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(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2018/0213920 A1**
Uzomba (43) **Pub. Date: Aug. 2, 2018**(54) **VELCRO DOCUMENT CARRYING
MECHANISM PROVIDING ADJUSTABLE,
REMOVABLE SHOULDER STRAP/PADDING
WITH SAFETY CLASP AND DESIGNS WITH
VALUE TO BE WATER REPELLENT AND TO
SECURE PLANS HANDS FREE**(71) Applicant: **Kennedy C. Uzomba**, ACWORTH, GA
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(US)(21) Appl. No.: **15/423,196**(22) Filed: **Feb. 2, 2017****Publication Classification**(51) **Int. Cl.**
A45F 3/14 (2006.01)(52) **U.S. Cl.**
CPC **A45F 3/14** (2013.01); **A45F 2003/003**
(2013.01)(57) **ABSTRACT**

This invention relates to a document carrying shoulder strap providing for adjustable, removable padding and designs,

which provides with attachment buckles and an adjustable mechanism which is improved by providing an interlocking lobster claw clasp made of galvanized metal material with swivel hinge structure. This present invention also provides with a padded shoulder strap adjustable in height for suitable use of occupant of different size. The upper end of the shoulder strap can be repositioned by manipulating a driving mechanism accessible on the shoulder strap of the invention. In a preferred embodiment, a shoulder cushioning pad is disposed on the shoulder carrying strap, following the adjustment of the upper end of the shoulder straps; and its adjuncts whereby a document carrying shoulder strap and designs, commonly known as plan holders, may be, suspended in a comfortable and adjustable manner. In a preferred embodiment, this invention provides for a heavy duty commercial grade Velcro document storage compartment strap belt, and also providing for an attached hardened plastic D-Ring coupler in which the Velcro document storage compartment strap belt is fed through the D-Ring coupler (position D. of FIG. 17) and then overlapped in the opposite direction thereby allowing the Velcro-tip end of the Velcro document storage compartment strap belt to mate with and join to the velvet fabric body of the Velcro document storage compartment strap belt in the opposite direction. The entire embodiment of my invention may or may not be treated with chemicals that are water repellent.



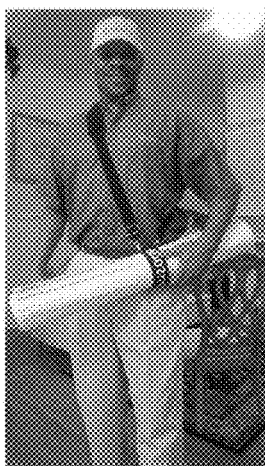


FIG. 1

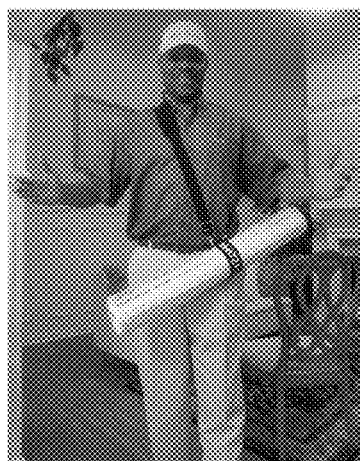


FIG. 2

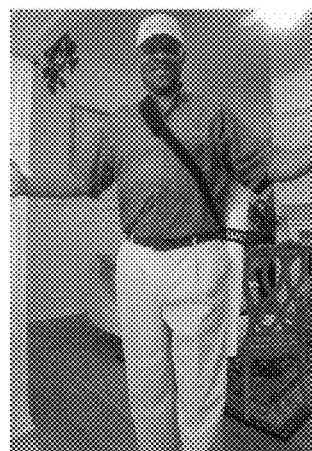


FIG. 3

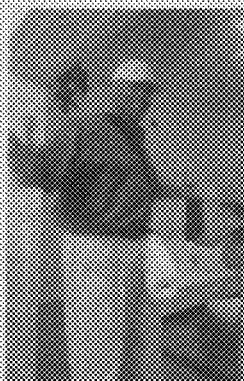


FIG. 4

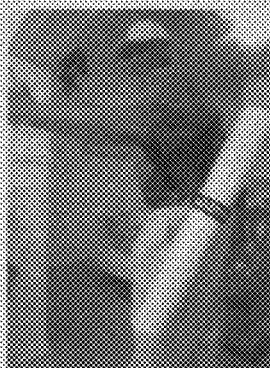


FIG. 5

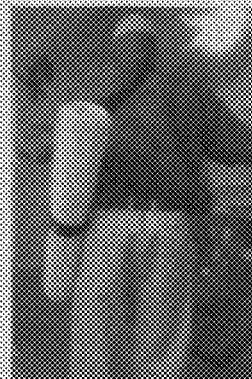


FIG. 6

Full embodiment of document carrying shoulder strap invention

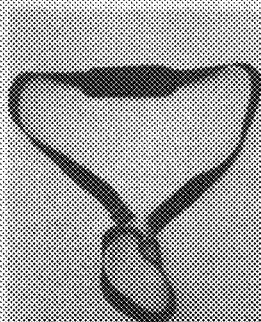


FIG. 7

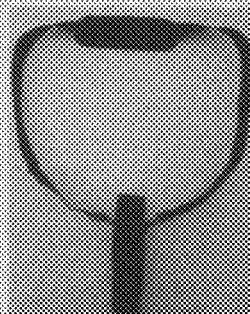


FIG. 8

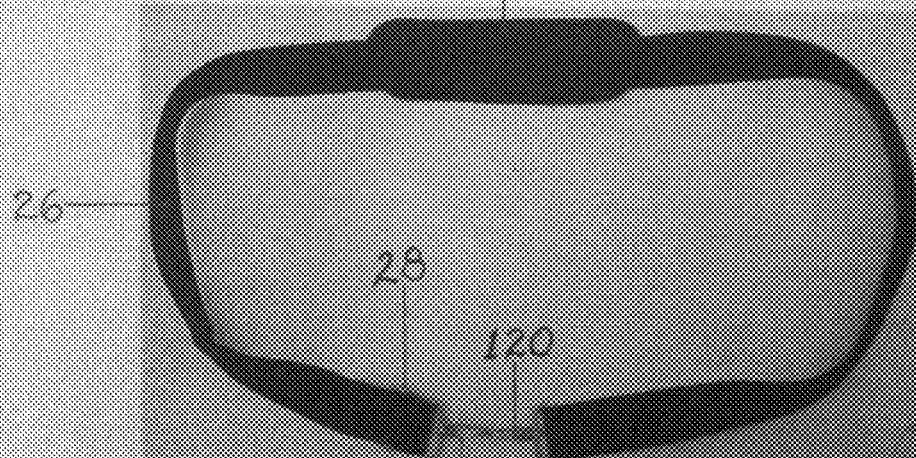


FIG. 9

32

122

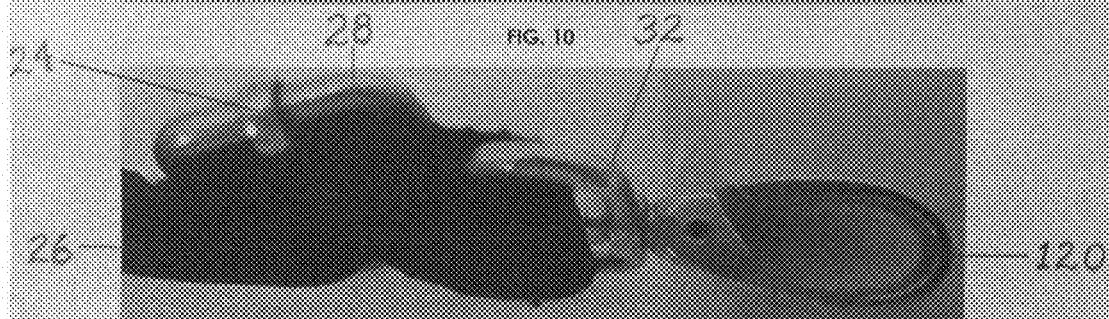
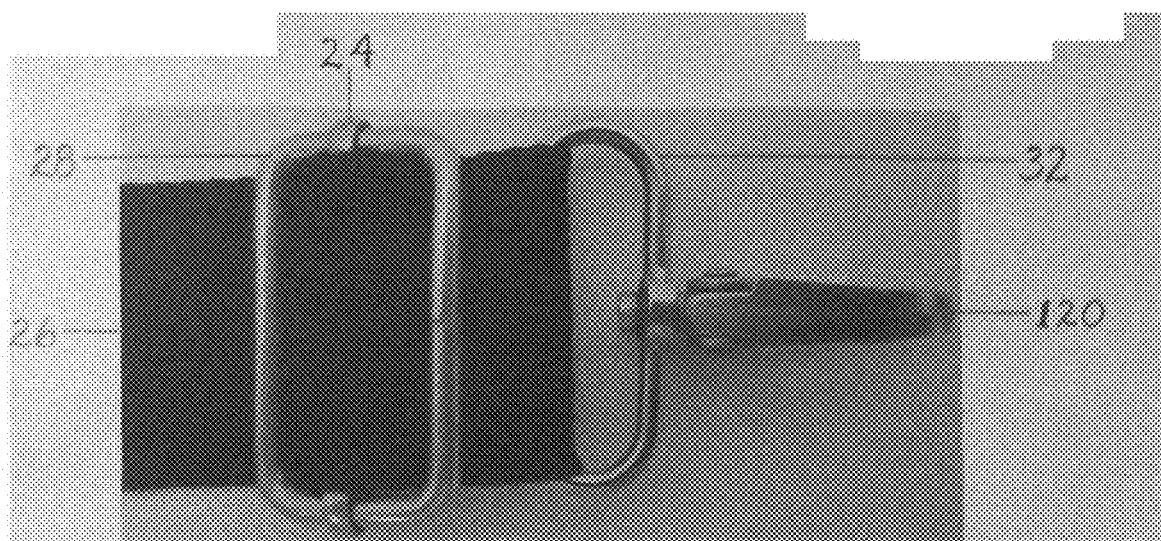


FIG. 11

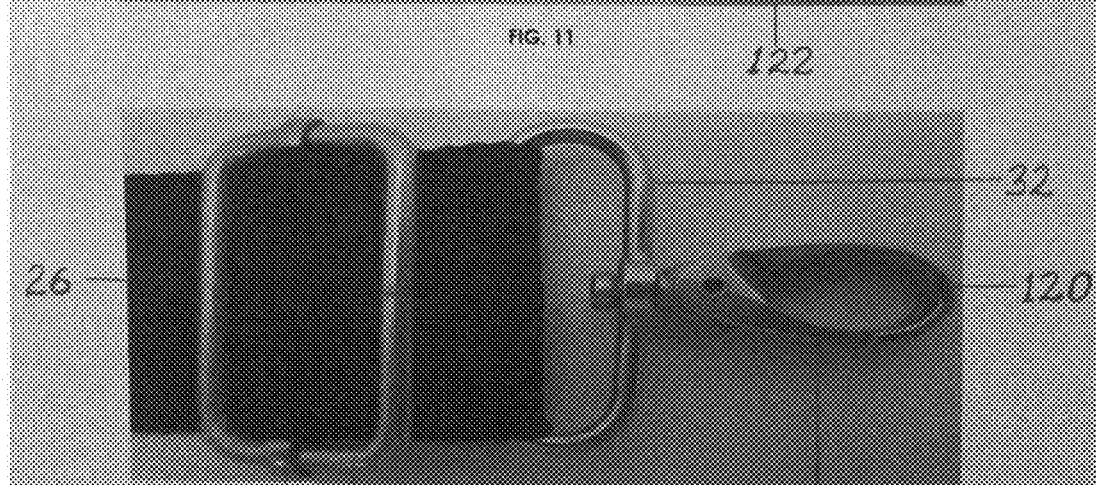


FIG. 12

One embodiment of a safety or latch-type clasp consisting of:

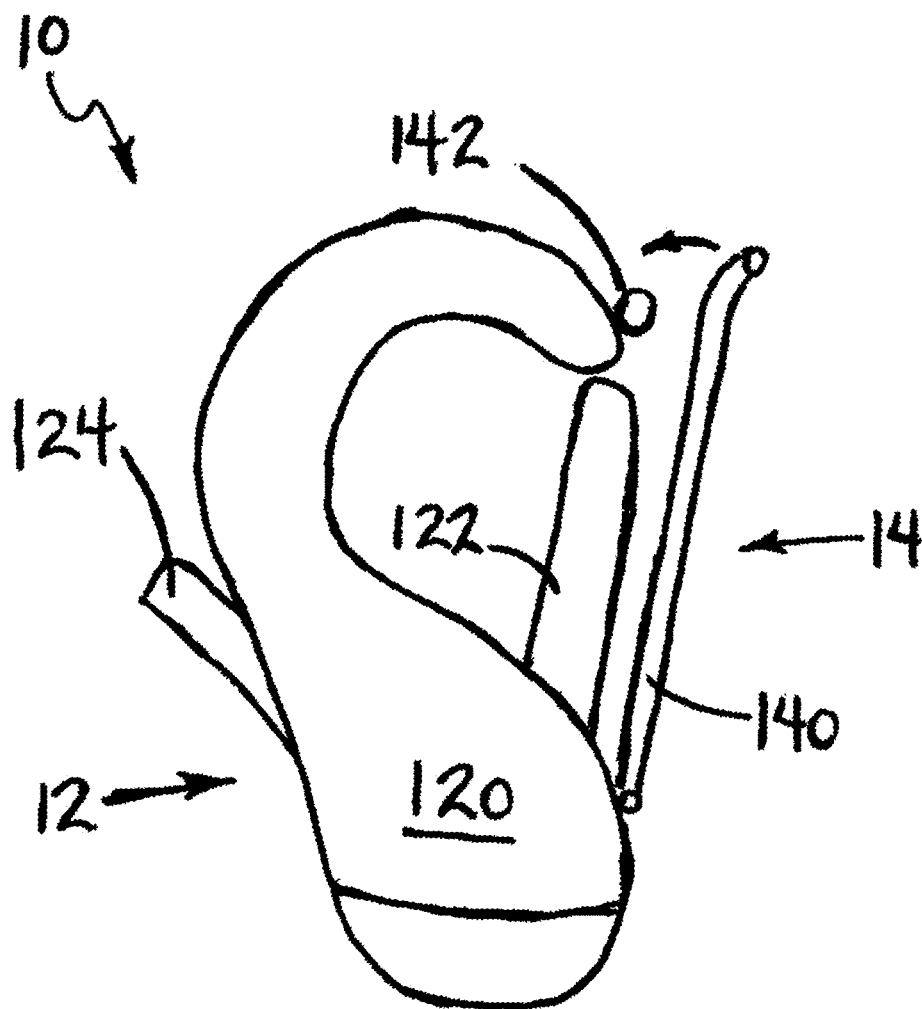
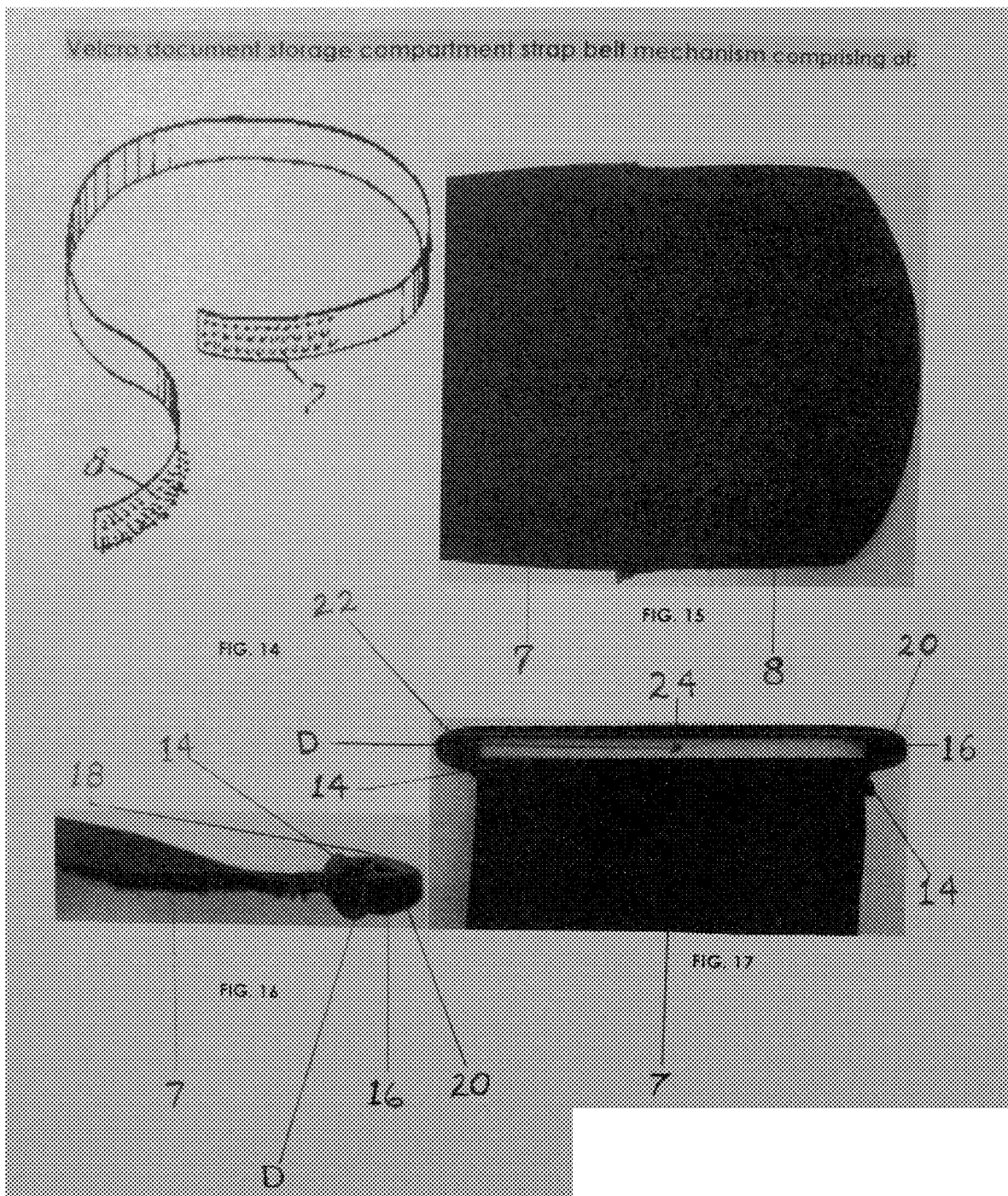


FIG. 13



**VELCRO DOCUMENT CARRYING
MECHANISM PROVIDING ADJUSTABLE,
REMOVABLE SHOULDER STRAP/PADDING
WITH SAFETY CLASP AND DESIGNS WITH
VALUE TO BE WATER REPELLENT AND TO
SECURE PLANS HANDS FREE**

TECHNICAL FIELD

[0001] The disclosed invention relates to blueprint and document holders.

BACKGROUND

Background of the Invention

[0002] Motivation

[0003] Inventor was motivated by the constant reminder that if something of value is not attached to you, it may easily be misappropriated. So after having to pay for misplaced or misappropriated "scaled drawings" on numerous occasions I invented a way to keep better track and control of my drawings. Also, the present method of double wrapping your drawings with what is universally known as a rubber band can often times "tear" and "cut" away at your valuable scaled drawings. I have always needed a document holder that would allow me to work hands-free so that I can focus on my work. And because I often work outside, I have always needed a document holder that was also water repellent as well.

[0004] Obstacles and Opportunities

[0005] The void which exist is that any known or present day prior art that may be similar to this invention is not designed nor configured exactly like the present full embodiment of this invention.

[0006] There are no known inventions in existence today that is configured or depicted exactly herein that holds and carry's blueprints or documents as described in this present embodiment of art, with the exact design and dimensions illustrated herein.

[0007] It would be advantageous to provide a holder for rolled sets of plans or documents on a padded carrying shoulder strap with attached [and providing for what is universally known as "Velcro"] a document storage compartment strap belt for safe transport and storage.

[0008] It would also be advantageous to provide a blueprint or document holder that holds a number of sizes of rolled plans, along with posters, maps, blueprints, paintings, artwork, banners drumsticks, arrows, trekking poles, or fishing rods in this manner.

[0009] It would also be advantageous to provide a blueprint and document holder that will keep them in viewable condition throughout the building or project life cycle.

[0010] It would further be advantageous to provide a blueprint holder that will hold a number of plans as well.

[0011] It would also be advantageous to provide this certain blueprint and document holder to the industry because there are none in existence today that is configured or depicted exactly as presented in the full embodiment of this invention and demand is warranted.

DESCRIPTION

Field of Invention

[0012] The disclosed invention relates to blueprint and document holders and, more particularly, to a blueprint and document holder that is made and designed for holding rolled sets of plans. A carrying shoulder strap which also provides with a padded shoulder strap adjustable in height for suitable use of occupants of different size. The shoulder strap is adjustable in height according to the occupant of different size. This present invention also provides for and attaches an adjustable, removable padding with attached commercial grade Velcro document storage compartment strap belt for safe transport and storage.

BRIEF SUMMARY OF THE INVENTION

[0013] In accordance with the present invention, there is provided a blueprint and documents holder that is both functional and decorative.

[0014] A document carrying shoulder strap and design strap is the length of fabric or other flexible material (such as leather, vinyl, rubber and any other now known or discovered in the future), used to suspend an item, often of some weight, from the shoulder(s). The strap may be worn slung over one shoulder or across the body. In the interest of comfort, they often have some manner of padding near the middle, where the strap rests directly against the shoulder or neck.

[0015] Document carrying shoulder strap, providing for adjustable, removable padding and designs, also provides with an adjustable mechanism which includes an auxiliary loop attachment for attaching the strap to, and improved by providing an interlocking clasp with swivel hinge structure and commercial grade Velcro document storage compartment strap belt, providing for an attached hardened plastic D-Ring coupler. This present invention also provides with a padded shoulder strap adjustable in height for suitable use of occupant of different size. The upper end of the shoulder strap can be repositioned by manipulating a driving mechanism accessible on the shoulder strap of the invention. In a preferred embodiment, a shoulder cushioning pad is disposed on the shoulder carrying strap, following the adjustment of the upper end of the shoulder straps. The padded shoulder strap with interlocking clasp.

[0016] My invention presents an improved and useful version of supporting mechanism that relates to a document carrying shoulder strap and design, and provides with an adjustable mechanism which is improved by providing an interlocking clasp made of galvanized metal material with swivel hinge structure; and its adjuncts whereby a document carrying shoulder strap and designs, commonly known as plan holders, may be, suspended in a comfortable and adjustable manner. With the above ends in view, my invention consists of an elongated shoulder strap, of any desired textile "fabric, such as nylon, leather and any other suitable material now known or invented by men in the future adapted to engage the shoulders of the user and serve as a support from which material can be adjustably suspended and the ends of the straps which provides with an adjustable mechanism which is improved by providing an interlocking clasp with swivel hinge structure and commercial grade Velcro document storage compartment strap belt, providing for an attached hardened plastic D-Ring coupler. This pres-

ent invention also provides with a padded shoulder strap adjustable in height for suitable use of occupant of different size. The upper end of the shoulder strap can be repositioned by manipulating a driving mechanism accessible on the shoulder strap of the invention. In a preferred embodiment, a shoulder cushioning pad is disposed on the shoulder carrying strap, following the adjustment of the upper end of the shoulder straps. The padded shoulder strap with interlocking clasp includes: The respective front and rear end portions of the elongated shoulder strap are passed through and clamped by corresponding pairs of buckles permanently secured to elongated straps of any desired fabric, which straps are in turn secured in spaced relation to each other on the upper periphery of the front and rear portion respectively of an Velcro document storage compartment strap belt thus affording an adjustable and detachable means for supporting the same.

[0017] The entire embodiment of my invention may or may not be treated with chemicals that are water repellent.

[0018] For the purpose of illustrating my invention I have shown in the accompanying drawings one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of the instrumentalities as herein shown and described.

BRIEF DESCRIPTION OF DRAWINGS

[0019] For purposes of clarity and brevity, like elements and components will bear the same designations and numbering throughout the Figures.

[0020] The accompanying drawings, which are included to provide a further understanding of the invention are incorporated in and constitute a part of this specification, illustrate embodiments of the invention and together with the description serve to explain the principles of the invention. In the following drawings:

[0021] FIG. 1 Depicts a man illustrating the front elevation view (hands on document) of the Velcro document carrying mechanism.

[0022] FIG. 2 Depicts a man illustrating the front elevation view (hands free) of the Velcro document carrying mechanism.

[0023] FIG. 3 Depicts a man illustrating the front elevation view (hands free with Velcro document carrying mechanism).

[0024] FIG. 4 Depicts a man illustrating the front elevation view (hands free with document carrying mechanism positioned to rear) a man illustrating the right oblique front elevation view (hands free with document carrying mechanism positioned to his left side) of the Velcro document carrying mechanism.

[0025] FIG. 5 Depicts a man illustrating the left elevation view (hands free with document carrying mechanism positioned to his left rear) of the Velcro document carrying mechanism.

[0026] FIG. 6 Depicts a man illustrating the rear elevation view (hands free with Velcro document carrying mechanism).

[0027] FIG. 7 Depicts the full embodiment of document carrying shoulder strap invention depicting an extended plan view of a document carrying shoulder strap, providing for

adjustable, removable padding and designs, also provides with an adjustable mechanism which is improved by providing an interlocking clasp with swivel hinge structure embodying the present invention; providing also for a side view of the commercial grade heavy duty Velcro storage compartment strap belt.

[0028] FIG. 8 Depicts the full embodiment of document carrying shoulder strap invention depicting an extended plan view of a document carrying shoulder strap, providing for adjustable, removable padding and designs, also provides with an adjustable mechanism which is improved by providing an interlocking clasp with swivel hinge structure embodying the present invention; providing also for a top view of the commercial grade heavy duty Velcro document storage compartment strap belt.

[0029] FIG. 9 Depicts the plan view of the document carrying mechanism providing adjustable, removable shoulder strap/padding and designs with heavy duty commercial grade Velcro document storage compartment strap belt.

[0030] FIG. 10 Depicts the top view of the document carrying shoulder strap, which provides with attachment buckles and an adjustable mechanism providing an interlocking lobster claw clasp (top view) made of galvanized metal material with swivel hinge structure.

[0031] FIG. 11 Depicts the side view of the document carrying shoulder strap, which provides with attachment buckles and an adjustable mechanism providing an interlocking lobster claw clasp (side view) made of galvanized metal material with swivel hinge structure.

[0032] FIG. 12 Depicts the top view of the document carrying shoulder strap, which provides with attachment buckles and an adjustable mechanism providing an interlocking lobster claw clasp (side view) made of galvanized metal material with swivel hinge structure.

[0033] FIG. 13 Depicts the side view of one embodiment of an interlocking clasp made of galvanized metal material.

[0034] FIG. 14 Illustrates the separable Velcro fastener afforded by this present invention to be utilized as a commercial grade heavy duty Velcro document storage compartment strap belt.

[0035] FIG. 15 Depicts the bottom view of the adhesive end of a commercial grade separable Velcro fastener.

[0036] FIG. 16 Depicts the side view of the commercial grade separable Velcro fastener providing for an attached commercial grade hardened plastic D-Ring coupler.

[0037] FIG. 17 Depicts the top view of the commercial grade separable Velcro fastener providing for an attached commercial grade hardened plastic D-Ring coupler.

DETAILED DESCRIPTION OF DRAWINGS

Description of the Preferred Embodiment

[0038] Referring to the figures, like numbers refer to like component parts with respect to each of the embodiments.

[0039] The detailed description set forth below is for exemplary embodiments and is intended to explain the present invention. It is to be understood that a variety of other arrangements are also possible without departing from the spirit and scope of the present invention.

[0040] Reference will now be made in detail to the preferred embodiments of the present invention; examples of which are illustrated in the accompanying drawings.

[0041] A complete understanding of the present invention may be obtained by reference to the accompanying draw-

ings, when considered in conjunction with the subsequent, detailed description, in which:

[0042] FIG. 1 Depicts a man illustrating the front elevation view (hands on document) of the document carrying mechanism providing adjustable, removable shoulder strap/padding and designs with heavy duty commercial grade Velcro document storage compartment strap belt.

[0043] FIG. 2 Depicts a man illustrating the front elevation view (hands free) of the document carrying mechanism providing adjustable, removable shoulder strap/padding and designs with heavy duty commercial grade Velcro document storage compartment strap belt.

[0044] FIG. 3 Depicts a man illustrating the front elevation view (hands free with document carrying mechanism positioned to his left rear) of the document carrying mechanism providing adjustable, removable shoulder strap/padding and designs with heavy duty commercial grade Velcro document storage compartment strap belt.

[0045] FIG. 4 Depicts front elevation view (hands free with document carrying mechanism positioned to rear) a man illustrating the right oblique front elevation view (hands free with document carrying mechanism positioned to his left side) of the document carrying mechanism providing adjustable, removable shoulder strap/padding and designs with heavy duty commercial grade Velcro document storage compartment strap belt.

[0046] FIG. 5 Depicts a man illustrating the left elevation view (hands free with document carrying mechanism positioned to his left rear) of the document carrying mechanism providing adjustable, removable shoulder strap/padding and designs with heavy duty commercial grade Velcro document storage compartment strap belt.

[0047] FIG. 6 Depicts a man illustrating the rear elevation view (hands free with document carrying mechanism positioned to his left rear) view of the document carrying mechanism providing adjustable, removable shoulder strap/padding and designs with heavy duty commercial grade Velcro document storage compartment strap belt.

[0048] Shoulder Strap with Padding Consisting of:

[0049] FIG. 7, 8, The full embodiment of document carrying shoulder strap invention depicting an extended front elevational plan view embodying the present invention of a document carrying shoulder strap, providing for adjustable, removable padding and designs. The respective front and rear end portions of the elongated shoulder strap are passed through and clamped by corresponding pairs of buckles permanently secured to elongated straps of any desired fabric, which straps are in turn secured in spaced relation to each other on the upper periphery of the front and rear portion respectively. It also provides with an adjustable mechanism which is improved by providing an interlocking clasp with swivel hinge structure embodying the present invention; providing also for both the side and top view of the commercial grade heavy duty Velcro document storage compartment strap belt.

[0050] With the above ends in view, the present invention further consists of an elongated shoulder strap, of any desired textile "fabric, such as nylon, leather and any other suitable material now known or invented by men in the future adapted to engage the shoulders of the user and serve as a support from which material can be adjustably suspended and the ends of the straps which provides with an adjustable mechanism which is improved by providing an interlocking clasp with swivel hinge structure;

[0051] Interlocking Lobster Claw Clasp Includes:

[0052] A metal lobster claw clasp with an outer housing made of a sheet of metal foil folded about its notched center portion so as to define a generally lobster claw-shaped housing having two opposed surface portions defining lateral openings there between. The lobster claw clasp additionally includes a generally C-shaped element having two arched portions, one of which terminates in a flat end which is normally disposed to the axis of the element and the other of which terminates in a beveled end which is obliquely directed towards the center of curvature of the associated arched portion. This C-shaped element is mounted in one lateral opening defined between the two surface portions of the housing and an elongated latching bar is introduced into the other lateral opening thereof. The latching bar is pivotably supported at one end and has an opposite free end which terminates in an oblique surface complementing the beveled end of the other arched portion. The latching bar is spring-loaded so that the oblique surface thereof is urged against the beveled surface of the arched portion to thereby substantially close the opening between the ends of the C-shaped element.

[0053] Lobster Claw Clasp Consisting of:

[0054] Referring to the figures, like numbers refer to like component parts with respect to each of the embodiments.

[0055] The detailed description set forth below is for exemplary embodiments and is intended to explain the present invention. It is to be understood that a variety of other arrangements are also possible without departing from the spirit and scope of the present invention.

[0056] To better explain the exemplary embodiments disclosed below, the following words or phrases are used for describing various elements of the exemplary embodiments, including:

[0057] Lobster Claw-type clasp: may include the following clasps known in the various industry by specific labels, such as lobster claw type clasps, single or double push lock type clasps, snap bolts or bolt snaps (interchangeably used), snap hooks and carabiners, among other types of clasps. The lobster claw type clasps may also include many variations, including standard lobster claws with or without jump rings, tear drop with or without jump rings, trigger clasp, lobster claw with swivel, infinity or figure-eight shaped lobster claw, oval cast clasp, dolphin shaped, heart shaped, among the many varieties available.

[0058] Referring now to FIG. 13, one embodiment depicts a clasp or connector 10 comprising a connector clasp 12 and a safety clasp 14 coupled to the connector clasp 12. The connector clasp 12 comprises a body 120, a movable or displaceable element 122, and means 124 for moving or displacing the element 122. The safety clasp 14 comprises a pivotal clasp 140 and a receiver 142 for receiving and coupling with the clasp 140. The safety clasp 14 is mounted to the connector clasp 12 so that the safety clasp 14 is adjacent the element 122. Thus, the connector clasp 12, generally, and the element 122, specifically, functions as the primary means for retaining a portion of jewelry, a fixed ring, or other similar component used for securing objects or items, and the safety clasp 14, generally, and the clasp 140 and receiver 142, specifically, functions as the secondary means for retaining the portion retained by the element 122. The element 122 may be generally described as a selectively

movable or displaceable element or member, or more specifically, a selectively movable or displaceable leg of the connector clasp 12.

[0059] More specifically, the safety clasp 14 may comprise a latch clasp, the latch clasp comprising a receiver 142 coupled to the connector clasp 12. A joint 144 may be coupled to the connector clasp 12 spaced from the receiver 142. An arm 146 may be coupled to the joint 144 and selectively movable for coupling to the receiver 142 in the frictionally impinged manner described above, and aligning the arm 146 adjacent, and in some circumstances parallel, to the displaceable element or member 122 of clasp 12. The receiver 142 may have a variety of forms or shapes, including the general form of a projection or protrusion depending from the connector clasp 12 after coupling. More particularly, the projection or protrusion may have the form of a ball, knob, block or other geometric configuration that allows the receiver 142 to frictionally impinge and engage the narrow end of the clasp 14, and more particularly, the narrow portion and/or end of the arm 146 and the aperture 148 formed at the narrow portion and/or end of the arm 146. As is depicted in FIG. 13, the figure-eight clasp may frictionally impinge with the receiver 142 at a distance away from the free end (such as near the middle of the figure-eight), and the non-figure eight may as well, usually dictate by the circumference and diameter of the receiver 142. The joint 144 may comprise a variety of forms, including the use of any variety of hinge or hinges, or hinge-equivalent(s), that allows the clasp 14, and more particularly the arm 146, to selectively move between an open (non-engaged) position and a closed (engaged) position.

[0060] It is also envisioned that several methods of making, fabricating or manufacturing the aforementioned embodiments may be utilized. For instance, a method for making a clasp or connector may comprise the step of coupling a safety clasp 14 to a connector clasp 12 or the types and variations described above, wherein the safety clasp 14 may be adhered, soldered, welded or otherwise affixed to the connector clasp 12 in a manner consistent with the configurations described above.

[0061] It is further envisioned that another method of making a clasp or connector may comprise the steps of forming a connector clasp 12, forming a safety clasp 14, and then coupling the safety clasp 14 to the connector clasp 12. The safety clasp 14 may be coupled to the connector clasp 12 by adhering, soldering, welding or otherwise affixing to a portion or the connector clasp 12.

[0062] It is further envisioned that another method of making a clasp or connector may comprise the steps of acquiring a connector clasp and acquiring a safety clasp, which may be accomplished by making each clasp or by purchasing each clasp, or by making one of the clasps and purchasing one of the clasps. After acquiring the clasps, the safety clasp 14 is coupled to the connector clasp 12, which may be accomplished by adhering, soldering, welding or otherwise affixing the safety clasp 12 to the connector clasp 12.

[0063] Related to the aforementioned methods described above are various methods for making an item of jewelry. In one such method, a method for making an item of jewelry comprises the step of coupling a connector clasp 12 having a safety clasp 14 coupled thereto to a segment of the jewelry, wherein the segment may comprise an end or a segment intermediately disposed between the respective ends of the

Velcro document storage mechanism. In another embodiment, a method for making an item of jewelry comprises the steps of coupling a safety clasp 14 to a connector clasp 12, such as by adhering, soldering, welding or otherwise affixing the safety clasp 14 to the connector clasp 12 in a manner consistent with the configuration(s) described above, and coupling the connector clasp 12 to an end of the jewelry. Other related methods include the forming of one or more clasps 12 and 14, and coupling the safety clasp 14 to the connector clasp 12 in a manner consistent with the methods described above. Another related method includes the acquisition of one or more of the clasps 12 and/or 14, and coupling the safety clasp 14 to the connector clasp 12 in a manner consistent with the methods described above.

[0064] It is envisioned that a number of materials, separately or in combination, may be suitable for use with one or more of the elements described and claimed in accordance with the embodiments disclosed herein. For jewelry, gold, silver, platinum and other precious and valuable metals may be used for one or more of the elements of each embodiment described. For non-jewelry items, it is envisioned that metal, plastic and other suitably durable materials may be used therewith.

[0065] FIG. 9 Depicts the plan view of the document carrying mechanism providing adjustable, removable shoulder strap/padding and designs with heavy duty commercial grade Velcro document storage compartment strap belt.

[0066] Referring to the figures, like numbers refer to like component parts with respect to each of the embodiments. FIGS. 9, 10, 11 and 12 illustrate a first embodiment of the invention. Referring to FIGS. 1 and 2, the embodiment comprises an elongate belt 20 having a first distal end 22 which is attached by means of an adjustable buckle 24 to the belt 20 so that the end of the belt 22 overlaps a portion of the belt 20 to permit adjustment of the length of the belt 20 and accommodate various length requirements of the person using the shoulder strap. Similarly, the belt 20 includes a second end 26 which is attached to a buckle 28 whereby the second end 26 overlaps the belt 20 to provide for length adjustment. The loops formed by the first end 22. The belt 20 further includes a middle or intermediate shoulder pad section 36. The shoulder pad section may include a cushion pad which is sewn onto the belt 20.

[0067] FIG. 10 Depicts the top view of the document carrying shoulder strap, which provides with attachment buckles and an adjustable mechanism providing an interlocking lobster claw clasp (top view) made of galvanized metal material with swivel hinge structure.

[0068] FIG. 11 Depicts the side view of the document carrying shoulder strap, which provides with attachment buckles and an adjustable mechanism providing an interlocking lobster claw clasp (side view) made of galvanized metal material with swivel hinge structure.

[0069] FIG. 12 Depicts the top view of the document carrying shoulder strap, which provides with attachment buckles and an adjustable mechanism providing an interlocking lobster claw clasp (side view) made of galvanized metal material with swivel hinge structure.

[0070] FIG. 13 Depicts the side view elevation of one embodiment of an interlocking clasp made of galvanized metal material.

[0071] FIG. 14 Illustrates the separable Velcro fastener afforded by this present invention to be utilized as a commercial grade heavy duty Velcro document storage compartment strap belt.

[0072] FIG. 15 Depicts the bottom view of the adhesive end of a commercial grade separable Velcro fastener.

[0073] FIG. 16 Depicts the side view of the commercial grade separable Velcro fastener providing for an attached commercial grade hardened plastic D-Ring coupler.

[0074] FIG. 17 Depicts the top view of the commercial grade separable Velcro fastener providing for an attached commercial grade hardened plastic D-Ring coupler.

[0075] The present invention dimensions will generally be, but not limited to the following measurements:

[0076] Velcro document storage compartment strap belt (fully extended, measurements vary between 35½"-55½" in length×8"-24" wide; Adjustable carrying shoulder strap (fully extended, measurements vary) between 55½"-79½" in length×2½"-6½" wide; shoulder strap padding (fully extended, measurements vary) between 8"-12" in length×3½"-6½" wide; Interlocking hinged clasps made of galvanized metal material (fully extended, measurements vary) between 2½"-5½" in length×1½"-6½" wide D-Ring plastic coupler (fully extended, measurements vary) between 1.00 cm-1.50 cm deep×8.00 cm-60.00 cm wide×0.50 cm-1.00 cm high

[0077] Velcro Document Storage Compartment Strap Belt Mechanism Comprising of:

[0078] Referring to the figures, like numbers refer to like component parts with respect to each of the embodiments.

[0079] In this present invention, a Velcro document storage compartment strap belt mechanism is provided with shoulder straps that can be completely detached. Detachable straps afford the user the option of carrying document items by hand and permit the item to be transported by the occupant.

[0080] The separable Velcro fastener afforded by the present invention illustrates its usefulness as documents holder. A typical illustrative use is shown in FIG. 14 in which is shown its application to a belt. A layer 7 of loop fabric is secured to one end of a belt on its outer face and a layer 8 of hook fabric is secured to the other end on its inner face. In use the layer 7 is pressed into contact with the layer-8 in desired position of adjustment and the layers will hook firmly together. A belt of this character is no longer provided with a buckle, holes or loop, and it has the great advantage of permitting of booking at an unlimited number of points along each layer of fabric 7 and 8.

[0081] The hooked fabric 8 or the looped fabric 7 may be produced in various ways. woven as relatively narrow bands having a width required for the intended use. In that event a number of such bands may be woven simultaneously on a loom of the type used for weaving ribbon. Alternatively, they may be woven as a band of considerable width which may be slit to form bands of desired width. In either event the bands may be of indeterminate length from which desired lengths may be cut at will.

[0082] Respectively, there is known a separable fastening device comprising two elements, in that case, two layers of woven fabric of the velvet type in which the loops have been cut to form hooks. The hooks of these layers of fabric are formed by a thread of artificial material, such as nylon or similar materials, so that they are capable of preserving their

shape after cutting the loops to form hooks. The preservation of the shape of the hooks is obtained by a thermal treatment appropriate for the particular artificial material used.

[0083] It will be understood that when two layers of this type are pressed into face to face relation a substantial percentage of the hooks engage with one another, and the two layers are thus hooked one to the other. Separation requires a force of a considerable magnitude when it is attempted to release a large number of hooks at once but separation may be quite readily effected by progressively peeling the layers apart. Hooking or connecting devices of this character are adapted to be used, for example, as closing devices for clothing, blinds or the like, thus replacing slide fasteners, buttons and other attachments of this type, particularly when a flexible closure, which is invisible and can be opened easily, is desirable.

[0084] It has been found that the use of one layer of fabric of the hooked velvet type, as described above, with a layer of fabric of the loop-type, such as terry or uncut velvet, provides greatly improved resistance to separation of the two layers of fabric.

[0085] In a preferred embodiment, this invention provides for a heavy duty commercial grade Velcro document storage compartment strap belt, and also providing for an attached hardened plastic D-Ring coupler in which the Velcro document storage compartment strap belt is fed through the D-Ring coupler (position D. of FIG. 17) and then overlapped in the opposite direction thereby allowing the Velcro-tip end of the Velcro document storage compartment strap belt to mate with and join to the velvet fabric body of the Velcro document storage compartment strap belt in the opposite direction.

[0086] In this present invention, the predominant way of providing for detachment of shoulder straps of document items is by D-ring members that are affixed to the body of the Velcro strap. The D-ring members are usually made of hardened plastic material.

[0087] The D-ring member (FIG. 17) is fabricated by bending a length of plastic stock of a diameter of, for example, 0.150 in. or 0.180 in. The D-ring member has a base leg 14, a pair of side legs 16 and 18, which extend upwardly and convergently toward each other from rounded junctures 20 and 22 with the base leg, and an arcuate head 24 that is joined to the side legs at junctures 20 and 22. The spacing X between the junctures 20 and 22 is less than the inner diameter D of the neck, thus forming a neck opening that is constricted relative to a head opening defined within the head 24. The length of the base leg 14 is established by the width of a loop of webbing or leather (not shown) by which the D-ring member is attached to the body of a nylon strap item. D-ring members having a different form of base for a different form of attachment to the nylon strap item can be configured with heads and necks similar to that of the illustrated embodiment. The head need not be arcuate but is preferably curved to facilitate shaping it by bending.

[0088] The herein mentioned D-ring unit for use with capture hooks having a D-ring member formed of a hardened plastic material and having a base portion, a pair of side leg portions joined to opposite ends of the base leg portions and converging toward each other from base junctures with the base portion, and a substantially arcuate head portion joined to the side at head junctures.

[0089] Thus, in summary, it can be seen that what is provided in this invention is an improved version of a prior

art plan holder FIG. 1 that is both functional and decorative, and that is fully capable of withstanding and complementing the daily duties of a contractor.

[0090] As discussed above, the method and/or device of the present invention overcomes the disadvantages inherent in the prior art methods and devices. In this respect, before explaining at least one embodiment of the present invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangement of the components or elements set forth in the following description or as illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting the scope of the invention.

[0091] Accordingly, those skilled in the art will appreciate that the conception upon which this invention is based may readily be utilized as a basis for the design of other structures, methods, and systems for carrying out the purpose or purposes of the present invention. Therefore, it is important that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit of the present invention.

[0092] Furthermore, the purpose of the foregoing “Abstract” is to enable the U.S. Patent and Trademark Office and the public, generally, and especially including the practitioners in the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection, the nature and essence of the technical disclosure of the application. The “Abstract” is neither intended to define the invention of the application, nor is it intended to be limiting to the scope of the invention in any way. It is intended that the application is defined by the claims appended to this application.

[0093] While particular embodiments of the invention have been described, those skilled in the art will recognize that many modifications are possible that will achieve the same goals by substantially the same system, device or

method, and where those systems, devices or methods still fall within the true spirit and scope of the invention disclosed.

[0094] Since other modifications and changes varied to fit particular operating requirements and environments will be apparent to those skilled in the art, the invention is not considered limited to the example chosen for purposes of disclosure, and covers all changes and modifications which do not constitute departures from the true spirit and scope of this invention.

[0095] While the invention has been described by way of example and in terms of several embodiments, it is to be understood that the invention is not limited to the embodiments disclosed herein. To the contrary, it is intended to cover various modifications and similar arrangements and procedures, and the scope of the appended claims therefore should be accorded the broadest interpretation so as to encompass all such modifications and similar arrangements and procedures.

[0096] Various other embodiments of the invention are considered to be within the scope of the disclosure. The position of the auxiliary attachments may be varied without departing from the spirit and scope of the invention. The means for attaching and fastening the elements comprising the auxiliary attachments may also be varied. The number of sub elements of the auxiliary attachments may also be varied. Thus, the invention is to be limited only by the following claims and their equivalents.

[0097] Having thus described the invention, what is desired to be protected by Letters Patent as presented in the subsequently appended claims.

[0098] The embodiments of the invention in which intellectual property is claimed are defined as follows:

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U.S. Pat. No. 5,354,131*	Mar. 18, 1993	Oct. 11, 1994	California Innovations Inc.	Bag handle with support loop
U.S. Pat. No. 5,431,317*	Nov. 30, 1994	Jul. 11, 1995	Kliot; Eugene	Multimode traveling bag
U.S. Pat. No. 5,664,713*	Jun. 17, 1996	Sep. 9, 1997	Burgstahler; Karl F.	Crutch holder
U.S. Pat. No. 5,713,439*	Feb. 12, 1996	Feb. 3, 1998	Samsonite Corporation	Dual point auxiliary luggage attachment system
U.S. Pat. No. 6,109,403*	Dec. 18, 1998	Aug. 29, 2000	Travel Caddy Inc.	Overnight case construction
U.S. Pat. No. 6,138,882*	Aug. 23, 1999	Oct. 31, 2000	Buettner; Dale T.	Universal carrier for bottles, beverage containers and other projects

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U.S. Pat. No. 6,375,053*	Jul. 14, 1999	Apr. 23, 2002	Walter Cecchinell	Knapsack supported on the two shoulders by a pair of shoulder straps
U.S. Pat. No. 6,375,056*	Aug. 11, 2000	Apr. 23, 2002	Jacques Henri	Over the shoulder holster belt
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U.S. Pat. No. 2,767,895*	Mar. 7, 1955	Oct. 23, 1956	Smith Mamie P	Multipurpose attachment for vehicle seat
U.S. Pat. No. 3,294,134*	May 21, 1964	Dec. 27, 1966	Montrose Mfg Company Inc	Wardrobe bag
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U.S. Pat. No. 4,177,909*	Oct. 17, 1977	Dec. 11, 1979	Haskell Lois O	Convertible purse
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U.S. Pat. No. 6,405,909*	Oct. 17, 2000	Jun. 18, 2002	Thomas L. Burnett	Seat-mounted gun and rod holder
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U.S. Pat. No. 6,896,164*	Feb. 12, 2003	May 24, 2005	Eva H. Fialla-Dori	Purse caddy
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International Classification	A47C7/62, B65D33/14, A45F4/00, B60R7/00, A45C15/00, A47F7/00
Cooperative Classification	B60R7/043, B60R2011/0276, B60R11/00, A45C11/26, A47C7/62, B60R2011/0017, B60R2011/0059, B60R11/0252
Classification	A47C7/62, B60R2011/0017, B60R2011/0059, B60R11/0252
European Classification	B60R7/04B, B60R11/00, A47C7/62
Classification	

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Klassifizierungen

US-Klassifikation	297/486
Internationale Klassifikation	B60R22/10
Unternehmensklassifikation	B62B3/1452, B62B9/24

Juristische Ereignisse

Datum	Code	Ereignis	Beschreibung
21. Nov. 2011	AS	Assignment	Free format text: ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: CHEN, LUNG-SHENG; WANG, YU-WEN; HUANG, YU-CHIEN; REEL/FRAME: 027265/0180 Owner name: LERADO (ZHONG SHAN) INDUSTRIAL CO., LTD., CHINA Effective date: 20111111

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Citing Patent	Filing date	Publication date	Applicant	Title
U.S. Pat. No. 3,086,529*	Jan. 4, 1962	Apr. 23, 1963	Propper Mfg Company Inc	Constrictors
U.S. Pat. No. 3,113,803*	Apr. 9, 1962	Dec. 10, 1963	Struble Albert	Head rest cover
U.S. Pat. No. 3,117,384*	Mar. 14, 1962	Jan. 14, 1964	Roman F Billis	Manipulatable teaching aid
U.S. Pat. No. 3,119,191*	Aug. 24, 1961	Jan. 28, 1964	Virginia E Vitzthum	Shoe improvement
U.S. Pat. No. 3,130,111*	Aug. 14, 1961	Apr. 21, 1964	Sobef Soc De Brevets De Fermet	Separable pile fastener

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U.S. Pat. No. 3,136,026*	May 21, 1962	Jun. 9, 1964	Velcro Sa Soulie	Method for producing a device for joining two flexibel elements
U.S. Pat. No. 3,138,841*	Oct. 23, 1962	Jun. 30, 1964	Naimer Jack	Separable fastening fabrics
U.S. Pat. No. 3,160,143*	Apr. 15, 1963	Dec. 8, 1964	Gen Electric	Quick release adjustable X-ray patient support belt
U.S. Pat. No. 3,230,545*	Nov. 6, 1964	Jan. 25, 1966	Joyce Galley	Contractible garment
U.S. Pat. No. 3,233,248*	Apr. 19, 1963	Feb. 8, 1966	Bushnell Francis L	Radiation protective apron
U.S. Pat. No. 3,277,547*	Dec. 17, 1962	Oct. 11, 1966		Separable fastening element
U.S. Pat. No. 3,279,008*	Nov. 23, 1964	Oct. 18, 1966	Wolverine Shoe & Tanning Corp	Ski band
U.S. Pat. No. 3,299,441*	Apr. 28, 1966	Jan. 24, 1967	Morris Mfg Co	Feel glove with flap holddown
U.S. Pat. No. 3,301,295*	Mar. 16, 1964	Jan. 31, 1967	Fitch Murrie M	Traveller's hand kit
U.S. Pat. No. 3,318,632*	Sep. 28, 1965	May 9, 1967	Albert Struble	Head rest cover
U.S. Pat. No. 3,319,307*	Oct. 12, 1964	May 16, 1967	Italo Marforio	Fabric fastening assembly
U.S. Pat. No. 3,319,852*	Aug. 27, 1965	May 16, 1967	Neale A Perkins	Sling
U.S. Pat. No. 3,328,081*	Oct. 28, 1963	Jun. 27, 1967	Scruggs Thomas M	Safety seat belt
U.S. Pat. No. 3,365,757*	Mar. 2, 1965	Jan. 30, 1968	Jean Billarant	Flexible band fitted with hooked elements of the filament type
U.S. Pat. No. 3,368,811*	Apr. 17, 1962	Feb. 13, 1968	Albert G Pearson	Interlocking glove and handle
U.S. Pat. No. 3,372,080*	Nov. 23, 1964	Mar. 5, 1968	Jean Billarant	Machine for the manufacture of flexible bands fitted with hooked elements
U.S. Pat. No. 3,387,345*	Mar. 23, 1967	Jun. 11, 1968	Velcro Sa Soulie	Separable fastening device
U.S. Pat. No. 3,417,440*	Jul. 21, 1966	Dec. 24, 1968	Velcro Sa Soulie	Hook and loop fastener
U.S. Pat. No. 3,461,513*	Feb. 20, 1967	Aug. 19, 1969	American Velcro Inc	Separable fastening device
U.S. Pat. No. 3,467,077*	Jun. 30, 1966	Sep. 16, 1969	Dupaco Inc	Sphygmomano metric cuff
U.S. Pat. No. 3,490,970*	Jul. 19, 1966	Jan. 20, 1970	Opti Holding Ag	Method of making a separable slide fastener with a reinforced end portion
U.S. Pat. No. 3,491,800*	Dec. 11, 1967	Jan. 27, 1970	Supplies Inc	Flexible conduit connection
U.S. Pat. No. 3,514,352*	Oct. 23, 1965	May 26, 1970	Honeycomb Co Of America Inc	Honeycomb expanding devices
U.S. Pat. No. 3,530,687*	Aug. 10, 1967	Sep. 29, 1970	Int Knitlock Corp	Method and apparatus for manufacturing knitted cloth

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U.S. Pat. No. 3,531,187*	Aug. 27, 1968	Sep. 29, 1970	Brown William H	having pile configuration
U.S. Pat. No. 3,539,436*	Aug. 10, 1967	Nov. 10, 1970	Int Knitlock Corp	Eye test frame support
U.S. Pat. No. 3,556,114*	Nov. 18, 1966	Jan. 19, 1971	Goodman & Sons Inc H	Knitted product having a material-engaging surface
U.S. Pat. No. 3,629,032*	Jul. 15, 1969	Dec. 21, 1971	American Velcro Inc	Hair curler
U.S. Pat. No. 3,643,316*	Feb. 24, 1969	Feb. 22, 1972	American Velcro Inc	Method for making flexible strips of material having on one surface thereof a pile of upstanding hooking elements
U.S. Pat. No. 3,688,348*	Dec. 16, 1970	Sep. 5, 1972	Theodore Klotz	Method of making separable fastening devices
U.S. Pat. No. 3,943,981*	Mar. 25, 1974	Mar. 16, 1976	Velcro S.A.	Method and article for fastening socks together
U.S. Pat. No. 4,083,321*	Sep. 9, 1976	Apr. 11, 1978	Lebron Richard C	Hooking-up device
U.S. Pat. No. 4,158,927*	Apr. 18, 1977	Jun. 26, 1979	Cordell Tackle, Inc.	Anti-pickpocket warning device
U.S. Pat. No. 4,163,303*	Oct. 4, 1977	Aug. 7, 1979	G. D. Hanna Incorporated	Fishing material
U.S. Pat. No. 4,222,162*	Nov. 29, 1978	Sep. 16, 1980	Levy Mark A	Hinge structure
U.S. Pat. No. 4,249,689*	Feb. 21, 1980	Feb. 10, 1981	Western Electric Company, Inc.	Screen repair
U.S. Pat. No. 4,287,015*	Oct. 18, 1976	Sep. 1, 1981	Danner Harold J Jun	Methods of and apparatus for advancing elongated material
U.S. Pat. No. 4,299,029*	Sep. 21, 1979	Nov. 10, 1981	Auken John A Van	Vacuum bag used in making laminated products
U.S. Pat. No. 4,299,384*	Sep. 21, 1979	Nov. 10, 1981	Auken John A Van	Method of making an electrically conductive game ball
U.S. Pat. No. 4,300,568*	May 25, 1979	Nov. 17, 1981	Charles Blanckmeister	Electrically conductive game ball
U.S. Pat. No. 4,307,493*	Mar. 31, 1980	Dec. 29, 1981	Yoshida Kogyo K. K.	Therapeutic bra
U.S. Pat. No. 4,330,907*	Mar. 31, 1980	May 25, 1982	Yoshida Kogyo K.K.	Velvet type fastener tape
U.S. Pat. No. 4,355,424*	Sep. 2, 1980	Oct. 26, 1982	Mccoy Jr William J	Velvet type fastener tape
U.S. Pat. No. 4,403,991*	Dec. 27, 1977	Sep. 13, 1983	E. R. Squibb & Sons, Inc.	and method of producing the same
U.S. Pat. No. 4,454,183*	Oct. 20, 1983	Jun. 12, 1984	Minnesota Mining And Manufacturing Company	X-Ray gloves and liner
				Closures for open ended ostomy pouch
				Strip material with heat-formed hooked heads

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U.S. Pat. No. 4,465,486*	Sep. 30, 1982	Aug. 14, 1984	E. R. Squibb & Sons, Inc.	Closures for open ended ostomy pouch
U.S. Pat. No. 4,541,154*	Nov. 4, 1983	Sep. 17, 1985	Yoshida Kogyo K.K.	Hooked fabric fastener tape
U.S. Pat. No. 4,579,537*	May 9, 1984	Apr. 1, 1986	Lynne Leahy	Take-apart toy
U.S. Pat. No. 4,628,709*	Mar. 18, 1985	Dec. 16, 1986	Actief N. V.	Apparatus and method for producing knitted hook-type fastener material
U.S. Pat. No. 4,646,397*	Jun. 13, 1985	Mar. 3, 1987	Yoshida Kogyo K. K.	Surface-type fastener
U.S. Pat. No. 4,648,137*	Feb. 27, 1985	Mar. 10, 1987	Cooper Leonard W	Shirt with adjustable collar opening
U.S. Pat. No. 4,664,378*	Dec. 12, 1983	May 12, 1987	Auken John A Van	Electrically conductive tennis ball
U.S. Pat. No. 4,672,722*	Apr. 28, 1986	Jun. 16, 1987	Jmw Textiles	Single tape closure construction
U.S. Pat. No. 4,709,453*	Oct. 14, 1986	Dec. 1, 1987	Foster-Miller, Inc.	Separable fastening device
U.S. Pat. No. 4,710,982*	Nov. 25, 1985	Dec. 8, 1987	Martin Lande	Zipper necktie
U.S. Pat. No. 4,755,177*	Sep. 30, 1982	Jul. 5, 1988	E. R. Squibb & Sons, Inc.	Closures for open ended ostomy pouch
U.S. Pat. No. 4,770,917*	Jul. 31, 1985	Sep. 13, 1988	Minnesota Mining And Manufacturing Company	Sheet material used to form portions of fasteners
U.S. Pat. No. 4,856,223*	Nov. 13, 1985	Aug. 15, 1989	Evans Steven C	Fishing lure
U.S. Pat. No. 4,875,259*	Mar. 24, 1988	Oct. 24, 1989	Minnesota Mining And Manufacturing Company	Intermeshable article
U.S. Pat. No. 4,876,011*	May 17, 1988	Oct. 24, 1989	Donaldson Company, Inc.	Oil recovery apparatus
U.S. Pat. No. 4,931,343*	Jan. 22, 1988	Jun. 5, 1990	Minnesota Mining And Manufacturing Company	Sheet material used to form portions of fasteners
U.S. Pat. No. 4,946,742*	May 20, 1988	Aug. 7, 1990	Minnesota Mining And Manufacturing Company	Pressure-sensitive adhesive having improved adhesion to plasticized vinyl substrates
U.S. Pat. No. 4,979,613*	Dec. 28, 1989	Dec. 25, 1990	The Proctor & Gamble Company	Separable fastening device
U.S. Pat. No. 4,985,488*	Apr. 16, 1990	Jan. 15, 1991	Minnesota Mining And Manufacturing Company	Pressure-sensitive adhesive having improved adhesion to plasticized vinyl substrates
U.S. Pat. No. 5,077,870*	Sep. 21, 1990	Jan. 7, 1992	Minnesota Mining And Manufacturing Company	Mushroom-type hook strip for a mechanical fastener

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U.S. Pat. No. 5,088,162*	Jul. 16, 1990	Feb. 18, 1992	Allan Robert M	Connector apparatus
U.S. Pat. No. 5,088,164*	Mar. 22, 1989	Feb. 18, 1992	Minnesota Mining And Manufacturing Company	Container with intermeshable closure members
U.S. Pat. No. 5,113,555*	Nov. 26, 1990	May 19, 1992	Minnesota Mining And Manufacturing Company	Container with intermeshable closure members
U.S. Pat. No. 5,133,166*	Jun. 21, 1990	Jul. 28, 1992	Tac-Fast Systems Sa	Structural assembly system
U.S. Pat. No. 5,179,767*	Nov. 12, 1991	Jan. 19, 1993	Allan Robert M	Connector apparatus
U.S. Pat. No. 5,201,101*	Apr. 28, 1992	Apr. 13, 1993	Minnesota Mining And Manufacturing Company	Method of attaching articles and a pair of articles fastened by the method
U.S. Pat. No. 5,231,738*	Dec. 12, 1991	Aug. 3, 1993	Kuraray Co., Ltd.	Mixed hook/loop separable fastener and process for its production
U.S. Pat. No. 5,315,740*	Aug. 20, 1992	May 31, 1994	Velcro Industries, B.V.	Hook for hook and loop fasteners
U.S. Pat. No. 5,339,499*	Feb. 16, 1993	Aug. 23, 1994	Velcro Industries B.V.	Hook design for a hook and loop fastener
U.S. Pat. No. 5,345,659*	Jan. 15, 1993	Sep. 13, 1994	Allan Robert M	Connector apparatus with nesting ridges
U.S. Pat. No. 5,360,270*	Apr. 28, 1992	Nov. 1, 1994	Minnesota Mining And Manufacturing Company	Reusable security enclosure
U.S. Pat. No. 5,369,852*	May 21, 1993	Dec. 6, 1994	Kuraray Co., Ltd.	Mixed hook/loop separable fastener and process for its production
U.S. Pat. No. 5,382,462*	Jul. 28, 1993	Jan. 17, 1995	Tac-Fast Systems Sa	Carpet tape
U.S. Pat. No. 5,470,629*	Oct. 28, 1994	Nov. 28, 1995	E. I. Du Pont De Nemours And Company	Method and apparatus for making a pile article and the products thereof
U.S. Pat. No. 5,472,762*	Feb. 22, 1993	Dec. 5, 1995	E. I. Du Pont De Nemours And Company	Method and apparatus for making a pile article and the products thereof
U.S. Pat. No. 5,473,800*	Mar. 29, 1994	Dec. 12, 1995	Magictape Co., Ltd.	Separable fastening component
U.S. Pat. No. 5,498,459*	May 17, 1995	Mar. 12, 1996	E. I. Du Pont De Nemours And Company	Method and apparatus for making a pile article and the products thereof
U.S. Pat. No. 5,505,747*	Jan. 13, 1994	Apr. 9, 1996	Minnesota Mining And Manufacturing Company	Method of making an abrasive article
U.S. Pat. No. 5,515,583*	Sep. 8, 1994	May 14, 1996	Kuraray Co., Ltd.	Mixed hook/loop separable

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U.S. Pat. No. 5,547,732*	May 15, 1995	Aug. 20, 1996	E. I. Du Pont De Nemours And Company	fastener and process for its production Method and apparatus for making a pile article and the products thereof
U.S. Pat. No. 5,555,608*	Apr. 19, 1994	Sep. 17, 1996	Allan; Robert M.	Connector apparatus with nesting ridges
U.S. Pat. No. 5,607,635*	Nov. 8, 1991	Mar. 4, 1997	Minnesota Mining And Manufacturing Company	Mushroom-type hook strip for a mechanical fastener
U.S. Pat. No. 5,634,245*	Jul. 14, 1995	Jun. 3, 1997	Minnesota Mining And Manufacturing Company	Structured surface fastener
U.S. Pat. No. 5,640,744*	Sep. 14, 1995	Jun. 24, 1997	Allan; Robert M.	Nested ridge strap connector apparatus
U.S. Pat. No. 5,651,745*	Jun. 8, 1995	Jul. 29, 1997	Childress; Ellen Carol	Motion transfer device
U.S. Pat. No. 5,657,516*	Oct. 12, 1995	Aug. 19, 1997	Minnesota Mining And Manufacturing Company	Dual structured fastener elements
U.S. Pat. No. 5,667,540*	Mar. 13, 1996	Sep. 16, 1997	Minnesota Mining And Manufacturing Company	Method of making an abrasive article
U.S. Pat. No. 5,672,186*	Mar. 13, 1996	Sep. 30, 1997	Minnesota Mining And Manufacturing Company	Method of making an abrasive article
U.S. Pat. No. 5,679,302*	Apr. 16, 1993	Oct. 21, 1997	Minnesota Mining And Manufacturing Company	Method for making a mushroom-type hook strip for a mechanical fastener
U.S. Pat. No. 5,691,026*	Mar. 8, 1994	Nov. 25, 1997	Minnesota Mining And Manufacturing Company	Fastener member with a dual purpose cover sheet
U.S. Pat. No. 5,691,027*	Sep. 29, 1995	Nov. 25, 1997	Minnesota Mining And Manufacturing Company	Fastener with a dual purpose cover sheet
U.S. Pat. No. 5,725,423*	Mar. 3, 1997	Mar. 10, 1998	Minnesota Mining And Manufacturing Company	Abrading apparatus
U.S. Pat. No. 5,785,784*	Jul. 23, 1997	Jul. 28, 1998	Minnesota Mining And Manufacturing Company	Abrasive articles method of making same and abrading apparatus
U.S. Pat. No. 5,802,676*	Dec. 20, 1996	Sep. 8, 1998	Velcro Industries B.V.	Strap for securing a bundled cord and the like
U.S. Pat. No. 5,840,089*	Jul. 29, 1997	Nov. 24, 1998	Minnesota Mining And Manufacturing Company	Method of making an abrasive article
U.S. Pat. No. 5,845,375*	May 30, 1997	Dec. 8, 1998	Minnesota Mining And Manufacturing Company	Mushroom-type hook strip for a mechanical fastener
U.S. Pat. No. 5,852,855*	Dec. 2, 1996	Dec. 29, 1998	Minnesota Mining And Manufacturing Company	Disposable diaper with fastener

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U.S. Pat. No. 5,868,987*	Jun. 19, 1997	Feb. 9, 1999	Minnesota Mining And Manufacturing	Superimposed embossing of capped stem mechanical fastener structures
U.S. Pat. No. 5,879,604*	Oct. 25, 1996	Mar. 9, 1999	Minnesota Mining And Manufacturing Company	Method of making a mushroom-type hook strip for a mechanical fastener
U.S. Pat. No. 5,902,427*	Jul. 11, 1997	May 11, 1999	Minnesota Mining And Manufacturing Company	Fastener arrangement with dual purpose cover sheet
U.S. Pat. No. 5,946,735*	Sep. 9, 1998	Sep. 7, 1999	Bayes; James E.	Quick-release football helmet chin strap
U.S. Pat. No. 6,000,106*	Mar. 17, 1998	Dec. 14, 1999	3M Innovative Properties Company	Superimposed embossing of capped stem mechanical fastener structures
U.S. Pat. No. 6,030,908*	Mar. 16, 1998	Feb. 29, 2000	Jwi Ltd.	Multilayer porous fabric
U.S. Pat. No. 6,054,091*	Oct. 3, 1996	Apr. 25, 2000	Minnesota Mining And Manufacturing Co.	J hook-type hook strip for a mechanical fastener
U.S. Pat. No. 6,081,959*	Jul. 1, 1996	Jul. 4, 2000	Umbrell; Richard	Buffer centering system
U.S. Pat. No. 6,132,660*	Jun. 19, 1997	Oct. 17, 2000	3M Innovative Properties Company	Method for forming headed stem mechanical fasteners
U.S. Pat. No. 6,159,596*	Dec. 23, 1997	Dec. 12, 2000	3M Innovative Properties Company	Self mating adhesive fastener element articles including a self mating adhesive fastener element and methods for producing and using
U.S. Pat. No. 6,269,759	Mar. 2, 1999	Aug. 7, 2001	E. I. Du Pont De Nemours And Company	Apparatus for producing a stitched pile surface structure
U.S. Pat. No. 6,367,128	Feb. 10, 2000	Apr. 9, 2002	3M Innovative Properties Company	Self-mating reclosable mechanical fastener
U.S. Pat. No. 6,546,604	Jan. 11, 2001	Apr. 15, 2003	3M Innovative Properties Company	Self-mating reclosable mechanical fastener and binding strap
U.S. Pat. No. 6,558,602	Dec. 11, 1996	May 6, 2003	3M Innovative Properties Company	Mushroom-type hook strip for a mechanical fastener
U.S. Pat. No. 6,579,161	Dec. 6, 1996	Jun. 17, 2003	3M Innovative Properties Company	Abrasive article

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U.S. Pat. No. 6,579,162	Dec. 15, 2000	Jun. 17, 2003	3M Innovative Properties Company	Abrasive article
U.S. Pat. No. 6,588,074	Jan. 11, 2001	Jul. 8, 2003	3M Innovative Properties Company	Self-mating reclosable binding strap and fastener
U.S. Pat. No. 6,641,096	Sep. 13, 2001	Nov. 4, 2003	3M Innovative Properties Company	Stretch releasing adhesive tape article with bundling strap
U.S. Pat. No. 6,726,976	Nov. 30, 2000	Apr. 27, 2004	E.I. Du Pont De Nemours And Company	Tufted pile structure having binder concentrated beneath the backstitches
U.S. Pat. No. 6,763,556	May 17, 2002	Jul. 20, 2004	3M Innovative Properties Company	Mating film and method for bundling and wrapping
U.S. Pat. No. 6,811,870	Oct. 15, 2002	Nov. 2, 2004	Dimitri Zafiroglu	Method for forming chenille yarns and the chenille yarns produced thereby
U.S. Pat. No. 6,842,915*	Dec. 20, 2001	Jan. 18, 2005	Nike, Inc.	Device and method for securing apparel to protective equipment
U.S. Pat. No. 6,849,142	Oct. 19, 1993	Feb. 1, 2005	The Procter & Gamble Company	Method of making multi-layer female component for refastenable fastening device
U.S. Pat. No. 6,884,157	Mar. 25, 2003	Apr. 26, 2005	3M Innovative Properties Company	Abrasive article
U.S. Pat. No. 6,904,649	Jan. 30, 2002	Jun. 14, 2005	Velcro Industries B.V.	Direct hook engagement
U.S. Pat. No. 6,910,353	Nov. 27, 2002	Jun. 28, 2005	Milliken & Company	Printed loop fabric and method for producing the same
U.S. Pat. No. 6,951,590	Dec. 9, 2002	Oct. 4, 2005	Invisia North America S.A.R.L.	Stitched pile surface structure and process and system for producing the same
U.S. Pat. No. 6,967,052	Oct. 15, 2002	Nov. 22, 2005	Invista North America S.A.R.L.	Stitched-bonded yarn surface structure
U.S. Pat. No. 6,979,045	Nov. 9, 2001	Dec. 27, 2005	Edwin Evans	Window system for convertible motor vehicles
U.S. Pat. No. 7,044,834	Apr. 20, 2005	May 16, 2006	3M Innovative Properties Company	Abrasive article
U.S. Pat. No. 7,188,396	Oct. 20, 2003	Mar. 13, 2007	3M Innovative Properties Company	Method for making a mushroom-type hook strip for a

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U.S. Pat. No. 7,260,851	Jun. 1, 2004	Aug. 28, 2007	Milnark Henry D	mechanical fastener
U.S. Pat. No. 7,325,421*	Nov. 27, 2002	Feb. 5, 2008	Sasser Michael P	Apron and method for using the same
U.S. Pat. No. 7,399,184	Jun. 23, 2005	Jul. 15, 2008	3M Innovative Properties Company	Printed loop fabric and method for producing the same
U.S. Pat. No. 7,544,404	Dec. 10, 2001	Jun. 9, 2009	Raytheon Company	Dry erase article
U.S. Pat. No. 7,626,356	Jan. 5, 2007	Dec. 1, 2009	Belkin International, Inc.	Shape-recovering material
U.S. Pat. No. 7,954,287*	Jun. 19, 2008	Jun. 7, 2011	Panduit Corp.	Modular power supply comprising an AC module, DC module and an electric charge storage module
U.S. Pat. No. 8,002,612	Apr. 8, 2004	Aug. 23, 2011	3M Innovative Properties Company	Cable management system for a raised floor grid system
U.S. Pat. No. 8,141,565*	Feb. 23, 2010	Mar. 27, 2012	Slavin Kate R	Attachment system for a sanding tool
U.S. Pat. No. 8,273,102	Jun. 4, 2004	Sep. 25, 2012	Vitalitec International, Inc.	Lotion, soap or cream applicator or appliance
U.S. Pat. No. 8,291,613*	Aug. 25, 2006	Oct. 23, 2012	Kenneth Dean Cunningham	Surgical clamp inserts with hooked traction elements
U.S. Pat. No. 8,484,762	Sep. 9, 2011	Jul. 16, 2013	Samuel A. Goldstein	Ready cleat
U.S. Pat. No. 8,829,328	Dec. 5, 2005	Sep. 9, 2014	Global Oled Technology Llc	Protective sports headgear
U.S. Pat. No. 8,920,902	Jun. 14, 2011	Dec. 30, 2014	Empire Technology Development Llc	Radiant energy transfer panel mountings
U.S. Pat. No. 9,072,343	Jan. 2, 2014	Jul. 7, 2015	John W. Ogilvie	Hook to hook releasable fastener
U.S. Pat. No. 9,089,237*	Feb. 13, 2013	Jul. 28, 2015	Todd Griffith	Multigrip touch closure fasteners
U.S. Pat. No. 9,089,355	Sep. 16, 2003	Jul. 28, 2015	Vitalitec International, Inc.	Collapsible colander
U.S. Pat. No. 9,321,218*	Oct. 27, 2007	Apr. 26, 2016	Nanlin Han	Surgical clamp inserts with hooked traction elements
U.S. Pat. No. 9,362,432	Jan. 15, 2014	Jun. 7, 2016	Global Oled Technology Llc	Fiber products, prepreps, composites and method of producing same
US20020062905*	Nov. 30, 2000	May 30, 2002	Zafiroglu Dimitri P.	Radiant energy transfer panel mountings
US20030051320*	May 17, 2002	Mar. 20, 2003	3M Innovative	Process for bonding of stitched carpets
				Mating film and method for

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US20030082334*	Dec. 9, 2002	May 1, 2003	Properties Company Zafiroglu Dimitri Peter	bundling and wrapping Stitched pile surface structure and process and system for producing the same
US20040065400*	Oct. 6, 2003	Apr. 8, 2004	Zafiroglu Dimitri Peter	Stitched yarn surface structure and method of forming the same
US20040069402*	Oct. 15, 2002	Apr. 15, 2004	Dimitri Zafiroglu	Method for forming chenille yarns and the chenille yarns produced thereby
US20040099020*	Nov. 27, 2002	May 27, 2004	Sasser Michael P.	Printed loop fabric and method for producing the same
US20050059987*	Sep. 16, 2003	Mar. 17, 2005	Novare Surgical Systems, Inc.	Surgical clamp inserts with hooked traction elements
US20050059988*	Jun. 4, 2004	Mar. 17, 2005	Novare Surgical Systems, Inc.	Surgical clamp inserts with hooked traction elements
US20050067041*	Aug. 28, 2003	Mar. 31, 2005	Taiwan Paiho Limited	Velcro fastener belt
US20050155693*	Nov. 12, 2003	Jul. 21, 2005	Zafiroglu Dimitri P.	Process for bonding of stitched carpets
US20050202770*	Apr. 20, 2005	Sep. 15, 2005	3M Innovative Properties	Abrasive article

I claim:

1-2. (canceled)

3. An improved and useful version of supporting mechanism that relates to a document carrying shoulder strap providing for adjustable, removable padding and design; which also provides with attachment buckles and an adjustable mechanism which is improved by providing an interlocking lobster claw clasp made of galvanized metal material with swivel hinge structure. A should strap, connector and supporting mechanism comprising:

- a). wherein said connector lobster claw clasp having a selectively displaceable member; and a safety clasp coupled to the connector clasp externally adjacent to the displaceable member; The connector of claim **3**, wherein the connector clasp comprises means for selectively displacing the member; The connector of claim **3**, wherein the safety clasp comprises a latch clasp, the latch clasp comprising: a receiver coupled to the connector lobster claw clasp of claim **3**; a joint coupled to the connector clasp spaced from the receiver; and an arm coupled to the joint and selectively movable for coupling to the receiver and aligning the arm parallel to the member;
- b). wherein said adjuncts interact whereby a document carrying shoulder strap and designs, commonly known

as plan holders, may be, suspended in a comfortable and adjustable manner of claim **1**. With the above ends in view, my invention consists of an elongated shoulder strap, of any desired textile “fabric, such as nylon, leather and any other suitable material now known or invented by men in the future adapted to engage the shoulders of the user and serve as a support from which material can be adjustably suspended and the ends of the straps which provides with an adjustable mechanism which is improved by providing an interlocking clasp with swivel hinge structure of claim **3**;

- c). wherein said invention also provides with a padded shoulder strap adjustable in height for suitable use of occupant of different size of claim **3**, includes an adjustable length shoulder strap which includes an auxiliary loop attachment for attaching the strap to the upper end of the shoulder strap can be repositioned by manipulating a driving mechanism accessible on the shoulder strap of the invention. In a preferred embodiment, a shoulder cushioning pad is disposed on the shoulder carrying strap, following the adjustment of the upper end of the shoulder straps;
- d). wherein said padded shoulder strap with interlocking lobster claw clasp includes: The respective front and rear end portions of the elongated shoulder strap are

passed through and clamped by corresponding pairs of buckles permanently secured to elongated straps of any desired fabric, which straps are in turn secured in spaced relation to each other on the upper periphery of the front and rear portion respectively of an Velcro document storage compartment strap belt thus affording an adjustable and detachable means for supporting the same of claim 3b;

- e). wherein said commercial grade Heavy Duty Velcro strap document storage compartment, providing for an attached commercial grade hardened plastic D-Ring coupler. Velcro strap material embodies a fastener mechanism consisted of two components:
- f). wherein said lineal fabric strips with tiny hooks that could "mate" with another fabric strip with smaller loops, attaching temporarily, until pulled apart as provided for in prior arts of claim 3. The fastener is constructed with nylon and polyester, providing 36 inches to 48 inches in length and three (3) inch" to twelve 12" inches wide of claim 7;
- g). wherein said present commercial grade nylon Velcro strap storage compartment provides for holding a plurality of and multiple sizes of the above mentioned items, which provides for an adjustable Velcro closure, providing for an attached hardened plastic D-Ring coupler, and with minimum capacity for carrying a document roll which is 3.5" to 24" in diameter of paper weight; a maximum weight up to 50 pounds of claim 3d and 3e; wherein said In a preferred embodiment, this invention provides for a heavy duty commercial grade Velcro document storage compartment strap belt, and also providing for an attached hardened plastic D-Ring coupler in which the Velcro document storage compartment strap belt is fed through the D-Ring coupler (position D. of FIG. 17) and then overlapped in the opposite direction thereby allowing the Velcro-tip end of the Velcro document storage compartment strap belt to mate with and join to the velvet fabric body of the Velcro document storage compartment strap belt in the opposite direction.

4-9. (canceled)

10. A heavy duty commercial grade hardened plastic D-ring coupler used to link the end pieces of the shoulder carrying strap, providing an adjustable interlocking clasp with swivel hinged structure of claim 3:

- a). wherein said D-ring coupler has a protruded grip end that is generally a C-shaped tie-down ring element having two arched portions at the upper northward facing end piece that attaches and connects with end tip of the galvanized metal clasp, and is secured to the Velcro Strap of claim 3;

- b). wherein said D-rings may vary in composition, geometry, weight, finish and load (rated) capacity dependent upon market demands of claim 3g and 10;

- c). wherein said heavy duty commercial grade D-ring coupler may have made of hardened plastic such as nylon or (PVC) polyethylene as they weigh less and are impervious to rusting.

- d). wherein said mentioned D-ring unit for use with capture hooks having a D-ring member formed of a hardened plastic material and having a base portion, a pair of side leg portions joined to opposite ends of the base leg portions and converging toward each other from base junctures with the base portion, and a substantially arcuate head portion joined to the side at head junctures of claim 3g and 10.

11-14. (canceled)

15. An improved adjustable, removable nylon or polyester document carrying shoulder strap providing for adjustable, removable padding and designs which provides with attachment buckles and an adjustable mechanism made for securing, carrying and holding architectural blueprints or design drawings, posters, maps, paintings, artwork, banners drumsticks, arrows, trekking poles, or fishing rods in an organized and safe manner comprising:

- a). wherein said padded shoulder strap with interlocking clasp includes: A metal The lobster claw clasp with an outer housing made of a sheet of metal foil folded about its notched center portion so as to define a generally claw-shaped housing having two opposed surface portions defining lateral openings there between. The lobster claw clasp additionally includes a generally C-shaped element having two arched portions, one of which terminates in a flat end which is normally disposed to the axis of the element and the other of which terminates in a beveled end which is obliquely directed towards the center of curvature of the associated arched portion of claim 15;

- b). wherein said C-shaped element is mounted in one lateral opening defined between the two surface portions of the housing and an elongated latching bar is introduced into the other lateral opening thereof of claim 15;

- c). wherein said latching bar is pivotably supported at one end and has an opposite free end which terminates in an oblique surface complementing the beveled end of the other arched portion. The latching bar is spring-loaded so that the oblique surface thereof is urged against the beveled surface of the arched portion to thereby substantially close the opening between the ends of the C-shaped element of claim 15.

16-20. (canceled)

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