

Protective vest, in particular a tactical bib or vest, a plate carrier vest or a bulletproof vest

[0001] The present invention relates to a protective vest, in particular a tactical bib or vest, a plate carrier vest or a bulletproof vest.

[0002] A protective vest is intended to be worn by a user, in particular a law enforcement officer, military personnel or similar, either, in the case of a plate carrier vest or a bulletproof vest, to protect them from attacks, be these by kicking, punching or similar, or impacts due to projectiles such as bullets or similar, and/or against stabbing by knives or similar, or, in the case of a bib, to carry an assembly of items required for their job, such as a weapon, handcuffs, documents, etc.

[0003] There are thus different types of protective vest.

[0004] The first type of protective vest, which offers the lowest level of protection, is referred to as an intervention bib or "tactical vest". An intervention bib does not have any pockets intended to receive plates to protect against attacks or bullets, such as ceramic plates, but does comprise a number of removable attachment means for elements such as binoculars, a walkie-talkie, a weapon and similar, so that these can be attached to the vest itself, making them readily available to the user/wearer of the vest. This type of vest offers a low level of protection against bullets or attacks.

[0005] A second type of protective vest is the bulletproof vest or body armour vest, which comprises one or more pockets, particularly at the front and at the rear, intended to receive plates, such as ceramic plates or blocks made from thermoplastic material, particularly aramid or polyethylene, or a combination of ceramic plates and polyethylene or aramid blocks of this type. The protection offered by this type of bulletproof vest is much higher than that offered by a tactical vest.

[0006] A respective additional type of vest can also be associated with these two types of vest, this additional type entailing providing protective elements for the shoulders/arms, these elements comprising a plurality of shells arranged one after the other along the user's arm from the shoulder.

[0007] This thus provides a third type of vest, or first type a), consisting of the tactical vest to which two left and right shoulder/arm protection elements have been added, either removably or otherwise, and a fourth type or second type a), consisting of the bulletproof vest to which two left and right shoulder/arm protection elements have
5 been added, removably or otherwise.

[0008] Traditionally, a protective vest comprises an outer front face which is intended, when the vest is worn, to be on the front side of the wearer, an outer rear face intended to be on the back of the wearer, the two front and rear faces being supplemented by two lateral sides, left and right respectively, while the shoulder
10 parts, left and right respectively, along with the upper edges of the two front and back faces and the two sides, form a hole for the head and two holes, left and right respectively, for the arms of the user/wearer of the vest.

[0009] Given the weight of these protective plates inserted in the pockets of a bulletproof vest or body armour vest, and even though recent technological
15 advances have enabled this weight to be reduced, it is difficult for a law enforcement officer to wear a bulletproof vest on a permanent basis. In addition, if there is a need to add elements that are traditionally carried for standard interventions not involving violence, such as walkie-talkies, weapons, binoculars, warrant card and similar items, it is not possible to provide for fixing these elements directly on the front
20 and/or rear faces of a bulletproof vest in order to thus obtain a vest serving a dual function as a tactical vest and a bulletproof vest. As a result, during interventions, the law enforcement services need to keep permanent stocks of two types of vest depending on the situation, which takes up space, particularly in response vehicles, and also takes time to change from one vest to another.

[0010] The object of the present invention is to overcome the disadvantages of the prior art by proposing a protective vest which makes it possible to keep the number of garments or parts of garments to be stored in a response vehicle as low as
25 possible, while allowing the law enforcement services to have access to at least two, and in particular four, types of protection. In addition, the aim is to be able to change
30 more quickly from one type of vest to another depending on the requirements of the situation encountered.

[0011] According to the invention, an assembly forming a protective vest, firstly comprising a basic vest having, in the worn state, an outer front face intended to cover the front, in particular the thorax and the abdomen, of the vest wearer, and an outer rear face intended to cover the back of the vest wearer, the two front and rear
5 faces being connected to each other from above at the level of the shoulders and laterally so as to define between them a passage for the head and two passages for the arms, and secondly comprising at least one panel having an outer face and an inner face, is characterised in that means for removably attaching the at least one panel to the outer front face or to the outer rear face of the vest are provided such
10 that, when the at least one panel is attached to the vest, it substantially covers the entire outer front face or the entire outer rear face of the vest, and the at least one panel can be detached from the vest in the worn state, in particular only by moving and displacing the hands outside the basic vest.

[0012] Preferably, the assembly forming the protective vest comprises two panels, a
15 front panel removably attached to the front face of the vest, and a rear panel removably attached to the rear face of the vest.

[0013] Preferably, the or each panel comprises a plate to protect against attacks or bullets, such as a ceramic plate, arranged between the outer face and the inner face of the panel, in particular in a pocket.

[0014] Preferably, the basic vest comprises two left and right front lateral parts, which
20 are intended to each cover a front part of the left and right sides of the vest wearer, and two left and right rear lateral parts which are intended to each cover a rear part of the left and right sides of the vest wearer.

[0015] The left and right front and rear lateral parts preferably overlap at their end.

[0016] Preferably, the basic vest comprises two left and right front shoulder parts
25 which are intended to each cover a front part of the left and right shoulders of the vest wearer, and two left and right rear shoulder parts, which are intended to each cover a rear part of the left and right shoulders of the vest wearer, the respective left and right front and rear shoulder parts being attached to each other, in particular in a
30 removable manner.

[0017] Preferably, the removable attachment means, on the one hand, originate from the outer front face of the basic vest and/or the outer rear face of the basic vest and, on the other hand, from the inner face of the panel and/or each panel.

5 [0018] Preferably, the attachment region, in particular the fastening region, of the outer front face of the vest, or the outer rear face of the vest respectively, comprising removable attachment means and defined as being the region with the largest possible surface area delimited by the solid line L passing through the most off-centre removable attachment means in the region such as to include all the removable attachment means originating from the outer front face, or the outer rear
10 face respectively, covers a majority of the outer front face of the vest, or the outer rear face of the vest respectively, in particular more than 50%, preferably more than 60%, preferably more than 70%, and even more preferably more than 80%.

[0019] Preferably, the removable attachment means consist of areas of hooks or loops originating from the outer front face of the basic vest and/or the outer rear face
15 of the basic vest and engaging with the associated areas of loops or hooks originating from the inner face of the panel or each panel.

[0020] Preferably, the basic vest also comprises two left and right flaps which extend laterally from the rear face, in particular to the rear of the rear lateral parts, and which comprise, at their respective end, removable attachment means to close the vest
20 around the user's waist.

[0021] Preferably, the basic vest comprises, on its front face and/or on its rear face respectively, means to help position the panel or panels, in particular in the form of two buckles with male or female end fittings, left and right respectively, or two press studs, left and right respectively, or other similar elements, intended to engage with
25 corresponding elements, for example respective female or male buckles, press studs, originating from at least two first and second panels for accurate positioning of the two panels on the outer front and/or outer rear faces of the vest.

[0022] According to another aspect, the object of the present invention is also a protection kit for law enforcement services, comprising on the one hand a protective
30 vest according to the invention, known as the basic vest, and at least two panels, preferably with substantially identical outer shapes or appearances, one of the at least two panels, designated the first type of panel or bib panel, comprising on the

inner face means for attaching to the front face and/or to the rear face of the basic vest and having on its opposite outer face traditional means for attaching tools and/or a weapon to form, with the basic vest, when it/they is/are attached in position, a tactical intervention vest, and the other of the at least two panels, designated the second type of panel or bulletproof panel, comprising on one inner face means for attaching to the front face and/or to the rear face of the basic vest and defining within itself a pocket for receiving ballistic plates to thus form, when it/they is/are attached in position, a bulletproof vest or a plate carrier vest.

[0023] The kit preferably comprises two panels of the first type and two panels of the second type.

[0024] According to a preferred embodiment of the invention, elements for shoulder/arm protection may also be added to the basic vest, in particular in the form of shell elements, which are removably attached to the basic vest.

[0025] By way of example, a preferred embodiment of the invention will now be described with reference to the drawings in which:

[0026] Fig. 1 is a top view of the part forming the rear face of a basic vest according to an embodiment of the invention as placed on a horizontal table, the lateral parts for connection to the front face being shown deployed laterally;

[0027] Fig. 2 is a top view of the front part of the basic vest from Fig. 1;

[0028] Fig. 3 is a perspective view of the basic vest consisting of the engagement of the rear part from Fig. 1 with the front part from Fig. 2;

[0029] Fig. 4 is a front view of the basic vest from Fig. 3 to which two removable left and right shoulder/arm protection elements have been added;

[0030] Fig. 5 is a rear view of the vest from Fig. 4;

[0031] Fig. 6 is a side perspective view of the basic vest shown in Fig. 3 to 5, in the worn state, to which have been attached, to the front part and rear part of said vest respectively (not visible in the figure), two panels of the second type to thus obtain a bulletproof vest;

[0032] Fig. 7 is a side perspective view of the basic vest shown in Fig. 3 to 5, in the worn state, to which have been attached, to the front part and rear part of said vest

respectively (not visible in the figure), two panels of the first type to thus obtain a tactical intervention vest;

[0033] Fig. 8 is a rear view of both the vest from Fig. 6 and the vest from Fig. 7;

[0034] Fig. 9 is a front view of both the vest from Fig. 6 and the vest from Fig. 7;

5 [0035] Fig. 10 is a perspective view of the various elements of the vest from Fig. 7, separated from each other; and

[0036] Fig. 11 is a perspective view of the various elements of the vest from Fig. 6, separated from each other.

[0037] Fig. 1 and 2 show an embodiment of a basic vest from an assembly according
10 to the invention. This basic vest comprises a front part 1 intended to be worn on the front to cover the thorax and the abdomen, and a rear part 6 intended to be worn on the rear to cover the back. The front part 1 defines a substantially rectangular front region 2 extended at the side by two right and left side regions 3 intended to cover, at least in part, the user's side and to engage with the corresponding regions of the
15 rear part 6 to ensure lateral protection around the wearer's waist.

[0038] The rear part 6 defines a substantially rectangular rear region 7 extended at the side by two right and left side regions 8 intended to cover, at least in part, the user's side and to ensure, with the corresponding regions 3 from part 1, forming the front face, complete lateral protection around the wearer's waist.

20 [0039] The rear part 6 also comprises, in its upper part, two rear left and right shoulder parts 11 intended to engage with two front left and right shoulder parts 10 in the form of tabs in the upper part of the front shoulder face 1 to ensure removable attachment at the top of the two front 1 and rear 6 parts. These removable attachments are formed by means of self-gripping loops and hooks in the form of
25 areas of hooks or loops formed on the surface of the parts 10, in particular of the front side (visible in Fig. 2) and the rear side (not visible in Fig. 2) and respective areas of loops or hooks formed on the opposite faces of the shoulder parts 11 of the front part 1, each shoulder part 11 consisting of two tabs 12A and 12B, rear and front respectively, forming a sandwich around a respective tab 10, the areas of loops or
30 hooks from both sides of the tab 10 engaging by fastening with the areas of hooks or loops on the tabs 12A and 12B.

[0040] Instead of self-gripping hooks and loops, these attachments could also be formed by means of press studs, buckle fastenings, zip fasteners and similar items.

[0041] The rear part 6 also comprises two left and right flaps 9, which extend from the rear face of the rear part, to the rear of the sides 8, and which comprise, at their
 5 respective end, removable attachment means for attaching to the front part 1 and thus closing the vest around the user's waist.

[0042] In particular, these removable attachment means may take the form of areas 60 of loops formed on the inner faces of the flaps 9 to fasten to a lower area 17 of
 10 hooks 17 from the front face of the front part 1. Left and right areas 16d, 16g of hooks are also provided on the outer opposite face to replace, with regard to panels 30 or 40 which are intended to be removably attached to the front face of the basic vest, the hooks in the area 17 taken by the loops 60 to ensure complete attachment of the panels when the vest is in the worn state.

[0043] The two flaps 9 also each comprise a tab 28 extending from their upper edge
 15 and comprising areas 29A of hooks or loops intended to engage with an associated area 29B of loops or hooks formed on the inner face of the flaps 9, the areas 29A and 29B being intended to engage with each other, trapping between them the edges of the sides 3 and 8 when these are positioned around the user's waist, thus ensuring that the sides are kept in position when the vest is in the worn state.

[0044] In the position in which the sides 3 and 8 are folded towards each other
 20 around the user's waist and the shoulder-connecting parts are connected to each other, three holes, respectively two left and right holes for the user's arms and one central hole for the user's head, are formed between the front part 1 and the rear part 6.

[0045] Two buckles with a left and right female end fitting 13 project into the upper
 25 part of the front region 2, while two buckles with a left and right female end fitting 14 project into the upper part of the rear region 7.

[0046] These buckles 13, 14, which could be replaced by buckles with a male end fitting, press studs, or self-gripping hook or loop attachment elements, either of the
 30 two elements of a zip fastener or any other standard removable attachment means, make it possible to not only create a first attachment function, but also to define the

correct position, during attachment, of a panel covering the front 2 and rear 4 regions respectively.

[0047] Two areas of hooks, a lower area 17 and an upper area 18, in particular with a rectangular or square shape, are formed on the region 2 below the pre-

5 fixing/positioning buckles 13. These two areas 17 and 18 of hooks fill substantially the entire outer front face 200 of the front region 2. Just one single area of hooks covering the entire front face could also be provided, in other words including the intermediate part between the areas 17 and 18.

10 [0048] Likewise, the outer rear face 700 of the rear region 7 comprises two areas of hooks, a lower area 19 and an upper area 20, which are identical or substantially identical to the areas 17 and 18. Just one single area of hooks including the two areas 19 and 20, and the intermediate part between the two areas of hooks, could also be provided.

15 [0049] Fig. 3, 4 and 5 show the basic vest in the worn state, in which the side 8 regions have been folded over the front or outer face of the front part 1, the areas 60 of loops engaging with the area 17 of hooks, in particular each of the two left and right areas 60 covering a respective half of the area 17. However, it is conceivable that each area could cover less than half of the area 17 such that some of the central hooks of the area 17 remain accessible from the outside.

20 [0050] Thus, in the worn state of the vest, the outer front face 100 of the basic vest is formed firstly by the upper part of the outer front face 200 of the front region 2 of the front part 1 (the part of the outer front face 200 which is not covered by the sides 8 and the tabs 9), and secondly by the outer face of the tabs 9, folded over the lower part of the outer front face 200.

25 [0051] In the worn state of the vest, its outer front face 100, which covers the thorax and the abdomen, having a substantially rectangular shape, comprises two areas of hooks, namely, on the one hand, the area 18 originating from the outer front face 200 of the front region 2 of the front part 1 and, on the other hand, the area 16 of hooks formed by the right and left areas 16d and 16g, as well as potentially the
30 hooks from the area 17 not covered by the tabs 9 in the event that the areas 16d and 16g do not cover all of the area 17 and leave a central part of the area 17 of hooks accessible.

[0052] The outer rear face 700, covering the wearer's back, is formed by the outer face of the rear region 7.

[0053] The attachment region, in particular the fastening region, of the outer front face 100 of the vest, or the outer rear face 700 of the vest respectively, is defined as being the region with the largest possible surface area delimited by the solid line L passing through the most off-centre hooks in the region such as to include all the hooks originating from the outer front face 100, or the outer rear face 700 respectively. Thus, for example, in Fig. 3 and 6, the line L encompasses the two areas 16 and 17, 19 and 20 respectively, and the intermediate area between the two areas 16 and 17, 19 and 20 respectively. This region corresponds to the attachment region of the opposite panel comprising the associated areas of loops, in the knowledge that, when this opposite panel is attached to the outer front face 100, or to the outer rear face 700 respectively, of the basic vest, the parts of the panel opposite the attachment region delimited by the line L are no longer free, whereas the parts outside the line L are in free parts, and may, for example, be folded at the level of the line L. Thus, for example, the intermediate region between the areas 16 and 17, 19 and 20 respectively, although it does not comprise any hooks, is also blocked by the engagement between the hooks and loops.

[0054] Preferably, the respective attachment region delimited by the line L covers a majority of the outer front face 100 of the vest, or the outer rear face 700 of the vest respectively, in particular more than 50%, preferably more than 60%, preferably more than 70%, and even more preferably more than 80%.

[0055] The lines L are shown by dashed lines in Fig. 5 and 6.

[0056] Areas of loops could evidently be provided instead of areas of hooks, and, conversely, areas of hooks could be provided instead of areas of loops. A plurality of press studs, for example in the form of rows and/or columns from regions 2 and 7 or one or more zip fasteners could also be provided instead of areas of hooks and/or loops. Similarly, the attachment region would then be defined as the region with the largest possible surface area delimited by the solid line L passing through the most off-centre studs or fastener in the region such as to include all the studs or fasteners originating from the outer front face 100, or the outer rear face 700 respectively, the region corresponding to the attachment region of the opposite panel comprising the

associated areas of studs or fasteners, in the knowledge that, when this opposite panel is attached to the front region 2, or the rear region 7 respectively, the parts of the panel opposite the attachment region delimited by the line L are no longer free, whereas the parts outside the line L are in free parts, and may, for example, be
 5 folded in relation to the central part delimited by the line L, which is blocked by the attachment region. In Fig. 4 and 5, the lines L are shown slightly offset to the outside to make them more visible.

[0057] Fig. 6 shows the vest from Fig. 1 to 5 to which has been added a panel 30 of the plate type, which is intended to engage with the basic vest, preferably also with a
 10 second identical panel 30, to form a plate carrier or a bulletproof vest.

[0058] The panel 30 is substantially rectangular or square in shape. It consists of two sheets, materials, fabrics or similar, on the front and back respectively, and sewn to each other along their peripheral edge to form between them a closed pocket which is intended to receive one or more protection plates, in particular one or more
 15 ceramic plates, one or more blocks of pleats made from thermoplastic material, in particular polyethylene or aramid, or a combination of plates and blocks of this type. This pocket is closed along the lower edge of the panel by a so-called zip fastener 34.

[0059] Two buckles with left and right male end fittings 31, which are intended to
 20 engage with one of the pairs of buckles with female end fittings 13 or 14 respectively from the top of the front region 2 or the rear region 7, are attached at the level of the upper edge of the panel 30.

[0060] An element 32 forming the lower flap originates from the lower part, in particular the lower edge of the panel 30, and is intended to be folded to the inside,
 25 between the user's body and the front part 1, or the rear part 6 respectively. This flap element 32 also has additional functions, on the one hand to position and centre the panel correctly with respect to the front part 1 or the rear part 6 to which it is attached and, on the other hand, to prevent the plates located in the pocket from falling out in the event that the zip fastener 34 were to be defective.

30 [0061] On the rear face of the rear sheet, in other words the face intended to be in contact with the front part 1 or the rear part 6, areas of loops corresponding to the

areas 16, 18, 19, 20 of hooks in the front region 2 or the rear region 7 extend for removably attaching the panel 30.

[0062] On the front face of the front sheet, areas of hooks in the form of parallel strips 35 extend in the horizontal direction and are intended to engage with the loops from accessories for attachment purposes. In addition, the strips 35 are only attached to the front sheet along the vertical lines (for example by sewing) such as to define areas between each vertical line where the strips 35 can be removed from the front face of the front sheet to allow accessories to be fastened on.

[0063] Fig. 6 shows a basic vest to which have been attached, in a removable manner, two panels 30 of the second type, to thus form a bulletproof vest.

[0064] Fig. 7 shows a basic vest to which have been attached, instead of the panels 30 shown in Fig. 6, two panels 40 of the so-called first type.

[0065] Each panel 40 is formed from a single sheet, fabric, material or similar. On its rear face, it comprises the same areas of loops as those provided on the rear face of the rear sheet of the panel 30 of the second type for removably attaching the panel by engaging with the areas 16, 18, 19 and 20 of hooks from the front 2 and rear 7 regions.

[0066] Thus, preferably, the rear face of the panel 30 of the first type is identical to the rear face of the panel 40 of the second type. However, since the panel 40 consists of a single sheet, fabric, material or similar, it does not comprise a receiving pocket within itself.

[0067] On the front face of the panel 40, as on the front face of the front sheet of the panel 30, it is possible to provide areas of hooks in the form of parallel strips 35 in the horizontal direction which are intended to engage with loops originating from accessories for attachment purposes. In addition, the strips 35 are only attached to the front sheet along the vertical lines (for example by sewing) such as to define areas between the vertical lines where the strips 35 can be removed from the front face of the front sheet to allow accessories to be fastened on.

[0068] However, it is also possible to provide a different arrangement of this front face to improve the accessory fastening/attachment function, in the knowledge that this panel 40 is intended to form, with the basic vest, not a bulletproof vest, but a

tactical bib. In addition, providing two different arrangements of the front face according to whether this is a panel 30 of the second type or a panel 40 of the first type, makes it possible to distinguish between said panels at a glance.

[0069] An identical element 32 forming the lower flap originates from the lower part, in particular the lower edge of the panel 40 and is intended to be folded to the inside, between the user's body and the front part 1, or the rear part 6 respectively. This flap element 32 also has additional functions to position and centre the panel correctly with respect to the front part 1 or the rear part 6 to which it is attached.

[0070] Fig. 7 shows a tactical bib comprising a basic vest and two panels 40 of the first type attached in a removable manner, to the front region 2 and the rear region 7 of the basic vest respectively.

[0071] The different panels 30 and 40 can be detached from the basic vest without the wearer having to remove the basic vest, and, in particular, the basic vest, in the worn state, has an identical shape and structure, with and without the panel or panels, and in particular retains its shape with the two front and rear parts connected to each other at the level of the shoulders and the waist.

[0072] Likewise, the different panels 30 and 40 can be attached to the basic vest without the wearer having to remove the basic vest, or even to change its structure and/or shape in the worn state.

[0073] The vest wearer can thus change very easily and very quickly from one configuration to another. In particular, to do this, it only entails moving and displacing the hands outside the basic vest.

[0074] On the other hand, it is also possible to add two removable left and right shoulder protection elements to the basic vest, as shown in Fig. 4 to 9. Each shoulder protection element may, in particular, be manufactured as described in patent application EP-A-3195743 under the applicant's name, comprising a base plate or reinforcement 50 made from a flexible material that has been adapted to fit the shape of the shoulder and/or the upper part of the arm and shells 51, in particular three shells, covering the reinforcement and attached in an articulated manner to the reinforcement, preferably independently from each other so that they partially overlap.

[0075] Each shoulder element is fastened to the basic vest by a respective connecting element 52 comprising an upper tab 58 and two lower bands 59 with an elongated shape projecting from the reinforcement 50. The upper or outer face of the upper tab 58 is covered with an element with loops or pile and its lower or inner face is covered with an element with hooks, whereas the outer or upper faces of the lower bands 59 are covered with an element with hooks and the inner or lower faces of the bands 59 are covered with an element with loops or pile. In order to attach a shoulder element to the rear part 7, the tab 12B of the shoulder part 11 is inserted between the tab 58 and the bands 59, then the bands 59 are folded over the tab 58, surrounding the tab 12B, the hooks on the upper face of the bands 59 fastening on to the loops of the pile covering the upper face of the tab 58. The hooks on the lower face of the tab 58 also engage with a pile covering the upper part of the outer face of the tab 12B of the shoulder part 11. The loops on the pile covering the upper face of the tab 58 engage with the hooks covering the inner face of the respective shoulder part 10 of the front part 1.

[0076] On the other hand, at the other, lower end, the shoulder elements each comprise two straps attached to the reinforcement 50 and each comprising press studs or similar to hold the shoulder element around the arm in the lower part of the shoulder element.

[0077] Thus, depending on the user's requirements, said user may, at their discretion, add the following to their basic vest formed of the front 1 and rear 6 parts: a panel 30 of the plate type or a panel 40 of the tactical intervention type, possibly also in addition to shoulder elements. They thus no longer need to keep two vests for immediate use and only need to keep one of these vests, and, for example, two pairs of two panels of the first and second types and a pair of shoulder elements, which they position on the vest depending on their requirements at any one time, so as to have access to a plurality of vest types. In addition, this makes it much quicker for them to change the type of protection. In addition, it is possible to ensure that all panels 30 and 40 are all the same size, whereas the vests are different sizes, which means that they can be stored in the same place for all people at the same company, for example, which allows further space-saving opportunities.

Claims

[Claim 1] Assembly forming a protective vest, firstly comprising a basic vest having, in the worn state, an outer front face (100) intended to cover the front, in particular the thorax and the abdomen, of the vest wearer, and an outer rear face (700) intended to cover the back of the vest wearer, the two front and rear faces being connected to each other from above at the level of the shoulders, and laterally so as to define between them a passage for the head and two passages for the arms, and secondly comprising at least one panel (30; 40) having an outer face and an inner face, characterised in that means (16, 18, 19, 20) for removably attaching the at least one panel to the outer front face or to the outer rear face of the vest are provided such that, when the at least one panel is attached to the vest, it substantially covers the entire outer front face or the entire outer rear face of the vest, and the at least one panel can be detached from the vest in the worn state.

[Claim 2] Assembly according to claim 1, characterised in that it comprises two panels, a front panel removably attached to the front face of the vest, and a rear panel removably attached to the rear face of the vest.

[Claim 3] Assembly according to either claim 1 or claim 2, characterised in that the or each panel comprises a plate to protect against attacks or bullets, such as a ceramic plate, arranged between the outer face and the inner face of the panel, in particular in a pocket.

[Claim 4] Assembly according to claim 1, 2 or 3, characterised in that the basic vest comprises two left and right front lateral parts, which are intended to each cover a front part of the left and right sides of the vest wearer, and two left and right rear lateral parts which are intended to each cover a rear part of the left and right sides of the vest wearer.

[Claim 5] Assembly according to any one of the preceding claims, characterised in that the basic vest comprises two left and right front shoulder parts (10) which are intended to each cover a front part of the left and right shoulders of the vest wearer, and two left and right rear shoulder parts (11), which are intended to each cover a rear part of the left and right shoulders of the vest wearer, the respective left and

right front and rear shoulder parts (10, 11) being attached to each other, in particular in a removable manner.

[Claim 6] Assembly according to any one of the preceding claims, characterised in that the removable attachment means on the one hand originate from the outer front face of the basic vest and/or the outer rear face of the basic vest and, on the other hand, from the inner face of the panel and/or each panel.

[Claim 7] Assembly according to any one of the preceding claims characterised in that the attachment region, in particular the fastening region, of the outer front face of the vest, or the outer rear face of the vest respectively, comprising removable attachment means and defined as being the region with the largest possible surface area delimited by the solid line L passing through the most off-centre removable attachment means in the region such as to include all the removable attachment means originating from the outer front face, or the outer rear face respectively, covers a majority of the outer front face of the vest, or the outer rear face of the vest respectively, in particular more than 50%, preferably more than 60%, preferably more than 70%, and even more preferably more than 80%.

[Claim 8] Assembly according to any one of the preceding claims, characterised in that the removable attachment means consist of areas of hooks or loops originating from the outer front face of the basic vest and/or the outer rear face of the basic vest and engaging with the associated areas of loops or hooks originating from the inner face of the panel or each panel.

[Claim 9] Assembly according to any one of the preceding claims, characterised in that the basic vest also comprises two left and right flaps (9) which extend laterally from the rear face, in particular to the rear of the rear lateral parts, and which comprise, at their respective end, removable attachment means (60) to close the vest around the user's waist.

[Claim 10] Assembly according to any one of the preceding claims, characterised in that the basic vest comprises, on its front face and/or on its rear face respectively, means to help position the panel or panels, in particular in the form of two buckles (13, 14) with male or female end fittings, left and right respectively, or two press studs, left and right respectively, or other similar elements, intended to engage with corresponding elements, for example respective female or male buckles, press

studs, originating from at least two first and second panels for accurate positioning of the two panels on the outer front and/or outer rear faces of the vest.

[Claim 11] Protection kit for law enforcement services, comprising on the one hand a protective vest according to any one of the preceding claims, known as the basic vest, and at least two panels, preferably with substantially identical outer shapes or appearances, one (30) of the at least two panels, designated the first type of panel or bib panel, comprising on the inner face means for attaching to the front face and/or to the rear face of the basic vest and having on its opposite outer face traditional means for attaching tools and/or a weapon to form, with the basic vest, when it/they is/are attached, a tactical intervention vest, and the other (40) of the at least two panels, designated the second type of panel or bulletproof panel, comprising on one inner face means for attaching to the front face and/or to the rear face of the basic vest and defining within itself a pocket for receiving ballistic plates to thus form, when it/they is/are attached in position, a bulletproof vest or a plate carrier vest.

[Claim 12] Kit according to claim 10, comprising two panels of the first type and two panels of the second type.

[Claim 13] Kit according to either claim 10 or claim 11, characterised in that it also comprises elements (50, 51, 52, 58, 59) for shoulder/arm protection, in particular in the form of shell elements, which can be removably fixed to the basic vest.