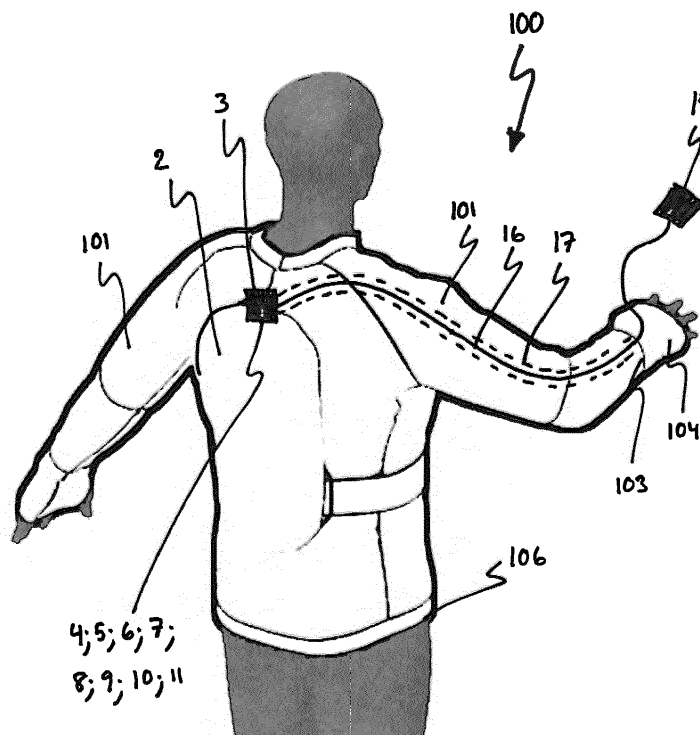
(72) Inventor: **Mucchiano-Ahlstrom, Alexander**
447 37 VÅRGÅRDA (SE)

(74) Representative: **AWA Sweden AB**
Box 5117
200 71 Malmö (SE)

(54) AIRBAG GARMENT AND THE USE OF SUCH AIRBAG GARMENT

(57) An airbag garment (100) is provided. The airbag garment (100) comprises an inflatable airbag (2), a gas generator (3) arranged in communication with the inflatable airbag (2), a digital system (8) operable connected to the gas generator (3), and a feedback unit (15) being configured to indicate and/or control functionality of the digital system (8). The feedback unit (15) is attached to

the airbag garment (100) via an attachment member. The attachment member has a free length allowing the feedback unit (15) to be detachably connected to the airbag garment (100) itself, to another garment (200) to be worn together with the airbag garment or across a user's hand, in a position remote from the digital system (8).

**Fig. 1**

Description

Technical field

[0001] The present invention refers to an airbag garment and the use of such airbag garment.

Technical background

[0002] Airbag garments comprising an airbag that is inflatable by means of an integrated gas generator in the event of a detected accident are well known in the art. The typical user of such airbag garment is a cyclist, a motor cyclist, or a construction worker. It can also be a person with reduced balance capability. To be comfortable during its normal use, which in fact is a prerequisite for the airbag garment to be used as intended, it is essential that the garment is not perceived as being heavy or bulky. It should also be allowed to be worn together with an outer garment, such as a jacket or shirt, but also with gloves if necessary. When worn underneath an outer garment, the airbag garment will be hidden from the user's sight. This means that there is a problem of providing a visual, passive, communication between the airbag garment and the user. There is also a problem of providing an operative, active, communication between the airbag garment and the user. Non-limiting examples of a visual, passive, communication is battery status and if the airbag garment is powered or not, i.e., switched on or off. This can by way of example be made by one or more LEDs or via a display. A non-limiting example of an operative, active, communication, is the possibility for the user to switch the power on or off. There is hence a need to provide a more user-friendly airbag garment that is easy to use no matter if it is used as a stand-alone airbag garment or under an outer garment.

Summary

[0003] It is an object of the present invention to provide an airbag garment that allows an improved interaction and communication with the user, no matter if it is a passive or active communication, or a combination thereof.

[0004] Another object is to provide an airbag garment that is easy to use, no matter if it used as a stand-alone airbag garment or if used together with an outer garment.

[0005] Another object is to provide an airbag garment that is compatible with gloves. These and other objects that will be apparent from the following summary and description are achieved by an airbag garment, said airbag garment comprising an inflatable airbag, a gas generator arranged in communication with the inflatable airbag, a digital system operable connected to the gas generator, and a feedback unit being configured to indicate and/or control functionality of the digital system, said feedback unit being attached to the airbag garment via an attachment member, said attachment member

having a free length allowing the feedback unit to be detachably connected to the airbag garment itself, to another garment to be worn together with the airbag garment or across a user's hand, in a position remote from the digital system.

[0006] The attachment member may be one or more of a communication wire, a webbing or a cord.

[0007] The attachment member may be a communication wire, and the feedback unit may be operable connected to the digital system via the communication wire.

[0008] In the context of the present invention, the term "*free length*" is to be understood as the length of the webbing or cord as measured between its connection points to the feedback unit and the airbag garment. In case of a communication wire, it is to be understood as the length of the communication wire as measured between its connection points to the feedback unit and the digital system respectively.

[0009] By arranging a thus attached feedback unit, the feedback unit may be detachable arranged on the user's discretion in a suitable position where the user has a visual access to the feedback unit. The desired position may vary depending on a number of different parameters. As non-limiting examples, the desired position may vary depending on if the airbag garment is the only worn garment or if it is worn together with another garment, if the airbag garment or the another garment has long sleeves or not, the length of such sleeves, and also if the user is wearing gloves or not.

[0010] Further, since the feedback unit is connected via an attachment member, there is no risk of the feedback unit being lost.

[0011] Since the feedback unit is attached to the airbag garment, the user of the airbag garment will have an easy access to the system status when the airbag garment is worn and also no matter if the airbag garment is worn alone or in combination with another garment. The airbag garment may by way of example be configured as a jacket, a shirt or an overall, but also as a vest or a harness.

[0012] Depending on the type of feedback unit, the user can either be passively presented with information from the digital system, or be allowed to actively operate the digital system. This includes the gas generator that is connected to the digital system.

[0013] In the context of the invention, the term "*passive*" is to be understood as a visual, tactile or audial communication from the digital system to the feedback unit. It can also be a combination of two or more of a visual, tactile, and audial communication. A non-limiting example of a visual communication is one or more LEDs or an LCD indicating battery status. A non-limiting example of a tactile communication is a vibrator indicating low power of the battery. A non-limiting example of an audial communication is a speaker indicating a low power of the battery.

[0014] In the context of the invention, the term "*active*", is to be understood as an operable communication, where the user of the airbag garment is allowed to ac-

tively set the digital system. As a non-limiting example this may be turning the power on or off.

[0015] The communication wire may be routed in a channel in the airbag garment, said channel extending from a position in the airbag garment adjacent the position of the digital system to a hem or to a free end of a sleeve of the airbag garment. It is to be understood that also a cord may be routed in a channel. The channel may be a sewn channel or a channel that is mounted to a surface layer of the airbag garment, e.g., by welding or adhesive. The channel may be arranged on an exterior surface layer of the airbag garment or on an inner surface layer, such as an inner liner of the garment. The free length of the communication wire and/or cord preferably exceeds the length of the channel.

[0016] The feedback unit may be configured to be detachably connected to the airbag garment itself or to the another garment by a magnetic coupling arrangement or by a mechanical coupling arrangement.

[0017] The magnetic coupling arrangement comprises a ferromagnetic body and a magnetic target surface. The ferromagnetic body may be attached to the feedback unit and the magnetic target surface may be arranged to the airbag garment and/or the other garment. Alternatively, the magnetic target surface may be attached to the feedback unit and the ferromagnetic body may be arranged to the airbag garment and/or the other garment. The magnetic target surface may be configured to be removably attached to its intended position. The magnetic target surface may be supported by e.g., a clip.

[0018] The mechanical coupling arrangement may, as a non-limiting example be the combination of a complementary female and male body, such as a snap fastener, also known as a popper. As another example, the mechanical coupling arrangement may be a clip.

[0019] The feedback unit may be supported by a clip, said clip being configured to be detachably connected to the airbag garment or to the another garment.

[0020] The feedback unit may be configured to be detachably connected to a band, said band extending away from a hem of the airbag garment or from a sleeve of the airbag garment. The free end may be a cuff of the airbag garment. The band may be an extension of a cuff.

[0021] The band may have a length allowing it to be wrapped across or encircle an arm or the back of a hand of a user of the airbag garment.

[0022] The airbag garment may comprise a sleeve with a cuff and a wrist unit connected to the cuff, and the band may be arranged to extend away from an interface between the cuff and the wrist unit.

[0023] The wrist unit may comprise one or more openings for a user's fingers. The wrist unit may by way of example have one opening for the thumb and one opening for the four fingers. In another embodiment, the wrist unit may comprise one opening for the thumb and one opening for each finger. In yet another embodiment, the wrist unit may comprise one single opening for both the thumb and the fingers.

[0024] The airbag garment may be a shirt, a jacket, a vest, an overall or a harness.

[0025] The feedback unit may comprise one or more of a digital display, at least one LED, a vibrator, a speaker, and at least one actuator. The digital display may be an LCD or a touch screen. The actuator may as a non-limiting example be a button or a scroll wheel.

[0026] The digital system may comprise one or more of a processor, a battery, a battery sensor, a sensor configured to indicate operational status of the gas generator, an actuator of the gas generator, an accelerometer, and a gyro sensor.

[0027] According to another aspect, the invention refers to the use of an airbag garment according to any of claims 1-12.

Brief description of the drawings

[0028] The invention will be described in detail with reference to the schematic drawings.

Fig. 1 discloses one embodiment of an airbag garment.

Fig. 2A discloses highly schematically a magnetic coupling arrangement.

Fig. 2B discloses a feedback unit detachable attached to a wrist unit by means of a magnetic coupling arrangement.

Figs. 2C discloses a feedback unit detachable attached to a wrist unit with the airbag garment worn under a jacket, by means of a magnetic coupling arrangement.

Figs. 2D discloses a feedback unit detachably attached to a glove by means of a magnetic coupling arrangement.

Fig. 3A discloses a feedback unit detachably attached to a garment by means of a magnetic coupling arrangement.

Figs. 3B discloses a feedback unit detachably attached to an outer garment by means of a magnetic coupling arrangement.

Figs. 3C discloses a feedback unit detachably attached to a garment by means of a magnetic coupling arrangement.

Fig. 4A discloses highly schematically a mechanical coupling arrangement.

Fig. 4B discloses a feedback unit detachably attached to a garment by means of a mechanical coupling arrangement.

Fig. 4C discloses a feedback unit detachably attached to a hem of a garment by means of a mechanical coupling arrangement.

Figs. 4D discloses a feedback unit detachably attached to a hem of a garment by means of a mechanical coupling arrangement.

Fig. 5A discloses a feedback unit detachably attached by means of a band.

Figs. 5B discloses a feedback unit detachably at-

tached by means of a band.

Figs. 5C discloses a feedback unit detachably attached by means of a band.

Fig. 6 discloses one example where the feedback unit is attached to an airbag garment via an attachment member in the form of a cord or webbing.

Detailed description

[0029] Now turning to Fig. 1 the overall design of an airbag garment 100 according to the invention is disclosed.

[0030] The airbag garment 100 is disclosed as a shirt with long sleeves 101. The skilled person realises that the airbag garment 100 may by way of example be configured as a jacket, a shirt or an overall, but also as a vest or a harness. A wrist unit 104 is disclosed as being attached to the cuff 102 of the sleeve 101 of the airbag garment 100. The wrist unit 104 may comprise one or more openings for a user's fingers. The wrist unit 104 may by way of example, as in the disclosed embodiment, have one opening for the thumb and one opening for the four fingers. In yet another, non-disclosed embodiment, the wrist unit 104 may comprise one opening for the thumb and one opening for each finger. In yet another, non-disclosed embodiment, the wrist unit 104 may comprise one single opening for both the thumb and the fingers. The skilled person realizes that the wrist unit 104 may be omitted and the sleeve being provided with a cuff 102.

[0031] The airbag garment 100 comprises at least one integrated airbag 2 that is fluidly connected to a gas generator 3. It should be stressed that the airbag 2 is highly schematically disclosed in Fig. 1. The gas generator 3 is preferably arranged in a central position in view of the airbag to thereby allow a uniform inflation thereof. The airbag 2 may by way of example be arranged to deploy and form one or more of a head protection, a chest protection, a back protection and a hip protection of a user.

[0032] In the event of a detected accident, such as a crash or a sudden fall, the gas generator 3 is configured to be activated and generate a gas flow that inflates and thereby deploys the airbag 2. The detection of an accident is made by a digital system 8 that comprises a processor 4 that is connected to one or more sensors, such as an accelerometer 6 and a gyro sensor 7. The digital system 8 typically further comprises a battery 9, a battery sensor 5, a sensor 10 configured to indicate operational status of the gas generator and an actuator 11 of the gas generator 3. The gas generator 3 is operable connected to the digital system 8.

[0033] The airbag 2 may be arranged integrated with the airbag garment 100, e.g., by being folded and/or rolled and contained in a compartment of the garment. The compartment may be formed by welded, sewn or adhesively bonded seams. These seams may be configured to rupture as the airbag is inflated.

[0034] The digital system 8 is operable connected to a

feedback unit 15 that is configured to indicate and/or control functionality of the digital system. The digital system 8 is disclosed as being operable connected to the feedback unit 15 via a communication wire 16 that will be further described below. As will be exemplified below, the feedback unit 15 may alternatively be configured to communicate with the digital system 8 in a wireless manner, e.g., by Bluetooth.

[0035] The feedback unit 15 may be one or more of a digital display, at least one LED, a vibrator, a speaker, and at least one feedback unit actuator. The digital display may be an LCD or a touch screen. The feedback unit actuator may as a non-limiting example be a button or a scroll wheel.

[0036] Depending on the type of feedback unit 15, the user can either be passively presented with information from the digital system 8 or be allowed to actively operate the digital system 8. This includes the gas generator 3 that is connected to the digital system 8.

[0037] In the context of the invention, the term "*passive*" is to be understood as a visual, tactile or audial communication from the digital system 8 to the feedback unit 15. It can also be a combination of two or more of a visual, tactile and audial communication. A non-limiting example of a visual communication is one or more LEDs or an LCD indicating battery status. A non-limiting example of a tactile communication is a vibrator indicating low power of the battery. A non-limiting example of an audial communication is a speaker indicating a low power of the battery.

[0038] In the context of the invention, the term "*active*", is to be understood as an operable communication, where the user of the airbag garment is allowed to actively set the digital system 8. As a non-limiting example this may be turning the power on or off.

[0039] The communication wire 16 has a free length that allows the feedback unit 15 to be detachably connected to the airbag garment 100 itself, to another garment 200 to be worn together with the airbag garment 100 or across a user's hand, in a position remote from the digital system 8. In the context of the present invention, the term "*free length of the communication wire*" is to be understood as the length of the communication wire 16 as measured between its connection points to the feedback unit 15 and to the digital system 8 respectively.

[0040] The feedback unit 15 may be detachable arranged on the user's discretion in any suitable position where the user has a visual access to the feedback unit 15. The desired position may vary depending on a number of different parameters. As non-limiting examples, the desired position may vary depending on if the airbag garment 100 is the only worn garment or if it is worn together with another garment 200, if the airbag garment or the another garment 200 has long sleeves 101 or not, the length of such sleeves 101, and also if the user is wearing gloves 300 or not.

[0041] The communication wire 16 is routed in a channel 17 in the airbag garment 100. The channel 17 extends

from a position in the airbag garment 100 adjacent the position of the digital system 8 to a hem 106 of the airbag garment 100 or to a free end of a sleeve 101 of the airbag garment 100. The hem 106 may be any hem of the airbag garment 100. The hem 106 may by way of example be along a lower frontal or side edge portion of the airbag garment 100, along a frontal zipper in the case the airbag garment 100 is a jacket, or adjacent a cuff 103 of the airbag garment 100 or adjacent a wrist unit 104 of the airbag garment 100.

[0042] The channel 17 is disclosed in Fig. 1 as a channel that extends from the digital system 8 that is disclosed as being arranged in the neck portion of the airbag garment 100 and along one of the long sleeves 101 towards the cuff 103 that is arranged in the end of the sleeve 101. The channel 17 may be a sewn channel or a channel that is mounted to a surface layer of the airbag garment 100, e.g., by welding or adhesive. The channel 17 may be arranged on an exterior surface layer of the airbag garment 100 or on an inner surface layer, such as on an inner liner of the airbag garment 100. The free length of the communication wire 16 preferably exceeds the length of the channel 17.

[0043] A number of different examples of how the feedback unit 15 may be detachably arranged will be given below.

[0044] Now turning to Figs. 2A-2D. The feedback unit 15 may be configured to be detachably connected to the airbag garment 100 itself or to another garment 200 by a magnetic coupling arrangement 20. The magnetic coupling arrangement 20 is highly schematically disclosed in Fig. 2A. The magnetic coupling arrangement 20 comprises a ferromagnetic body 21 and a magnetic target surface 22. The ferromagnetic body 21 may be attached to the feedback unit 15 and the magnetic target surface 22 may be arranged to the airbag garment 100 and/or the other garment 200. Alternatively, the magnetic target surface 22 may be attached to the feedback unit 15 and the ferromagnetic body 21 may be arranged to the airbag garment 100 and/or the other garment 200. The skilled person realizes that the magnetic target surface 22 may be configured to be removably attached to its intended position. This may by way of example be made by the provision of a connector 23, such as a clip or a popper. The latter requires a first connecting part to be arranged on the magnetic target surface 22 and a second connecting part to be arranged on the intended position of the detachable feedback unit, such as at the end of a sleeve 101 or at glove 300.

[0045] Fig. 2B discloses one example where the feedback unit 15 is detachably connected to a wrist unit 104 at a free end of the sleeve 101 of an airbag garment 100 by means of a magnetic coupling arrangement 20. The feedback unit 15 is connected to a digital system 8 via a communication wire 16. The communication wire 16 extends along at least a part of its length in a channel 17 that is formed in the airbag garment 100.

[0046] Fig. 2C discloses one example where the feed-

back unit 15 is detachably connected to a wrist unit 104 at a free end of the sleeve 101 of an airbag garment 100 by means of a magnetic coupling arrangement 20. The feedback unit 15 is connected to a digital system 8 via a communication wire 16. The communication wire 16 extends along at least a part of its length in a channel 17 that is formed in the airbag garment 100. The airbag garment 100 is worn under another garment 200.

[0047] Fig. 2D discloses one example where the feedback unit 15 is detachably connected to the back of a glove 300 that is worn together with an airbag garment 100. The feedback unit 15 is detachably connected to the glove 300 by means of a magnetic coupling arrangement 20. The feedback unit 15 is connected to a digital system 8 via a communication wire 16. The communication wire 16 extends along at least a part of its length in a channel 17 that is formed in the airbag garment 100. The airbag garment 100 is worn under another garment 200.

[0048] Now turning to Figs. 3A-3C, another way of connecting the feedback unit by means of a magnetic coupling arrangement 20 is disclosed. The magnetic coupling arrangement 20 is of the same type that has previously discussed in view of Fig. 2A and reference is made to the previous discussion to avoid undue repetition.

[0049] Fig. 3A discloses one example where the feedback unit 15 is detachably connected to the lower end of the sleeve 101 of the airbag garment 100. The feedback unit 15 is connected to the sleeve 101 which in turn is connected to a wrist unit 104. The feedback unit 15 is connected to the sleeve 101 by means of a magnetic coupling arrangement 20. The feedback unit 15 is connected to a digital system 8 via a communication wire 16. The communication wire 16 extends along at least a part of its length in a channel 17 that is formed in the airbag garment 100 and extends to the exterior via an opening 18 in the interface between the sleeve 101 and the wrist unit 104.

[0050] Fig. 3B discloses one example where the feedback unit 15 is detachably connected to the lower end of a sleeve 201 of another garment 200 that worn outside the airbag garment 100. The feedback unit 15 is connected to the sleeve 201 by means of a magnetic coupling arrangement 200. The feedback unit 15 is connected to a digital system 8 via a communication wire 16. The communication wire 16 extends along at least a part of its length in a channel 17 that is formed in the airbag garment 100.

[0051] Fig. 3C discloses one example where the feedback unit 15 is detachably connected to the sleeve 101; 201 of a garment which can be either the airbag garment 100 or another garment 200 worn outside the airbag garment. A glove 300 is worn together with the airbag garment 100. The feedback unit 15 is detachably connected by means of a magnetic coupling arrangement 200. The feedback unit 15 is connected to a digital system 8 via a communication wire 16. The communication wire 16 extends along at least a part of its length in a channel 17 that is formed in the airbag garment 100.

[0052] Now turning to Figs. 4A-4D, the feedback unit 15 may be configured to be detachably connected to the airbag garment 100 itself or to another garment by a mechanical coupling arrangement 30. The mechanical coupling arrangement 30 may be integrally formed with the feedback unit 15. Alternatively, the feedback unit 15 may be supported by the mechanical coupling arrangement 30.

[0053] The mechanical coupling arrangement is highly schematically disclosed in Fig. 4A in the form of a clip 31. The skilled person realizes that a clip 31 may be designed in a number of ways with remained function. The mechanical coupling arrangement 30 may, as an alternative to a clip, and as a non-limiting example, be the combination of a complementary female and male body, such as a snap fastener, also known as a popper.

[0054] Fig. 4B discloses one example where the feedback unit 15 is detachably connected to the lower end of the sleeve of the airbag garment 100. The feedback unit 15 is connected to a portion of the sleeve 101 which in turn is connected to a wrist unit 104. The feedback unit 15 is connected to the sleeve 101 by means of a clip 30 engaging a loop 105 on the sleeve 101. It is to be understood that the feedback 15 can be connected directly to the sleeve 101. The feedback units 15 is connected to a digital system 8 via a communication wire 16. The communication wire 16 extends along at least a part of its length in a channel 17 that is formed in the airbag garment 100.

[0055] Fig. 4C discloses one example where the feedback unit 15 is detachably connected to a hem 206 of another garment 200 that is worn outside the airbag garment 100 by means of a mechanical coupling arrangement 30 being a clip 31. The feedback unit 15 is connected to a digital system 8 via a communication wire 16. The communication wire 16 extends along at least a part of its length in a channel 17 that is formed in the airbag garment 100.

[0056] Fig. 4D discloses the similar arrangement as that described above in view of Fig. 4C with the difference that the user also wears a glove 300.

[0057] Now turning to Figs. 5A-5C. The feedback unit 15 may be configured to be detachably connected to a band 40 that is configured to be wrapped around the hand or around the arm of the user. The band 40 may be separate from the airbag garment 100. Alternatively, the band 40 may in one end be fixed to the airbag garment 100, or to another garment 200 or to a glove 300. The band 40 may be provided with Velcro® or another suitable locking means to allow easy wrapping, locking and adjustment. The band 40 may be connected to the airbag garment 100 via an attachment member 50 in the form of a strap 41.

[0058] The feedback unit 15 is in Fig. 5A disclosed as being connected to a band 40 that is wrapped around the wrist unit and hence the hand of the user. The feedback unit 15 may be fixedly connected to the band 40. Alternatively, the feedback unit 15 may be configured to be

detachable connected to the band 40 by means of a mechanical connector arrangement or by a magnetic connector arrangement of the types discussed above.

[0059] The feedback unit 15 is connected to a digital system 8 via a communication wire 16. The communication wire 16 extends along at least a part of its length in a channel 17 that is formed in the airbag garment 100. The communication wire 16 can be received in a channel 17 also on the band 40.

[0060] Fig. 5B discloses how the arrangement according to Fig. 5A may be worn together with another garment 200 outside the airbag garment 100.

[0061] Fig. 5C discloses how the arrangement according to Fig. 5A and/or 5B may be worn together with a glove 300.

[0062] Fig. 6 discloses one example where the feedback unit 15 is attached to the airbag garment 100 via an attachment member 50 in the form of a cord 51. The airbag garment 100 is exemplified as a vest. The feedback unit 15 is disclosed as being attached to a hem 106 along a lower end of the airbag garment 100. The cord 51 has a free length that allows the feedback unit 15 to be detachably connected to the airbag garment 100 itself or to another garment 200 to be worn together with the airbag garment, at the user's discretion, in a position remote from the digital system 8. The attachment may be provided for by a mechanical coupling arrangement 30 or by a magnetic coupling arrangement 20 of the types discussed above. The cord 51 extends between the feedback unit 15 and a suitable position on the airbag garment 100. The cord 51 may by way of example extend from a position in or adjacent a hem of the airbag garment 100. The cord 51 is flexible and preferably also elastic. Although the attachment member 50 is disclosed as a cord, the very same principle applies if the attachment member instead of being a cord is a webbing. The webbing may be made of a flexible material and may also be elastic.

[0063] No matter if the attachment member 50 is a cord or a webbing, the feedback unit 15 may be operable connected to the digital system 8 via a communication wire 16. The communication wire 16 may arranged to extend in a channel 17 in the airbag garment 100 as described above. Alternatively, the feedback unit 15 may be configured to communicate with the digital system 8 in a wireless manner, e.g., via Bluetooth.

[0064] By the feedback unit 15 being attached to the airbag garment 100 via an attachment member 50 in the form of a cord or webbing, there is no risk of the feedback unit being lost during use.

[0065] Accordingly and in summary, an airbag garment is provided that comprises an inflatable airbag, a gas generator arranged in communication with the inflatable airbag, a digital system operable connected to the gas generator, and a feedback unit being configured to indicate and/or control functionality of the digital system. The feedback unit is attached to the airbag garment via an attachment member. The attachment member has a

free length allowing the feedback unit to be detachably connected to the airbag garment itself, to another garment to be worn together with the airbag garment or across a user's hand, in a position remote from the digital system. This allows the user of the airbag garment to have an easy access to the system status when the airbag garment is worn. The feedback unit may be positioned at the user's discretion where the user has easy access to the information presented by the feedback unit. This applies no matter if the airbag garment is worn alone or in combination with another garment on top of the airbag garment. Depending on the type of feedback unit, the user can either be passively presented with information from the digital system, or be allowed to actively operate the digital system, e.g., turning it on/off.

[0066] The airbag garment has been disclosed and exemplified as a shirt or jacket with long sleeves. The principle with a channel receiving the communication wire of the feedback unit is equally applicable to other garments, such as a vest, an overall or a harness. Correspondingly, the another garment must not be a shirt, a jacket or a glove, but may be a bag or the like.

Claims

1. An airbag garment, said airbag garment (100) comprising an inflatable airbag (2), a gas generator (3) arranged in communication with the inflatable airbag (2), a digital system (8) operable connected to the gas generator (3), and a feedback unit (15) being configured to indicate and/or control functionality of the digital system (8),
said feedback unit (15) being attached to the airbag garment (100) via an attachment member, said attachment member having a free length allowing the feedback unit (15) to be detachably connected to the airbag garment (100) itself, to another garment (200) to be worn together with the airbag garment or across a user's hand, in a position remote from the digital system (8).
2. An airbag garment of claim 1, wherein said attachment member is one or more of a communication wire, a webbing or a cord.
3. An airbag garment, according to claim 1, wherein attachment member is a communication wire (16), and wherein the feedback unit (15) is operable connected to the digital system (8) via the communication wire (16).
4. An airbag garment according to claim 3, wherein the communication wire (16) is routed in a channel (17) in the airbag garment (100), said channel (17) extending from a position in the airbag garment (100) adjacent the digital system (8) to a hem (106) or to a free end of a sleeve (101) of the airbag garment

(100).

5. An airbag garment according to claim 1, wherein the feedback unit (15) is configured to be detachably connected to the airbag garment itself (100) or to the another garment (200) by a magnetic coupling arrangement (20) or by a mechanical coupling arrangement (30).
6. An airbag garment according to claim 1, wherein the feedback unit (15) is supported by a clip (31), said clip being configured to be detachably connected to the airbag garment (100) or to the another garment (200).
7. An airbag garment according to claim 1, wherein the feedback unit (15) is configured to be detachably connected to a band (40), said band extending away from a hem (106) of the airbag garment (100) or from a sleeve (101) of the airbag garment (100).
8. An airbag garment according to claim 7, wherein said band (40) has a length allowing it to be wrapped across or encircle an arm or the back of a hand of a user of the airbag garment.
9. An airbag garment according to claim 7, wherein the airbag garment (100) comprises a sleeve (101) with a cuff (102) and a wrist unit (104) connected to the cuff (102), and wherein the band (40) is arranged to extend away from an interface between the cuff (102) and the wrist unit (104).
10. An airbag garment according to any of the preceding claims, wherein the airbag garment (100) is a shirt, a jacket, a vest, an overall or a harness.
11. An airbag garment according to any of the preceding claims, wherein the feedback unit (15) comprise one or more of a digital display, at least one LED, a vibrator, a speaker, and at least one actuator.
12. An airbag garment according to any of the preceding claims, wherein the digital system (8) comprises one or more of a processor (4), a battery (9), a battery sensor (5), a sensor configured to indicate operational status of the gas generator (3), an actuator (11) of the gas generator, an accelerometer (6), and a gyro sensor (7).
13. Use of an airbag garment according to any of claims 1-12.

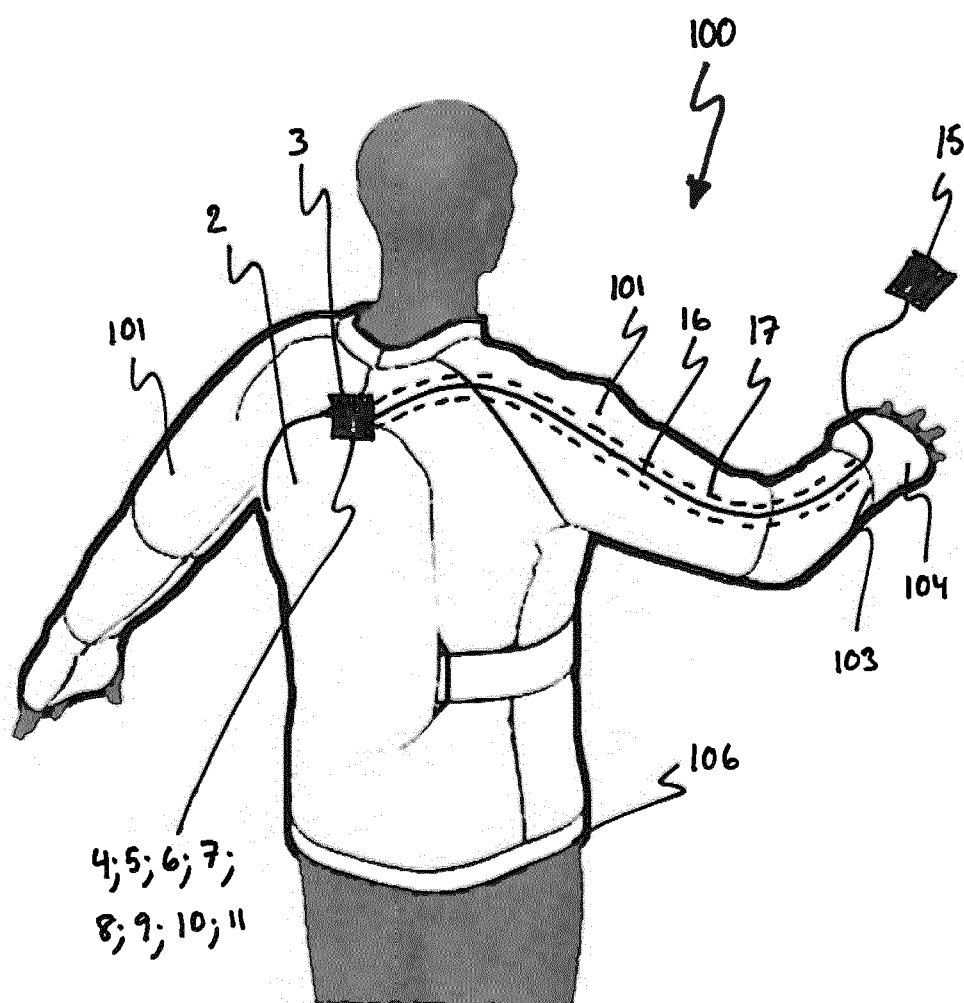


Fig. 1

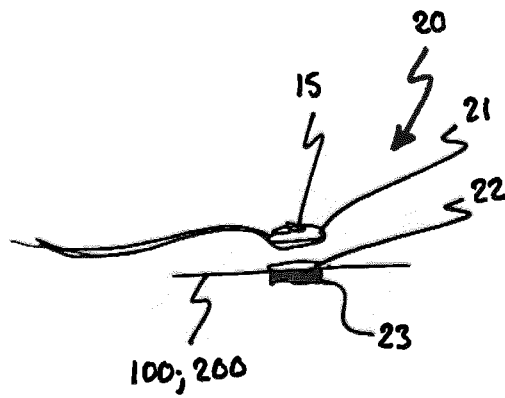


Fig. 2A

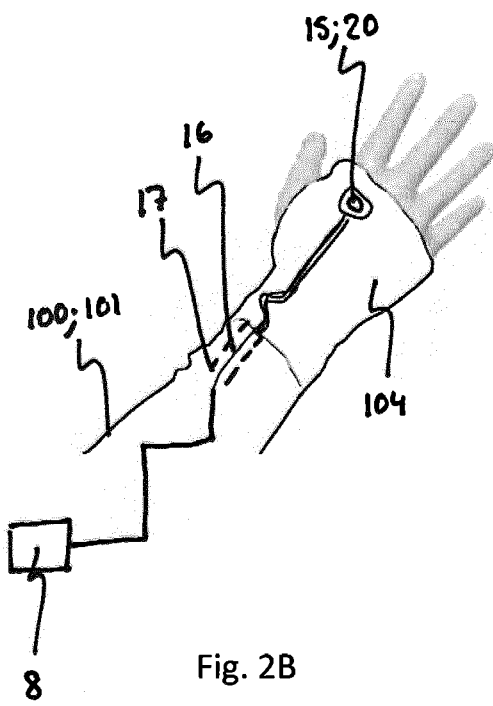


Fig. 2B

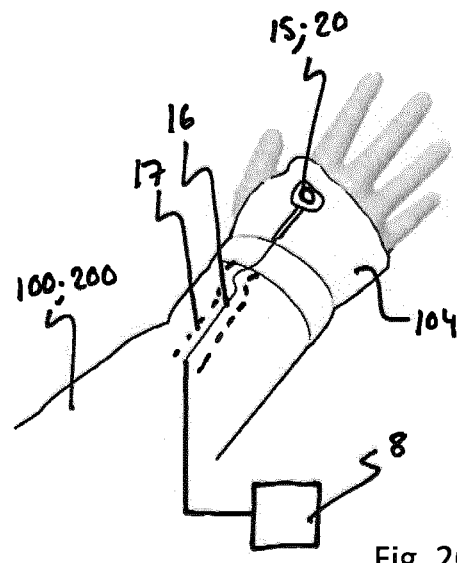


Fig. 2C

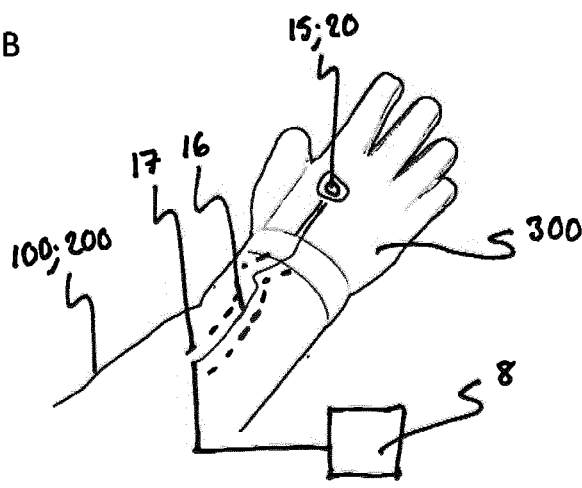


Fig. 2D

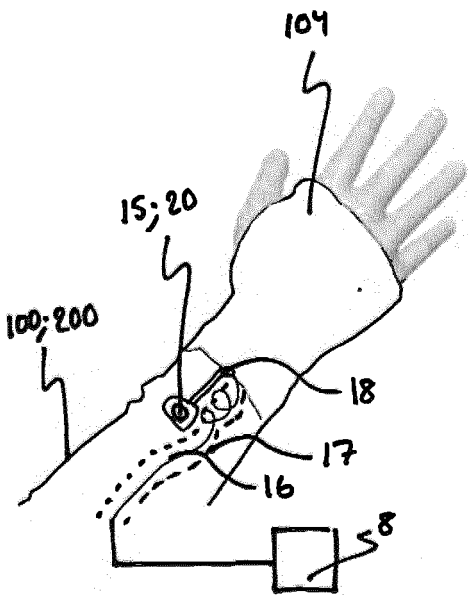


Fig. 3A

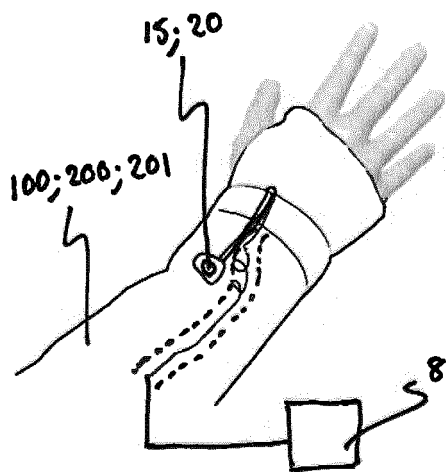


Fig. 3B

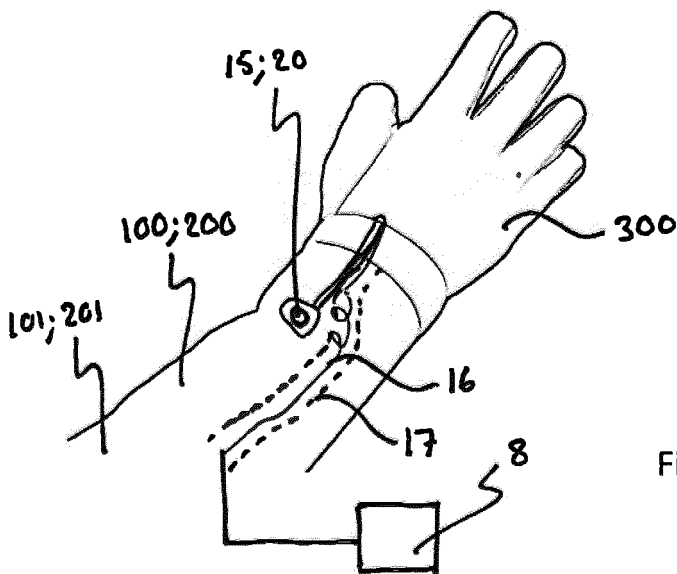


Fig. 3C

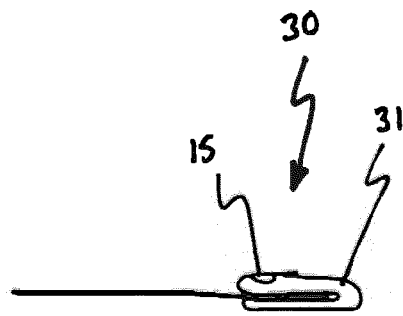


Fig. 4A

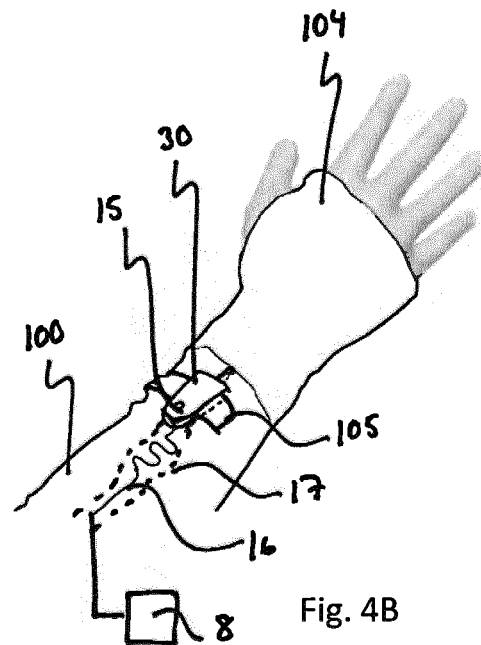


Fig. 4B

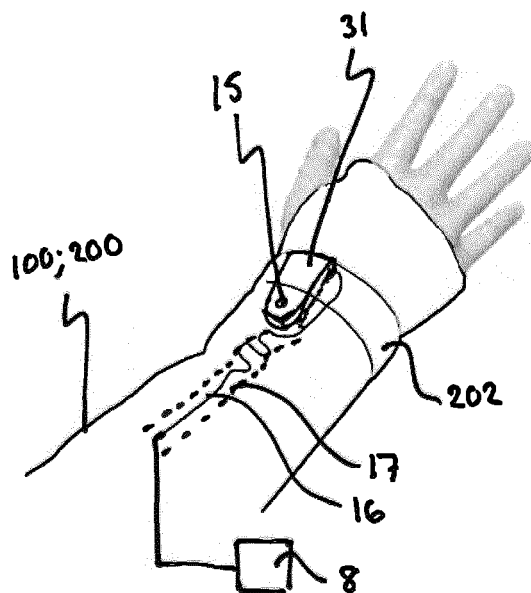


Fig. 4C

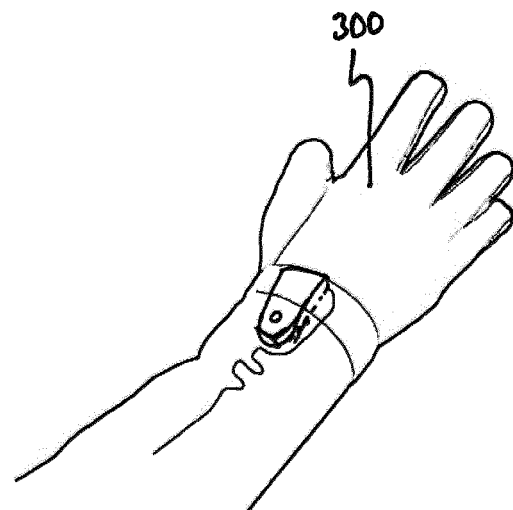


Fig. 4D

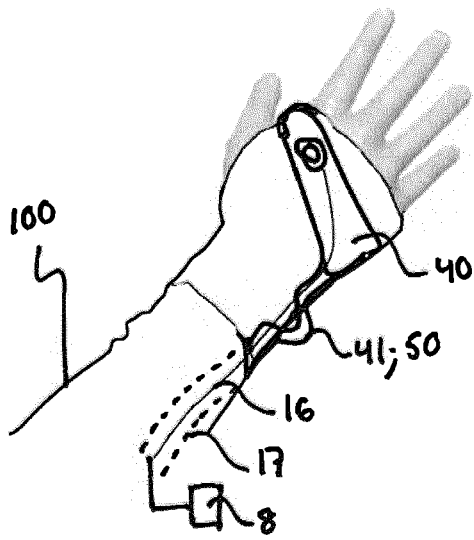


Fig. 5A

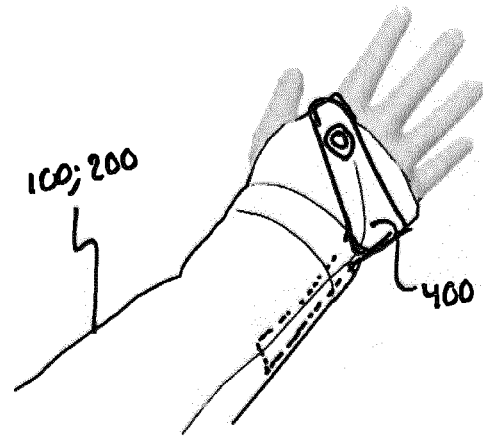


Fig. 5B

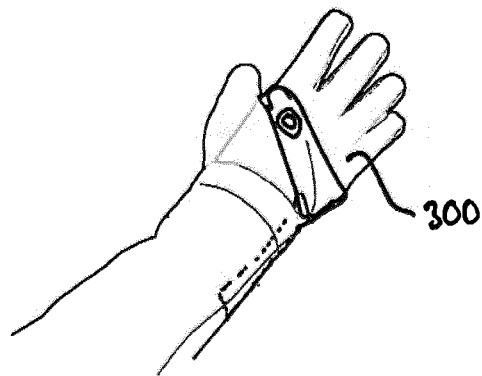


Fig. 5C

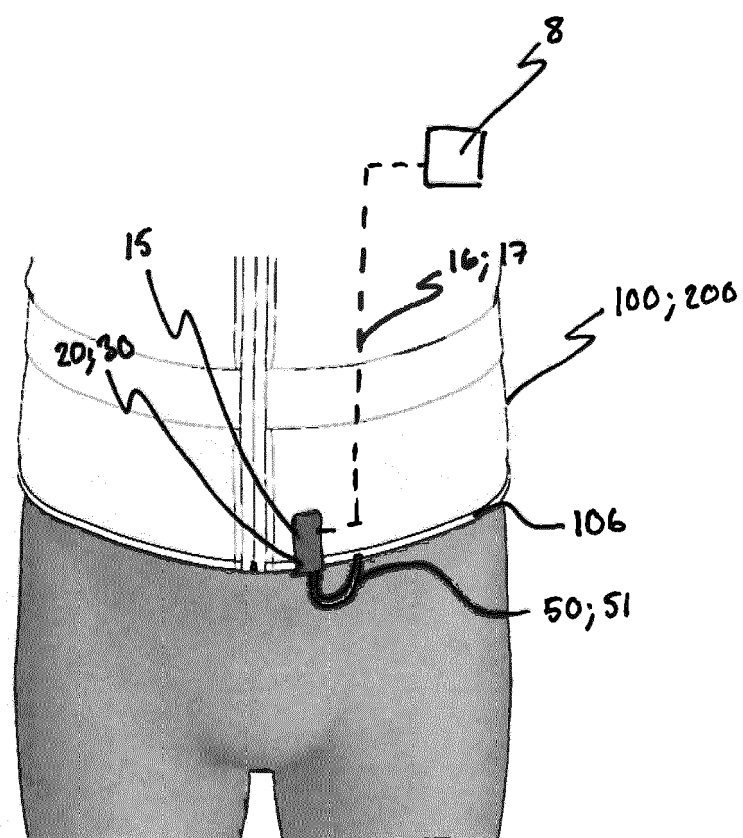


Fig. 6



EUROPEAN SEARCH REPORT

Application Number

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			A41D
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		5 December 2024	Gallego, Adoración
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