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(54) **ERGONOMIC WEIGHT-DISTRIBUTING VEST**

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(57) **ABSTRACT**

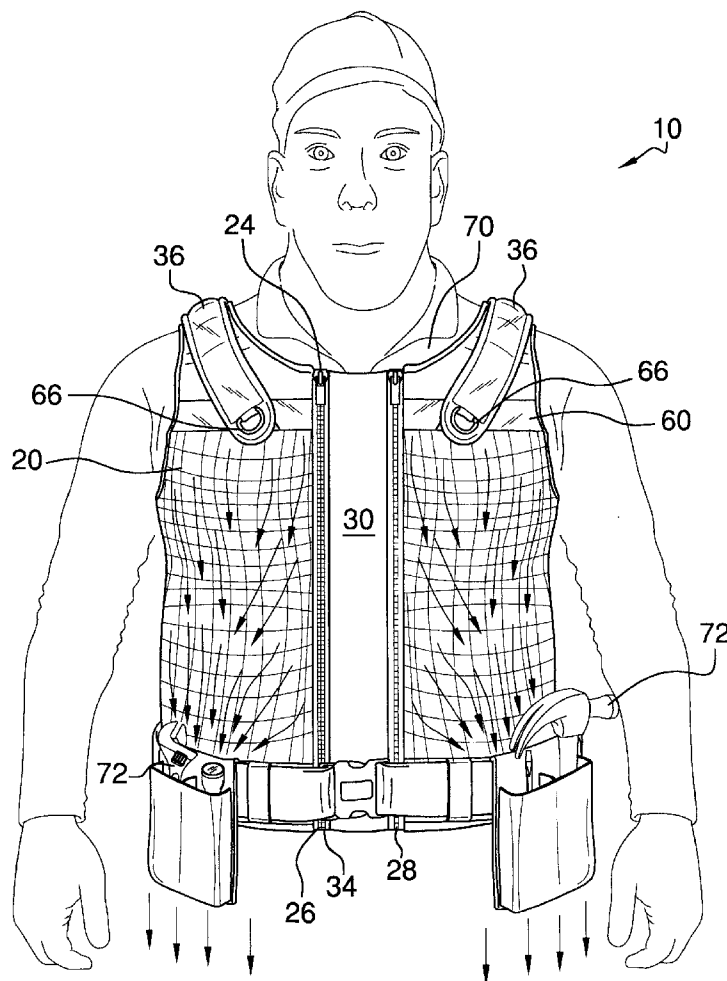
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Related U.S. Application Data

(63) Continuation-in-part of application No. 13/781,243, filed on Feb. 28, 2013, now abandoned, which is a continuation-in-part of application No. 12/813,755, filed on Jun. 11, 2010, now abandoned, which is a continuation-in-part of application No. 11/869,610, filed on Oct. 9, 2007, now abandoned.

An ergonomic weight distributing vest that includes a non-stretch mesh fabric that enables multiple anatomical contact points of said fabric across the torso of a wearer, each of said contact points conforming the vest to the contours of the torso of the wearer, wherein the weight of extant articles suspended from the vest and attached thereto, is distributed evenly throughout the mesh fabric over said multiple anatomical contact points across the contours of a wearer's torso, whereby said weight is more evenly distributed across a wearer's body and load bearing is thereby ergonomically configured to lessen local stresses resultant from carrying said articles at specific positions upon the body over extended periods of time.

(60) Provisional application No. 60/828,427, filed on Oct. 6, 2006.



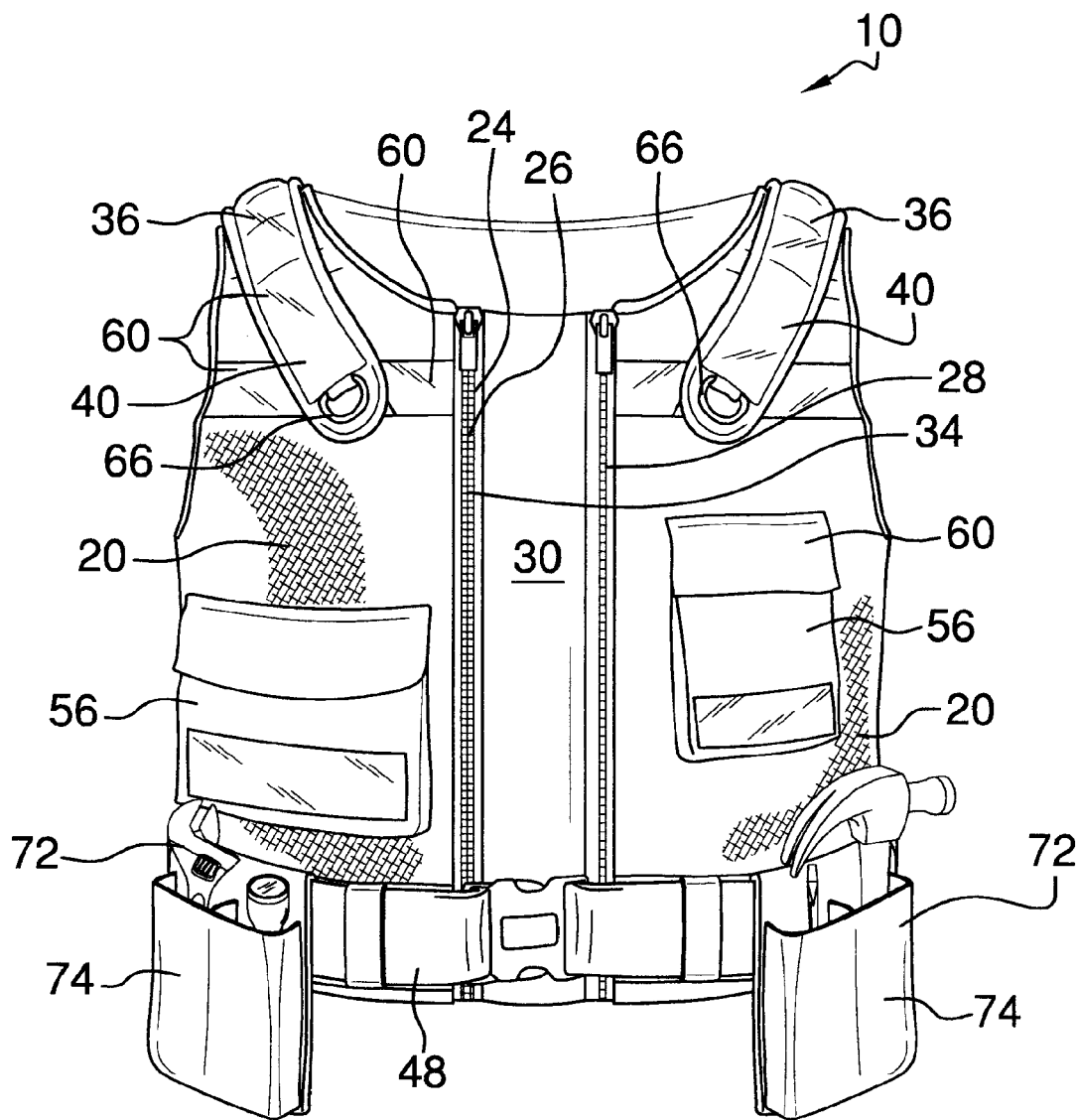


FIG. 1

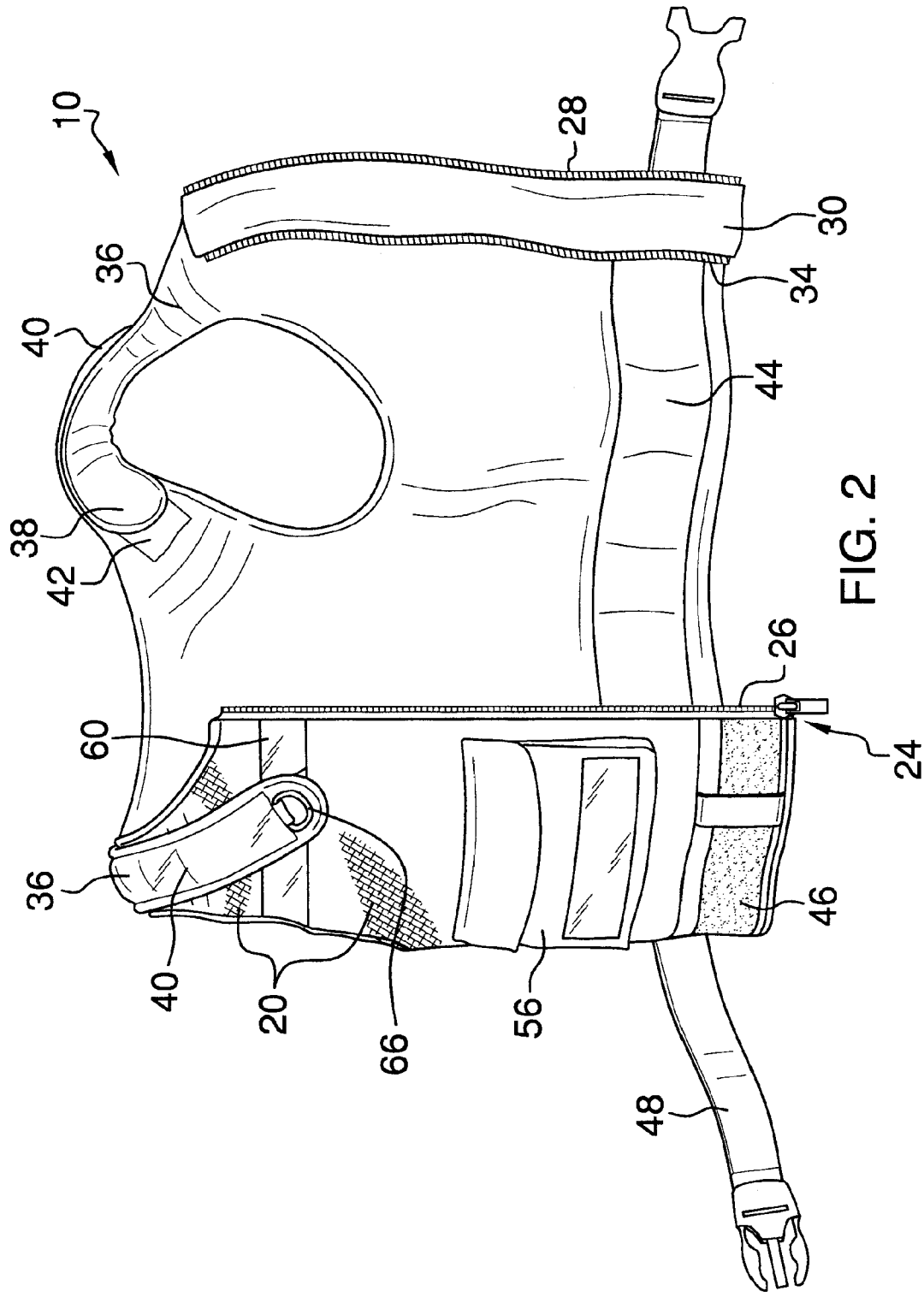


FIG. 2

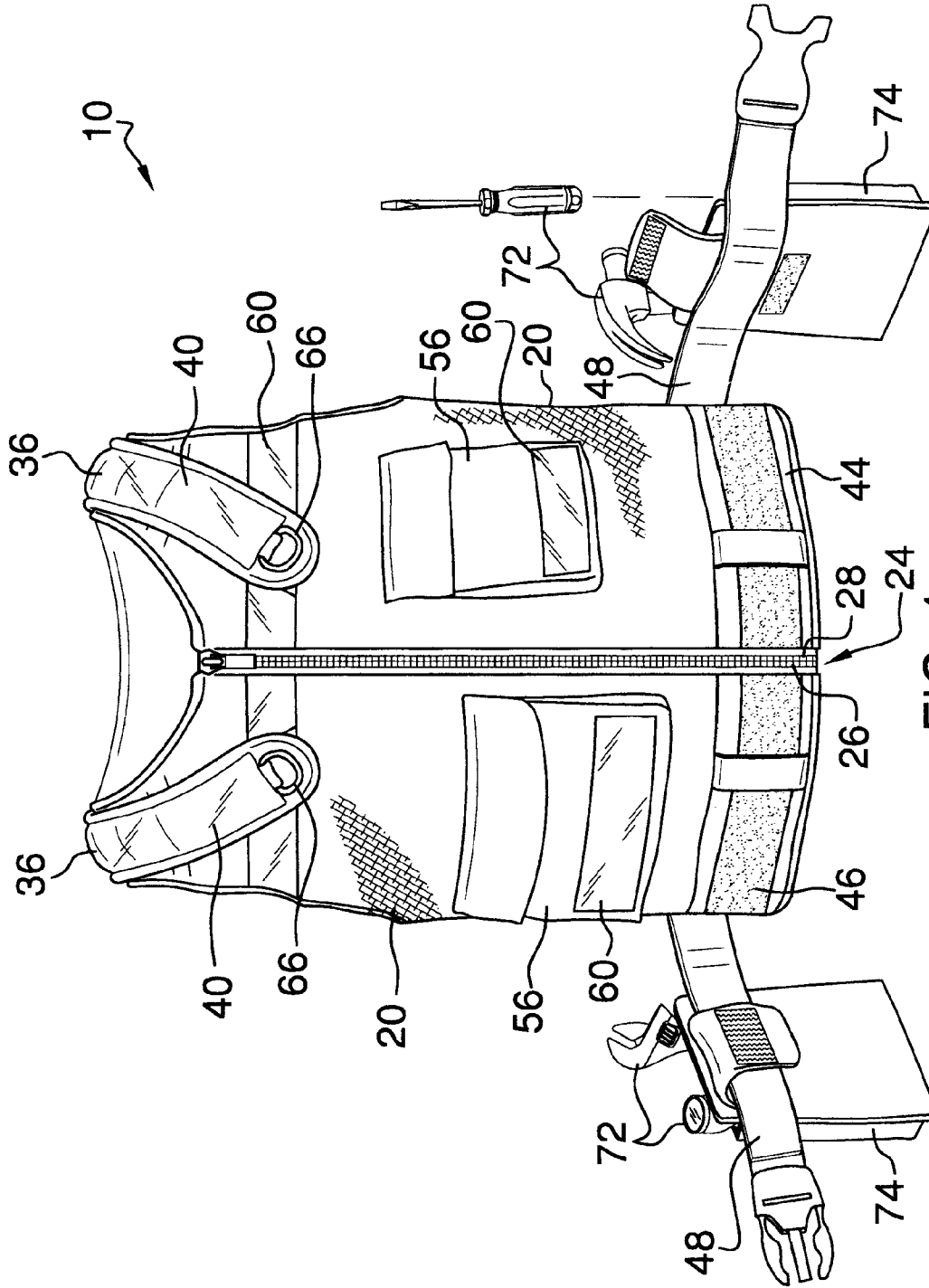
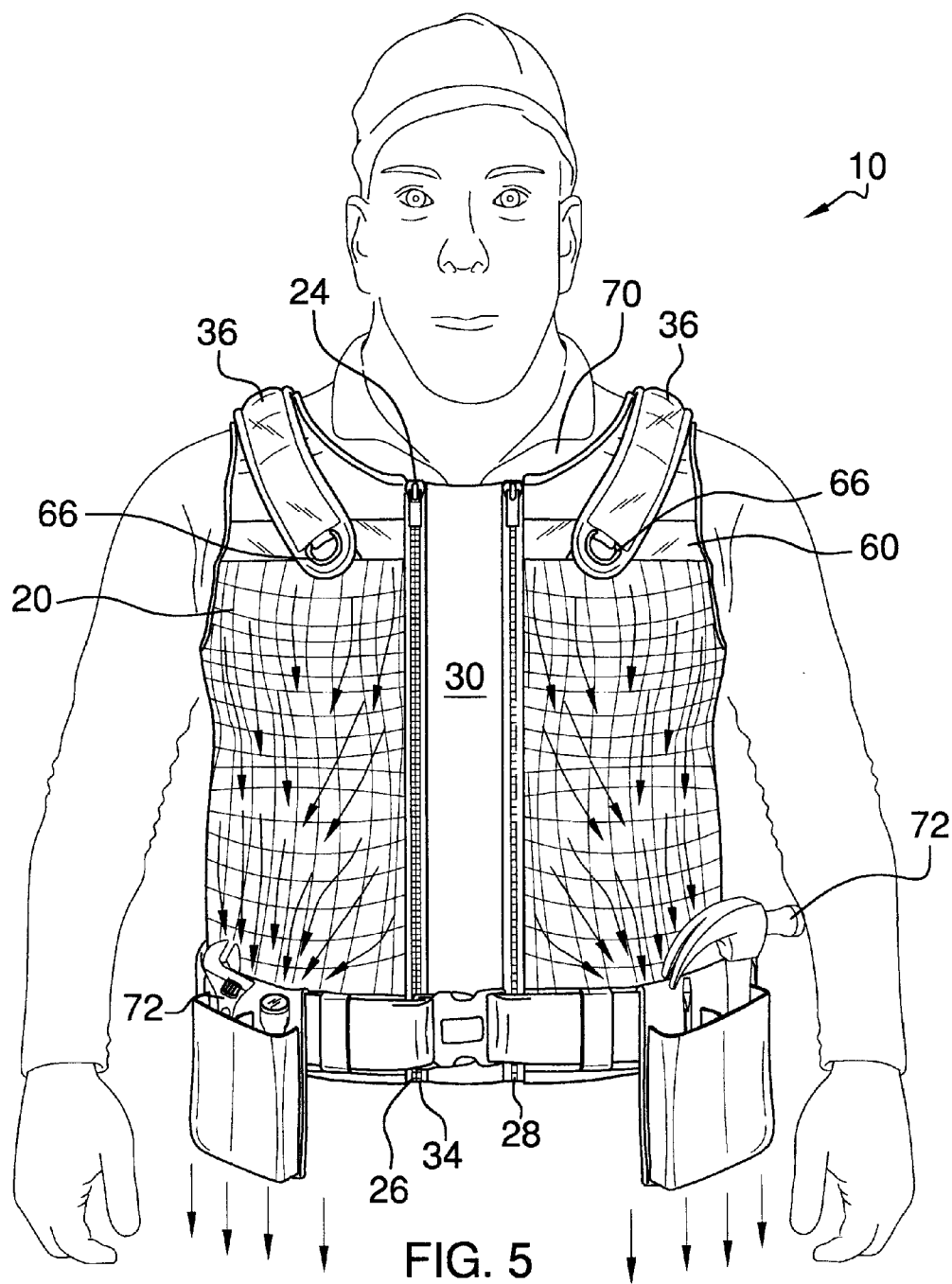


FIG. 4



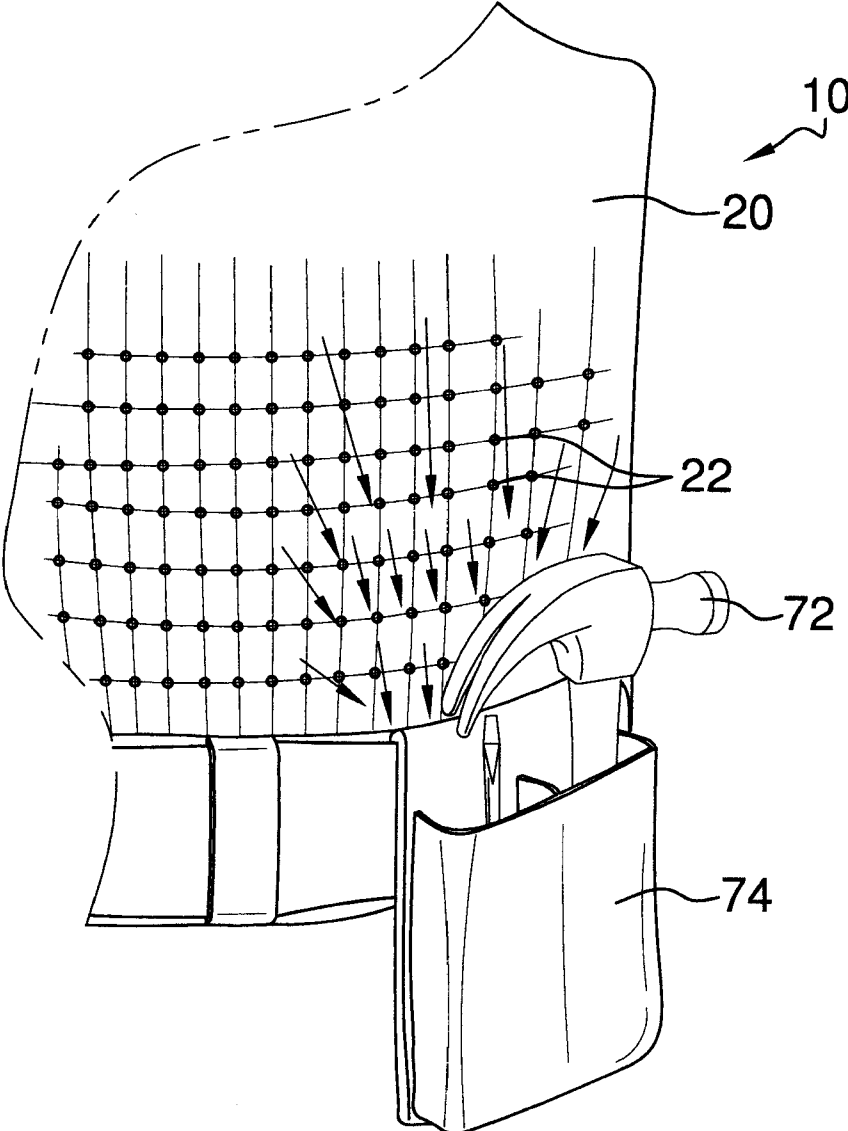


FIG. 6

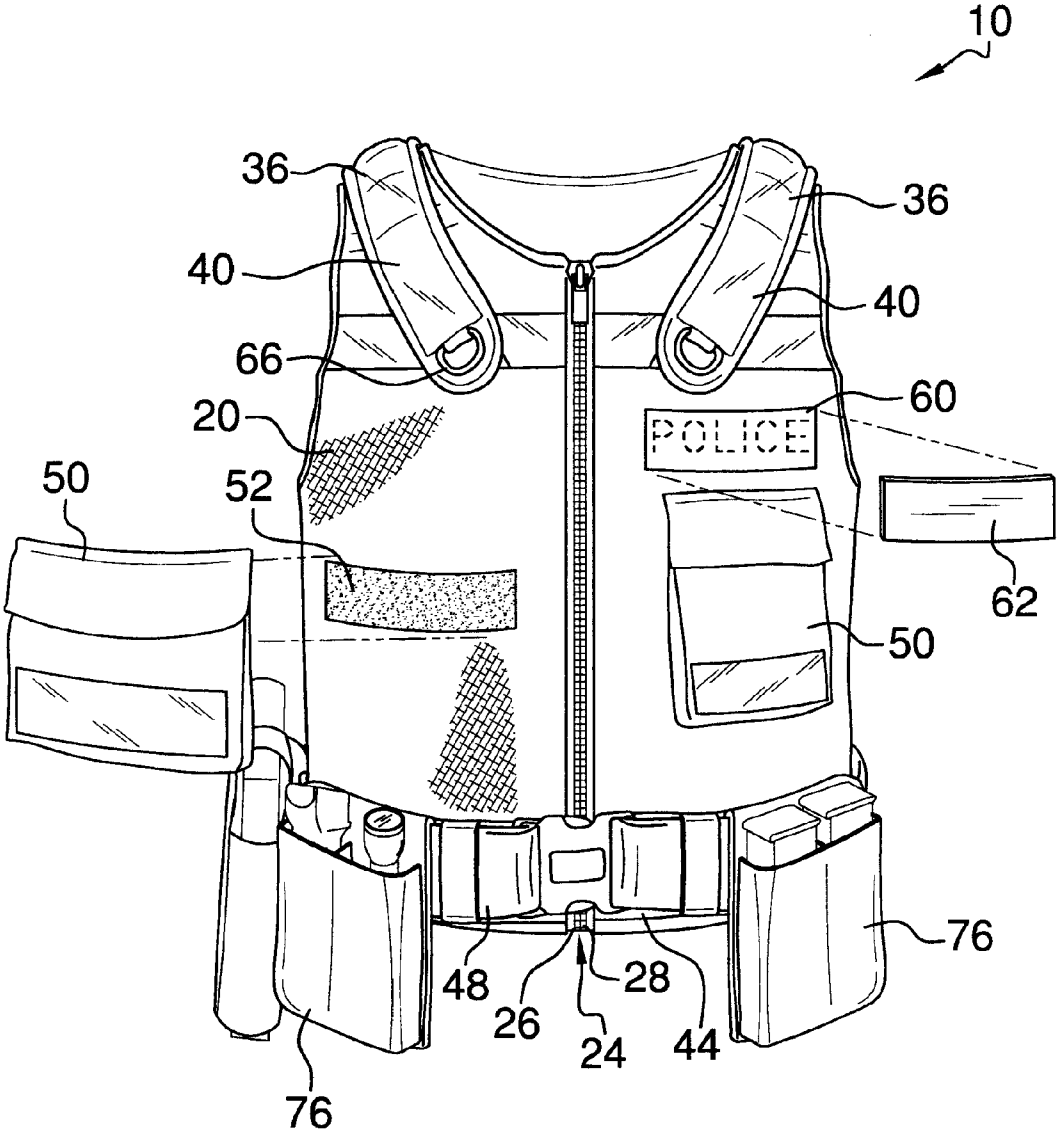


FIG. 7

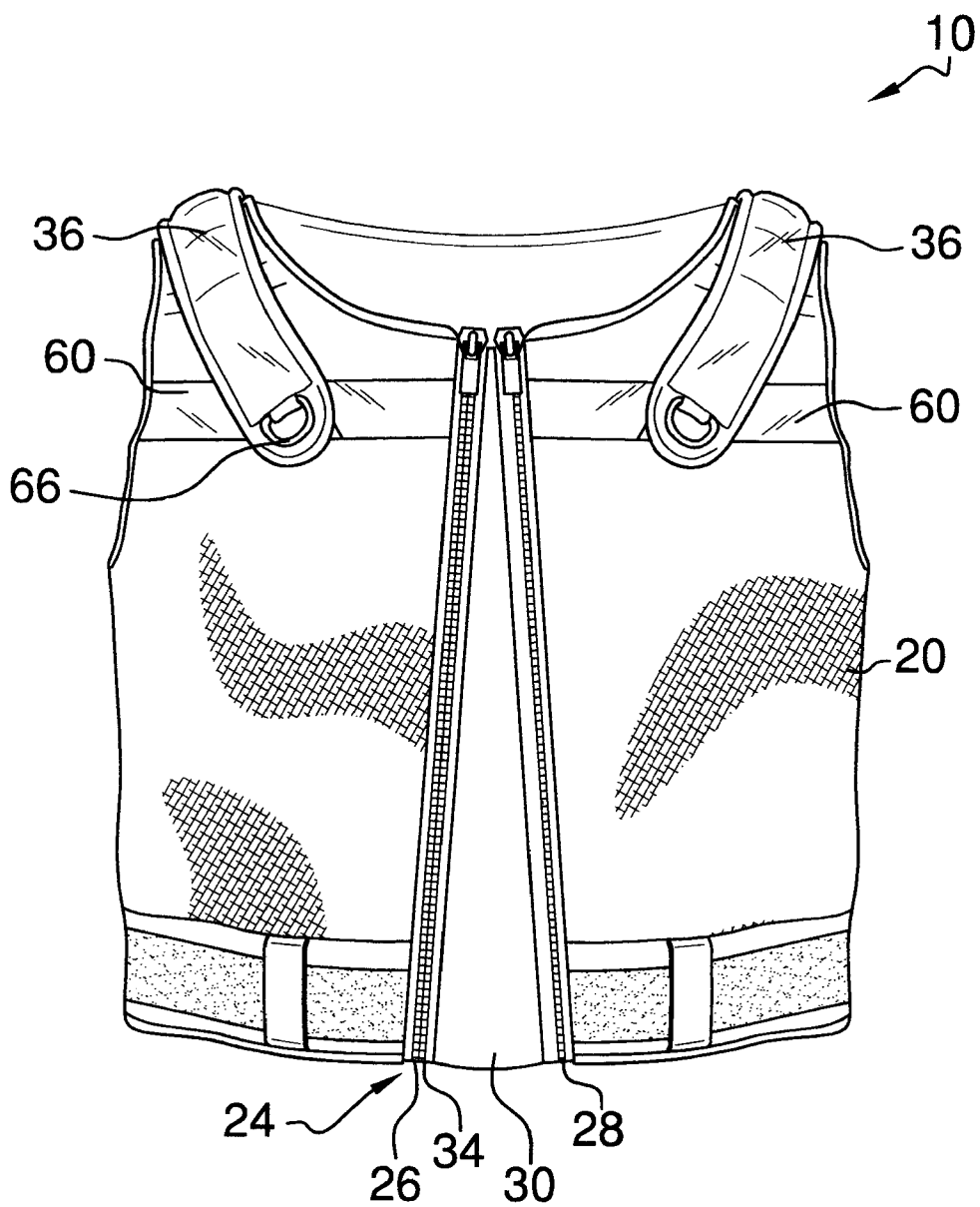


FIG. 8

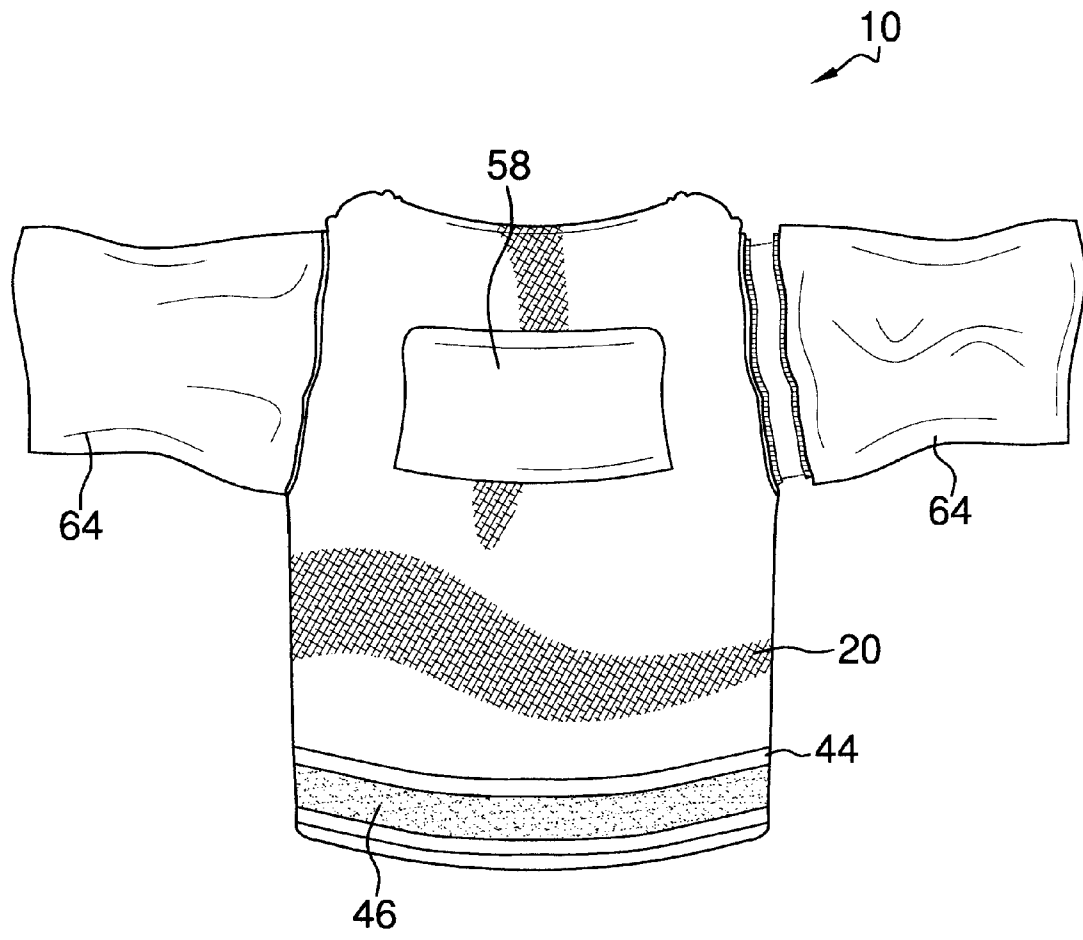


FIG. 9

ERGONOMIC WEIGHT-DISTRIBUTING VEST

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority benefit to pending U.S. patent application Ser. No. 13/781,243, filed on Feb. 28, 2013, which is a Continuation-in-Part of now abandoned U.S. patent application Ser. No. 12/813,755, filed on Jun. 11, 2010, which is a Continuation-in-Part of now abandoned U.S. patent application Ser. No. 11/8,696,108 filed on Oct. 9, 2007, which claims priority to now expired U.S. Provisional Application No. 60/828,427 filed on Oct. 6, 2006.

FIELD OF THE INVENTION

[0002] The present invention relates to an ergonomic weight-distributing vest comprising a non-stretch mesh fabric that provides multiple anatomical contact points across the torso of the vest wearer's body when the vest is snugly fit to the wearer's torso, said contact points thereby conforming the vest to the contours of the torso of the wearer, whereby the weight of extant articles attached to and suspended from the vest is distributed evenly throughout the mesh fabric over said multiple anatomical contact points across the contours of a wearer's torso, whereby said weight is more evenly distributed across a wearer's body and load bearing is thereby ergonomically configured to lessen local stresses resultant from carrying said articles at a specific position upon the body over extended periods of time.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0003] None

REFERENCE TO A MICROFICHE APPENDIX

[0004] None

BACKGROUND OF THE INVENTION

[0005] Various types of safety vests and vests which may provide comfort, such as warmth or protection from the elements or the like, are known in the prior art. The user or wearer often needs freedom of use of the arms and hands and so relies on the vest to carry articles, which the wearer may eventually need. Typical examples are law enforcement persons, outdoorsmen, soldiers, construction workers, etc. In many instances the articles suspended from the vest are quite weighty and can become injurious to the wearer's body. So what is lacking is a vest which alleviates or minimizes this problem. The instant invention ergonomically distributes the weight of extant articles suspended from said vest. The vest is made of non-stretch mesh fabric having multiple anatomical contact points conformable to the contours of a wearer's body whereby the weight of the articles suspended from the vest is evenly distributed across the surface area of a wearer's torso to prevent and alleviate injury to the musculoskeletal system resultant from repeated portage of extant articles ported at specific locations upon the body for extended periods of time.

SUMMARY OF THE INVENTION

[0006] The general purpose of the ergonomic weight-distributing vest, described subsequently in greater detail, is to provide an ergonomic weight-distributing vest which has

many novel features that result in an ergonomic weight-distributing vest which is not anticipated, rendered obvious, suggested, or even implied by prior art, either alone or in combination thereof.

[0007] The present ergonomic weight-distributing vest has been devised to prevent and alleviate stress injuries wreaked upon the body from the repeated and prolonged portage of various articles, tools, accouterments, and accessories (herein collectively "articles") upon specific positions upon the body. Many jobs require the frequent and repeated use of specific articles, which are more expediently kept at hand by portage upon the body. Such jobs include construction, law enforcement, mining, and soldiering, among others. For example, carrying a tool belt while working construction applies weight unevenly distributed upon the hips. Regular use of a tool belt can, over time, cause musculoskeletal disorders and create lasting damage and discomfort to the musculoskeletal system.

[0008] The present ergonomic weight-distributing vest has been devised to distribute weight of ported articles through-out a non-stretch mesh fabric that, when snugly fit to a wearer, conforms to the contours of the torso of a wearer, and weight of articles suspended and attached to the vest is thereby evenly distributed through the mesh fabric over multiple anatomical contact points across the contours of the wearer's torso. Weight of articles ported upon the vest is thusly evenly distributed across the contours of the wearer's torso, and local stresses at the point of portage is appreciably lessened. The vest also provides lumbar support for the small of the back when worn, and therefore assists in maintaining correct posture.

[0009] The ergonomic weight-distributing vest has been devised to snugly fit to a person in order that the mesh fabric conforms to the contours of the wearer's torso in order that weight of articles there attached are evenly distributed across the torso. As a result, a number of different vest sizes may be necessary to provide a proper fit for various human physiques. At least seven sizes are contemplated. An expansible zipper may be included in a vest when needed to adapt a vest to fit physiques having dimensions in between said plurality of sizes and to accommodate the changing shapes of physiques over time. The expansible zipper enables the vest to be enlarged when a third zipper track disposed upon a flap member is connected to a first zipper track in lieu of a second zipper track, as will be described subsequently. Thus, the invention provides a number of different sizes with a variety of adjustments to fit the vest appropriately to virtually any user's size or physique to obtain the benefits and advantages of the invention, which were not previously available.

[0010] The ergonomic weight-distributing vest includes a padded belt band disposed to girdle the waist of a wearer when the vest is worn, which provides additional lumbar support. A hook and loop fastener strip is disposed overlying the padded belt band, and a belt member releasably fastens the vest closed at the waist of a wearer, said belt member disposed overlying the hook and loop fastener strip. Extant articles, such as tool bags, holsters, pockets, and pouches, among other such articles, are releasably attachable to the hook and loop fastener strip and supported depending over the belt member. Weight of articles there disposed is thus distributed through the padded belt band around the hips of a wearer and distributed by the non-stretch mesh fabric across the contours of a wearer's torso.

[0011] Moreover, said articles attached to the hook and loop fastener strip may be moveably positioned upon the hook and loop fastener strip around the waist of the wearer and supported by the belt member, or moved to a position deemed more comfortable or accessible around the waist of the wearer. A smaller belt member is also contemplated for use without articles attached to the underlying hook and loop fastener strip, to assist in fastening the vest around, and snugly upon, the torso of a wearer, as may be desirable in jobs requiring a smaller vest profile.

[0012] A pair of adjustable shoulder straps is included, each of said pair of shoulder straps having a rear strap portion releasably attachable to a front strap portion. Each of said shoulder straps enables an adjustable fit of the vest to a particular torso, and enables further weight distribution of articles carried upon the vest over the shoulders. However, it is important to note that the snug fit of the vest around the waist and across the torso enables portage of various articles with the shoulder straps loosely attached together (when desired) as weight is well distributed by the mesh fabric across the multiple anatomical contact points conforming to the contours of the torso.

[0013] For the strategic placement of additional pockets and pouches as desired for use when attending to a particular job, hook and loop sections are contemplated disposed upon the ergonomic weight-distributing vest, whereby pockets, pouches, and other articles, may be releasably secured to the vest and positioned strategically according to the dictates of a particular wearer. For example, law enforcement and military embodiments are contemplated wherein a wearer may customize the vest for use porting a particular set of articles upon the vest for use during a particular operation or job at hand.

[0014] For use in construction and other industries, the ergonomic weight-distributing vest has been devised to meet ANSI Class I safety standards, and provides at least 250 square-inches of visible surface area. However, attachable sleeves are contemplated to increase said visible surface area to at least 700 square-inches whereby the ergonomic weight-distributing vest is ANSI Class II compliant. Reflective striping is contemplated whereby the vest visibility is increased. However, covers are also contemplated that are attachable to conceal reflective striping, as desired, whereby a particular ergonomic weight-distributing vest may be useable with said reflective striping and other features of the vest (such as, for example, the word "POLICE") concealed. Removal of the covers will then reveal the reflective striping or other features previously concealed, as may be desirable when, for example, responding to an emergent situation, directing traffic, conducting a raid, or signaling location for pickup following a military operation, for example.

[0015] The snug fit of the ergonomic weight-distributing vest further provides increased safety as the likelihood the vest will snag upon some structure during use is decreased. Moreover, the mesh fabric enables passage of heat and vapor and vents the vest for use in hot climates. Additional linings are contemplated attachable to the vest interior to adapt the vest for use in cold climates. While the mesh fabric is considered of a durable, waterproof, non-stretch material (such as polyester) additional fabrics are contemplated for use, for example in law enforcement and by the military, such as aramid and para-aramid fibers suited to resisting penetration of high velocity particles including bullets and shrapnel.

[0016] Thus has been broadly outlined the more important features of the present ergonomic weight-distributing vest so

that the detailed description thereof that follows may be better understood and in order that the present contribution to the art may be better appreciated.

[0017] Objects of the present ergonomic weight-distributing vest, along with various novel features that characterize the invention are particularly pointed out in the claims forming a part of this disclosure. For better understanding of the ergonomic weight-distributing vest, its operating advantages and specific objects attained by its uses refer to the accompanying drawings and description.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018] FIG. 1 is an isometric view.

[0019] FIG. 2 is a front view with the ergonomic weight-distributing vest unzipped.

[0020] FIG. 3 is a front view illustrating the fastening action of a shoulder strap.

[0021] FIG. 4 is a front view illustrating the attachment of articles to a hook and loop fabric strip disposed underlying a belt member.

[0022] FIG. 5 is an in-use view illustrating conformability of a mesh fabric to the contours of a wearer's torso whereby weight of articles ported upon the vest is evenly distributed throughout the vest.

[0023] FIG. 6 is a detail magnified view of the mesh fabric illustrating the lines of force by which weight of articles ported by the vest is distributed throughout the mesh fabric and across an increased surface area of a wearer's torso.

[0024] FIG. 7 illustrates an embodiment for use in law enforcement.

[0025] FIG. 8 illustrates an embodiment detailing a flap member of an expansible zipper configured with converging edges.

[0026] FIG. 9 is a rear view with attachable sleeves illustrated.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0027] With reference now to the drawings, and in particular FIGS. 1 through 9 thereof, example of the instant ergonomic weight-distributing vest employing the principles and concepts of the present ergonomic weight-distributing vest and generally designated by the reference number 10 will be described.

[0028] Referring to FIGS. 1 through 9 a preferred embodiment of the present ergonomic weight distributing vest 10 is illustrated.

[0029] The present ergonomic weight-distributing vest 10 has been devised to enable portage of various tools, accouterments, articles, and accessories that a particular job may require. Many jobs necessitate the repeated use of particular tools, articles, accouterments, or other accessories (herein collectively "articles"), on a regular basis, whereby keeping said articles about the person is deemed efficient and desirable. Unfortunately, porting such articles about the person can, over periods of time, engender repetitive stress injuries from the weight of said articles applied unevenly distributed upon the body.

[0030] A tool belt, for example, popular in the construction industry, applies an amount of increased weight unevenly upon the hips. This weight, there disposed, can inadvertently injure the body, create back and knee pain, and result in musculoskeletal problems, especially after years on the job.

The same is true for other industries requiring frequent and regular use of various articles, which, expediency dictates, are prudently ported upon the body. Such industries include, but are not limited to, mining, law enforcement, and the military, all of which require personnel to don specific tools for the job on a daily basis for hours at a time.

[0031] What is needed is an ergonomic weight distributing vest **10** that includes a non-stretch mesh fabric **20** that enables multiple anatomical contact points **22** of said fabric **20** across the torso **70** of a wearer, each of said contact points **22** conforming the vest **10** to the contours of the torso **70** of the wearer, wherein the weight of extant articles **72** suspended from the vest **10** and attached thereto, is distributed evenly throughout the mesh fabric **20** over said multiple anatomical contact points **22** across the contours of a wearer's torso **70**, whereby said weight is more evenly distributed across a wearer's body and load bearing is thereby ergonomically configured to lessen local stresses resultant from carrying said articles **72** at a specific position upon the body.

[0032] The present ergonomic weight-distributing vest **10** comprises a non-stretch mesh fabric **20** disposed to snugly fit to the torso **70** of a wearer. The non-stretch mesh fabric **20** is embedded with a multitude of elongated crossing non-stretch fibers **22a** (shown in FIG. 6). The embedment of the multitude of elongated crossing non-stretch fibers **22a** may or may not include being located within a fabric material, a non-woven material, a stretching material, a non-stretching material, and organic material or an inorganic material.

[0033] The intersections of the crossing fibers **22a** forms a matrix having of a plurality of anatomical contact points **22**, which by their definition each engages a portion of the wearer's torso. This plurality of contact points **22** conforms the mesh fabric **20** around the contours of a wearer's torso **70**, with each of the contact points **22**, by the nature of the non-stretching properties of the fibers and by each engaging a portion of the wearer's torso, distributes weight of extant articles **72** attached to the vest **10** across the contours of the wearer's torso **70**. A feature of the present invention is that the embedded multitude of elongated crossing non-stretch fibers **22a** results in a matrix that is non-stretching in the horizontal, vertical, and diagonal direction. Weight is thereby distributed across a greater surface area of the wearer's body than otherwise would occur by simply porting an article, for example, attached to a belt, or at another specific location upon the body. Weight is also better distributed compared to vests that are composed of a stretching material or used a stretchable material for weight distribution because the use of stretching materials generally isolate weight of an extant articles to more of a localized area due to their flexing or stretch properties.

[0034] Because the weight of said articles are distributed over a larger surface area of the wearer's torso **70**, local stresses rendered the body from specific siting of various loads upon the body is appreciably lessened. The multitude of elongated crossing non-stretch fibers **22a** are shown in FIG. 6 intersect at preferably a 90 degree angle to allow for the even distribution of weight of the extant articles **72** attached to the vest **10** across the contours of the wearer's torso **70** especially compared to fibers that intersect greater than 90 degree angles and less than 90 degree angles.

[0035] Another feature of the present invention is that the ergonomic weight-distributing vest **10** comprises a one-piece material that extends continuously or uninterrupted around the wearer's torso **70**. By extending continuously or uninterrupted around the wearer's torso **70**, the matrix of crossing

non-stretch fibers **22a** provides for a greater uniform surface area for weight distribution compared to vests that comprises 2 or more pieces or vest that are worn over the shoulder or are connected by two or more securing members.

[0036] The present ergonomic weight-distributing vest **10** is devised to snugly fit to the torso **70** of a particular user. The snug fit of the vest **10** is paramount to ensure the mesh fabric **20** conforms to the contours of the wearer's torso **70**. The snug fit further provides lumbar support for a wearer, and assists in maintaining a correct posture. In order that the fit be fairly exact to conform to the various anatomies and physiques prevalent across human physiology, a plurality of sizes of the present ergonomic weight-distributing vest **10** is contemplated, each size appropriate to a particular range of physical dimensions, whereby a snug fit is ensured for any particular person choosing to use the device **10**.

[0037] To enable adaptability of a particular sized vest **10**, if needed, an expansible zipper **24** may be included, see FIG. 1. The expansible zipper **24** includes a first zipper track **26**, a second zipper track **28**, and a flap member **30** disposed between the first zipper track **26** and the second zipper track **28**. The flap member **30** is moveable from a folded position, attached interiorly to the vest by hook and loop members **32**, to an in-use position, disposed extended between the first and second zipper tracks **26**, **28**. A third zipper track **34** is disposed upon the flap member **30** in parallel with the second zipper track **28**. The third zipper track **34** is therefore connectable to the first zipper track **26** in lieu of the second zipper track **28**, and the vest **10** is thereby expanded by the inclusion of the flap member **30** extended in between the first zipper track **26** and the second zipper track **28** when the vest **10** is worn.

[0038] The expansible zipper **24** provides versatility since it enables snug fitting of the vest **10** to the torso **70** of a person exhibiting a size, which is between the sizes of the vest **10** that are contemplated for manufacture. The expansible zipper **24** further enables adjustability for a wearer if over time, said wearer's physique or size varies. An additional flap member (not shown) is contemplated whereby the a fourth zipper track (not shown) is attachable to the third zipper track **34** in lieu of the first zipper track **26** and second zipper track **28** whereby the vest is further adjustable.

[0039] An embodiment shown in FIG. 8 is contemplated wherein the flap member **30** is disposed with converging vertical edges. In this embodiment, the flap member **30** has a shorter width at the top of the vest (proximal the sternum of a wearer) relative the width at the bottom of the flap member (proximal the navel of a wearer). This configuration enables a snug fit of the vest **10** across the chest and the stomach of a wearer, when needed (as case may be), to better enable distribution of weight through the mesh fabric **20** across the entire torso **70** of a wearer than otherwise may occur should the vest more tightly fit around a wearer's stomach relative said wearer's chest.

[0040] To further enable a snug and accurate fit around the torso **70** of a particular user, a pair of adjustable shoulder straps **36** is included. Each of said shoulder straps **36** includes a rear strap portion **38** and a front strap portion **40**. The rear strap portion **38** and the front strap portion **40** are releasably attachable together and the vest **10** is supportable, and thus weight of extant articles attached to the vest **10** is distributable, across the shoulders of a wearer. It is important to note that the snug fit of the vest **10** around a wearer's torso **70**

distributes weight around the torso **70** of a user, and, in use, the vest **10** may be worn with the shoulder straps **36** loosely attached together.

[0041] Embodiments are considered wherein the front strap portion **40** attaches atop the rear strap portion **38** and, alternately, wherein the rear strap portion **38** attaches atop the front strap portion **40**. Such configurations are contemplated for vests **10** wherein weight is ported predominantly upon the vest front and, respectively, upon the vest rear. In the preferred embodiment herein disclosed, attachment of the rear strap portion **38** and the front strap portion **40** is effected by means of hook and loop fasteners **42** disposed to adjustably position said straps appropriate to the comfort and individual physique of a particular person wearing the device.

[0042] For comfort in wearing the vest **10**, and added support for the lumbar region, a padded belt band **44** is disposed to overlie the waist of a wearer. A hook and loop fastener strip **46** is disposed exteriorly atop the padded belt band **44** and a belt member **48** is releasably attachable to the vest **10** overlying the padded belt band **44**. The belt member **48** is fastenable around the wearer's waist to gird the wearer's waist and snugly fit the vest **10** to the torso **70** of a wearer. The hook and loop fastener strip **46** is disposed between the belt member **48** and the padded belt band **44** to releasably secure extant articles thereto. For example, as is shown in FIG. 4, extant tool bags **74** are attachable to the hook and loop fastener strip **46**, and then supported over the belt member **48** when worn. Weight of tools disposed within said tool bags **74** is distributed through the padded belt band **44** into the mesh fabric **20** where the plurality of contact points **22** collectively distributes said weight across the contours of the wearer's torso **70**, and the weight of said tools applied directly upon the hips is appreciably reduced. Moreover, the hook and loop fastener strip **46** enables selective positioning of the tool bags **74**, as shown in FIG. 3, whereby the weight of articles ported therein is counterbalanced on either side of the person wearing the vest **10**. Such selective positioning enables a person wearing the vest **10** to position tool bags **74** and other articles, as desired, to affect the greatest comfort when porting said articles over extended time periods. Moreover, adjustments may be made, as desired, to reposition said articles and redistribute weight from a different location upon the body.

[0043] Additional attachment means are contemplated disposed exteriorly upon the mesh fabric **20**, said attachment means releasably securing extant articles thereto. Said attachment means are contemplated to include attachable pockets and pouches **50** that releasably connect to hook and loop sections **52** strategically placed upon the vest **10** exterior, said hook and loop sections **52** devised and positioned dependent upon the particular industry to which the vest **10** is configured for use. For example, as shown in FIG. 6, an embodiment of the vest **10** usable in law enforcement is illustrated wherein a badge window **54** is disposed to support identification, a badge, or other implement therein, various law enforcement accouterments **76** (such as, for example, a Taser, a firearm, a truncheon, a flashlight, among other such articles utile in the enforcement of the law in modern society) are attached around the belt member **48**. Additional hook and loop sections **52** are contemplated that enable customization of the vest **10** for use with various articles desirable, for example, for use by differing military units.

[0044] As is shown in FIGS. 1, 2, and 3, various pockets **56** are also contemplated as part of the vest **10**, which pockets may be permanently, attached to the vest **10** exterior. Said

pockets **56** are contemplated for secure storage of smaller articles therein, as case may be.

[0045] For use with harnesses (not shown), as desired, a flap **58** is disposed centrally upon the back of the vest **10** in a position in between the shoulder blades of a person wearing the vest **10**. The flap is disposed to enable the passage there-through of an extant attachment ring disposed upon an extant harness worn under the vest. Attachment of said extant harness to a rope, or other securing means, is thereby provided and the vest **10** may be worn over suitable harnesses as may be required for job safety when performing a particular job.

[0046] Each embodiment of the present ergonomic weight distribution vest **10** is contemplated to be ANSI class I compliant, presenting at least 217 square-inches of visible surface area to an observer. Reflective striping **60** is considered atop the mesh fabric **20**, as desired, for use when such visibility is prudent. Such reflective striping **60** may be ANSI Class I compliant, exhibiting a surface area of at least 155 square-inches upon the vest **10**. As shown in FIG. 6, removable covers **62** are contemplated, also, to conceal said reflective striping **60**, as desired, whereby a wearer may, for example, remove said covers **62** to increase visibility when responding to an emergency, for example, or signal identification during a raid, say, or signal position for pickup subsequent a tactical operation, as case may be.

[0047] FIG. 9 is a rear view with attachable sleeves **64** To increase the visible surface area of the ergonomic weight-distributing vest **10**, and meet ANSI class II safety standards, a pair of attachable sleeves **64** is shown in the embodiment of FIG. 9. Each of said sleeves **64** is attachable to the vest **10**, when desired, to increase the visible surface area of the vest **10** from at least 217 square-inches to at least 775 square-inches. Reflective striping **60** may also be increased to 201 square-inches by attachment of the sleeves **64**.

[0048] The mesh fabric **20** used throughout the vest **10** is contemplated to consist of a synthetic non-stretch fiber, such as polyester, for example; however additional durable, waterproof, and non-stretch fabrics are contemplated, such as aramid or para-aramid fibers for vests used by law enforcement and military personnel. Additional attachment means are contemplated and include metallic D-rings **66** strategically disposed upon the vest **10** for attachment of articles having clips thereupon.

[0049] For illustrative purposes, FIG. 6 shows the elongated non-stretch fibers, not identified by any reference numerals, which make up the vest mesh as being widely spaced from one another, but the art and industry understand that the mesh is made up of a multitude of closely spaced fibers which extend horizontally (widthwise) and vertically (height-wise) with respect to one another. In accordance with the teaching of the instant invention the vest described and claimed herein serves all of the functions of vests described in the relevant prior art with the additional feature of providing multiple anatomical contact points across the body or torso of the wearer when the vest is snugly fitted to the wearer's torso thereby evenly distributing the weight of articles carried by the vest over the wearer's torso.

I claim:

1. An ergonomic weight-distributing garment for a wearer carrying articles suspended from the garment, the garment comprising: a vest substantially covering a wearer's torso, said vest made of non-stretch mesh fabric consisting of a multitude of elongated crossing non-stretch fibers, the intersections of said crossing fibers forming multiple anatomical

contact points across the torso of the wearer, said anatomical contact points each engaging the wearer's torso and conforming said vest to the contour of the wearer's torso when said vest is snugly fit to the wearer's torso to evenly distribute the weight of articles suspended from the vest across the wearer's torso minimizing localized stresses resultant from the weight of said suspended articles.

2. The ergonomic weight-distributing garment of claim 1 wherein said vest is non-stretching in the horizontal, vertical, and diagonal direction.

3. The ergonomic weight-distributing garment of claim 2 wherein said multitude of elongated crossing non-stretch fibers intersect each other at a 90 degree angle to allow for the even distribution of weight of the extant articles.

4. The ergonomic weight-distributing garment of claim 3 wherein said vest comprises a one-piece material that extends continuously around the wearer's torso.

5. The ergonomic weight-distributing garment of claim 4 further comprising attachment means for various extant articles, accouterments, and accessories, wherein the weight of said articles, accouterments, and accessories is evenly distributed by the mesh fabric and supported across the contours of a wearer's torso when attached to the vest.

6. The ergonomic weight-distributing garment of claim 5 further comprising an expansible zipper vertically disposed to snugly close the vest around a wearer's torso, said expansible zipper including a first zipper track, a second zipper track, and a third zipper track, said third zipper track disposed parallel the second zipper track upon a flap member disposed to fold and releasably attach to the interior of the vest when not in use, said third zipper track moveable from said folded position to an in-use position wherein the first and third zipper tracks are connectable and the second zipper track is thereby spaced apart from the first zipper track, whereby the vest is enlargeable thereby.

7. An ergonomic weight-distributing garment for a wearer carrying articles suspended from the garment, the garment comprising: a vest substantially covering a wearer's torso, said vest made of non-stretch mesh fabric, said non-stretch mesh fabric embedded with a multitude of elongated crossing non-stretch fibers, the intersections of said crossing fibers forming a matrix having a plurality of anatomical contact points across the torso of the wearer, said anatomical contact points each engaging the wearer's torso and conforming said

vest to the contour of the wearer's torso when said vest is snugly fit to the wearer's torso to evenly distribute the weight of articles suspended from the vest across the wearer's torso minimizing localized stresses resultant from the weight of said suspended articles.

8. The ergonomic weight-distributing garment of claim 7 wherein said vest is non-stretching in the horizontal, vertical, and diagonal direction.

9. The ergonomic weight-distributing garment of claim 8 wherein said multitude of elongated crossing non-stretch fibers intersect each other at a 90 degree angle to allow for the even distribution of weight of the extant articles.

10. The ergonomic weight-distributing garment of claim 9 wherein said vest comprises a one-piece material that extends continuously around the wearer's torso.

11. The ergonomic weight-distributing garment of claim 10 wherein said multitude of elongated crossing non-stretch fibers is embedded in a non-woven material.

12. The ergonomic weight-distributing garment of claim 10 wherein said multitude of elongated crossing non-stretch fibers is embedded in a woven material.

13. The ergonomic weight-distributing garment of claim 10 wherein said multitude of elongated crossing non-stretch fibers is embedded in a stretchable material.

14. The ergonomic weight-distributing garment of claim 10 further comprising attachment means for various extant articles, accouterments, and accessories, wherein the weight of said articles, accouterments, and accessories is evenly distributed by the mesh fabric and supported across the contours of a wearer's torso when attached to the vest.

15. The ergonomic weight-distributing garment of claim 14 further comprising an expansible zipper vertically disposed to snugly close the vest around a wearer's torso, said expansible zipper including a first zipper track, a second zipper track, and a third zipper track, said third zipper track disposed parallel the second zipper track upon a flap member disposed to fold and releasably attach to the interior of the vest when not in use, said third zipper track moveable from said folded position to an in-use position wherein the first and third zipper tracks are connectable and the second zipper track is thereby spaced apart from the first zipper track, whereby the vest is enlargeable thereby.

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