BELTS AND METHODS OF USE THEREOF

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Abstract

A belt for use by healthcare workers includes a strap to encompass a portion of the body of the worker to which a plurality of holders (or containers) is attached. The holders are preferably adapted to hold or containing various items that are often used by healthcare workers in the course of their routine. For example, at least one of the holders can be a pouch fabricated from a lightweight, durable and flexible material. Preferably, the entire belt is fabricated from a generally lightweight, durable and flexible material. In addition to pouches, which can hold or contain items of various size, shape etc., one or more of the holders can be adapted to hold specific items. For example, at least one of the holder can be a bottle holder. A belt for use by a person requiring care, supervision or oversight (for example, a child or a patient of diminished capacity) includes a strap to encompass a portion of the body of the person. The belt has attached thereto a plurality of holders in which the patient can carry items. The entire belt can be fabricated from a generally lightweight, durable and flexible material. Preferably, at least one of the holders is sufficiently transparent to allow others to identify the contents thereof. The belt further can also include at least one information tag. The information tag can for example provide patient identity and/or the identity of a facility in which the patient is being cared. The belt can also include at least one safety tag to facilitate viewing of the belt in reduced visibility conditions.
BELTS AND METHODS OF USE THEREOF

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application is a continuation application of U.S. patent application Ser. No. 10/304,221, filed Nov. 26, 2002, which claims the benefit of U.S. Provisional Patent Application Ser. No. 60/333,633, filed Nov. 27, 2001, the disclosures of which are incorporated herein by reference.

BACKGROUND OF THE INVENTION

[0002] The present invention relates to item holders, belts or aprons and to methods of use thereof, and, especially, to item holders, belts or aprons for use in the healthcare industry, in the outdoor or sporting industries and/or by children and to methods of using such belts or aprons.

[0003] Personnel in the healthcare industry such as nurses, nurse’s aids and others must have at their quick disposal many different items. For example, spray-bottles of disinfectant, wipes, facial tissues, paper towels and various first-aid items are used frequently. Typically, such items are stored at many locations in a healthcare facility in an attempt to provide quick access. However, valuable healthcare facility personnel time is wasted in constantly searching for and retrieving such often used items.

[0004] Additionally, health-care professionals that care for Alzheimer’s patients and other patients having reduced capacity must constantly retrieve items that are collected by patients. In that regard, one of the symptoms or behaviors of Alzheimer’s patients is to collect various items and place such items in their pockets or elsewhere. Young children (whether healthy or ill) often display similar behavior.

[0005] It is very desirable to develop devices and methods to facilitate the work of healthcare professionals as well as to facilitate the care of Alzheimer’s patients and children.

SUMMARY OF THE INVENTION

[0006] In one aspect, the present invention provides a belt for use by, for example, a healthcare worker. The belt includes a strap to encompass a portion of the body of the worker to which a plurality of holders (or containers) is attached. The holders are preferably adapted to hold or containing various items that are often used by healthcare workers in the course of their routine. For example, at least one of the holders can be a pouch fabricated from a lightweight, durable and flexible material. The material(s) of the belt can also be water resistant or waterproof as known in the art. The materials can also be readily washable (by hand or machine). The pouch or pocket can be opened on the top or be closable (for example, via a flap securable with a hook-and-loop type fastener). Preferably, substantially the entire belt is fabricated from a generally, lightweight, durable and flexible material. Likewise, the material(s) of substantially the belt can also be water resistant or waterproof and washable as known in the art.

[0007] In addition to pouches, which can hold or contain items of various size, shape etc., one or more of the holders can be adapted to hold specific items. For example, at least one of the holders can be a bottle holder. In general, such bottle holders have a generally cylindrical opening on the top thereof and are otherwise adapted (for example, by the shape thereof) to hold generally cylindrical bottles. Likewise, one or more holder can be thin and elongated to, for example, hold correspondingly shaped implements such as pens, pencils and thermometers.

[0008] The belt preferably further includes a connector to secure the belt around a worker. Preferably, the connector is readily releasable by the worker.

[0009] The belts of the present invention are not limited to use by healthcare workers. In general, the belts of the present invention are suited for use by any individual desiring to have at their quick disposal a personal storage or holding belt suitable to store any number of different items for quick and generally unobstructed access. For example, the belts of the present invention can be of particular use in outdoor sporting and recreational activities such as hiking.

[0010] In another aspect, the present invention provides a belt for use by a child, a patient of diminished capacity (as, for example, compared to an average adult), or another person requiring care, supervision or oversight. The belt includes a strap to encompass a portion of the body of the person. The belt has attached thereto a plurality of holders in which the patient can carry items. Substantially, the entire belt can be fabricated from a generally, lightweight, durable and flexible material. The material(s) of the belt can also be water resistant, waterproof and/or readily washable (by hand or machine) as known in the art.

[0011] Preferably, at least one of the holders is sufficiently transparent or "open" to allow others to identify the contents thereof. The belt can also include at least one information tag. The information tag can, for example, provide patient/individual identity and/or the identity of a facility in which the patient/individual is being cared. The belt can also include at least one safety tag to facilitate viewing of the belt in reduced visibility conditions. Likewise, the belt can include a communication device (which can be fixed or removable) to, for example, assist in locating an individual or providing one- or two-way communications.

[0012] The belt also preferably includes a fastening mechanism to retain the belt on the person. Preferably, the fastening or connecting mechanism cannot be opened or is somewhat difficult to open by the person wearing the belt. The fastening mechanism can, for example, be on the back of the person when the person wears the belt.

[0013] In another aspect, the present invention provides a method of caring for a person requiring care, supervision or oversight (for example, a person of diminished capacity) including the step of providing the person with a belt having a strap to encompass a portion of the body of the person, the belt further having attached thereto a plurality of holders in which the patient can store items as described above.

[0014] In another aspect, the present invention provides a method of facilitating access of a healthcare worker to items including the step of providing a healthcare worker with a belt including a strap to encompass a portion of the body of a healthcare worker. The belt has attached thereto a plurality of holders in which the items can be placed as described above.

[0015] In still another aspect, the present invention provides an item holder to be worn by a person, including: a flexible strap to encompass the waist of the person. The ends of the strap include a first connector section and a cooperating second connector section attachable to the first connector section. The belt includes a flexible base extending from the strap. The base has attached thereto a plurality of holders as described above.
Although various utility or tool belts have been developed over the years for use, for example, by repairmen and construction personnel, belts adapted to hold various items have not been used in the healthcare industry and in other areas of use in which a longfared need exists. Heavy belts having little flexibility, such as used by repairmen and construction personnel have little utility in the healthcare field. As described above, however, belts constructed of generally lightweight, durable and flexible material(s) that are equipped with holders to hold or contain various items can be used to great advantage by, for example, healthcare workers, recreational and sporting personnel and certain patients, children or others requiring care, supervision or oversight.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1A illustrates a healthcare professional wearing one embodiment of a belt of the present invention.

FIG. 1B illustrates the belt of FIG. 1A opened on a flat surface.

FIG. 2 illustrates another embodiment of a belt of the present invention for use by a healthcare professional.

FIG. 3 illustrates an embodiment of a belt of the present invention for use by a patient of diminished mental capacity.

FIG. 4 illustrates an embodiment of a belt of the present invention for use by a child.

DETAILED DESCRIPTION OF THE INVENTION

FIGS. 1A and 1B illustrate one embodiment of the present invention providing a belt or apron for use, for example, by a healthcare professional(5) for example, a nurse, or for a child. Belt 10 includes a fastening mechanism 20 which can, for example, include a buckle 22. Other fastening mechanisms such as snaps, ties and VELCRO® (that is, a hook-and-loop type fastening mechanism) can also be used. Preferably, fastening mechanism 20 is positioned on belt 10 so that it is positioned on the side of healthcare professional 5 when worn to facilitate access thereto.

Belt 10 preferably includes a plurality of containers or holders to enable healthcare professional 5 to carry any number of frequently used items on their person. In the embodiment of FIGS. 1A and 1B, belt 10 includes, for example, a holder or holster 30 for carrying a bottle or similar container 32 (for example, a disinfectant spray bottle). Belt 10 also includes pouches 40, 50 and 60 in which healthcare professional 5 can carry various items such as antiseptic wipes, tissues, bandages, combs etc. Belt 10 further includes one or more flapped pouches 60 for carrying items, for example, personal effects (such as watches, wallets, keys etc.) and other items, requiring additional security. Flap 62 of pouch 60 can, for example, be secured with a fastening mechanism 64 such as VELCRO. Belt 10 can also include one or more tags 70 that can include printed material such as the identity of healthcare professional 5 and/or the name of the healthcare facility. Belt 10 can also include a fastener or connector such as openable D-Ring 80 which is attached to belt 10 via a loop of material 82. Fastener 80 can, for example, be openable and closeable via a clasp 84 or other mechanism for connection of items including a fastening ring, loop or other device. For example, a key chain can be securely attached to fastener 80.

Belt 10 and/or containers, pouches, holsters or holders 30, 40, 50, 60 and 80 are preferably fabricated from lightweight, strong, flexible and durable material(s) such as denim, nylon, GORE-TEX (available from W. L. Gore & Associates, Inc.), or a canvas material, that can withstand the daily wear experienced in a healthcare facility, but do not hamper the mobility or otherwise disrupt the routine of the healthcare worker. The material(s) of the belt can also be water resistant or waterproof (either inherently or via a coating or treatment) as known in the art. The materials are preferably readily washable (by hand or machine). Part or all of containers, pouches, holsters or holders 30, 40, 50, 60 and 80 can also include an elastic material to assist in placing items therein and/or retaining items therein.

The belts of the present invention can be equipped with any number of types and sizes of holders, pouches and/or containers for use by healthcare professionals and others. For example, at least one of pouches or pockets 40, 50 and 60 can be relatively wide (for example, approximately 5, 6 or more inches) and relatively deep (for example, approximately 5, 6 or more inches) to provide easy access and space for storage of relatively large or oddly shaped articles. Moreover, in addition to container holder 30 and pockets or pouches 40, 50 and 60, belt 10 can also include relatively narrow, elongated holders 90a and 90b for holding correspondingly shaped items such as pens, pencils and/or thermometers.

In the embodiment of FIGS. 1A and 1B, belt 10 includes a length of strapping or belting 12 encompassing the waist of the user. A length of base material 14 is attached to hang or extend downward from strap 12. Base 14 is preferably of sufficient width w to act as a base for attachment of pouches, pockets, containers, and/or holders such as described above. For example, container holder 30 and pockets or pouches 40, 50 and 60 can be attached to base 12 via stitching around at least a portion of the periphery thereof. Base 12 can form the rear or back side of container holder 30 and pockets or pouches 40, 50 and 60 of belt 10. As set forth above, base 14 can be fabricated from water resistant, waterproof and/or readily washable (by hand or machine) material(s) as known in the art.

FIG. 2 illustrates another embodiment of a belt 110 of similar construction to belt 10. Belt 110 includes two holders or holsters 130a and 130b for bottles, three open pouches 140a, 140b and 150 of various size and one flapped pouch 160. Holster 130a is fabricated from generally orthogonally oriented straps while holster 130b is fabricated from a netting material (for example, nylon netting). Holsters 130a and 130b can include elastic material 132a and 132b around the opening thereof to help retain items therein. Like belt 10, belt 110 includes a side-fastening buckle or connector 122 and one or more information tags 170 for imprinted or electronically- or magnetically-encoded information. Preferably, buckle or other connector 122 is easily fastened and released by the user. However, connector 122 preferably provides substantial resistance to disconnection or unfastening during normal use. In the embodiment of FIG. 2, connector 122 includes prongs 122a and 122b which bend inwardly (that is, toward the centerline of belt 110) to connect to a cooperating receptacle 122c. Once connected, prongs 122a and 122b are released and flex outwardly to form a secure connection with receptacle 122c. Connectors of the type of connector 122 are used commonly, for example, in seating restraints for children.

FIG. 3 illustrates an item holder or belt 210 of the present invention that is suitable for use with a patient suffering from diminished mental capacity, such as an Alzheimer’s patient. As discussed above, Alzheimer’s patients in certain stages of the disease are known to act like "packrats" in that
they accumulate items they encounter during the day in their pockets and elsewhere. Sometimes, pants and other clothing are ruined by such behavior. Moreover, items that can be dangerous to the patient are sometimes taken. Belt 210 includes a plurality of pouches or containers 230a-230e in which a patient can store items collected during the day.

Preferably, pouches 230a-230e are made of a material that is durable and leak proof. Most preferably, pouches 230a-230e are made of a material that is also sufficiently transparent or "open" to enable healthcare and/or other personnel to view what the patient has collected in pouches 230a-230e. An example of a suitable material for pouches 230a-230e is a strong, flexible and transparent polymeric material such as visqueen or other such polymeric materials as known in the art. One or more of pouches 230a-230e also be fabricated from a netting, strapping or other material that includes openings that allow viewing of the contents thereof. In FIG. 3, pouch or pocket 230d is, for example, shown to be fabricated from an "open" netting material. Allowing healthcare and other personnel to view what the patient has collected in pouches 230a-230e enables such personnel to remove items of which the patient should not be in possession. For example, a patient may have picked up a wallet or keys of a staff healthcare professional. Moreover, a patient may have picked up a dangerous item such as a kitchen knife 240 as illustrated in pouch 230a.

Belt 210 preferably includes a fastening mechanism such as a buckle 220. Buckle 220 can be positioned to fasten behind the back of the patient to prevent the patient from removing belt 210 or to at least make it difficult for the patient to remove belt 210. Moreover, a connector that is inherently difficult to remove by one of diminished capacity (for example, a connector such as connector 122 of FIG. 2) can be used. A communication device or locator 290 such as a radio frequency transponder as known in the art can be attached to belt 210 or other belts of the present invention, for example, assist in locating an individual or to provide one- or two-way communications.

Belt 210 preferably further includes an information tag or tags 270 that can include printed or encoded (for example, magnetically or electronically) information. For example, patient identity, facility identity/location and/or medical information can be included on tag(s) 270. Although, great care is taken to prevent patients from wandering away from care facilities, patients wonder away form even the best of such care facilities. Providing information tag(s) 270 helps to identify the patient as a patient of a care facility and facilitates return and care of a patient that has wandered off the premises. Moreover, belt 210 also preferably includes safety strips or tags 280 that can include a reflective, retroreflective, illuminating or other similarly functioning material to facilitate visibility of the patient even in poor visibility conditions.

The belts of the present invention are also well suited for use by children of various ages. Like the patients described above, children often act as scavengers and can collect items that can, for example, ruin clothing or that the child should not have. FIG. 4 illustrates a belt 310 that is similar to belt 210, but is for use with children.

Belt 310 includes a plurality of flapped and/or unflapped pouches 330a-330e that are preferably made of a material that is durable and leak proof. Most preferably, pouches 330a-330e are made of a material that is also sufficiently transparent to enable parents and others to view what the child has collected.

Belt 310 preferably includes a fastening mechanism such as a buckle 320. Buckle 320 can be positioned or adapted to hinder the child from removing belt 310 as discussed above in connection with belt 210.

Like belt 210, belt 310 preferably further includes an information tag or tags 370 that can include printed or encoded (for example, magnetically or electronically) information including, for example, identity, contact information and medical information. Belt 310 also preferably includes safety strips or tags 380 as discussed above to facilitate visibility of the patient even in poor visibility conditions.

Item holders or belts 10, 110, 210 and/or 310 of the present invention can be readily adapted or modified for use in generally any type of endeavor. The pockets, pouches, holders and other containers of the belts of the present invention can be made to be of generally any dimension to accommodate a particular use. Moreover, the item holders or belts of the present invention are attractive to wear, lightweight, flexible and generally unobtrusive. The belts can readily be fabricated in any color or be multicolored. Indeed, children and adults of diminished capacity (for example, Alzheimer patients) may prefer and be attracted to multicolored, striking item holders or belts of the present invention, and thus be more willing to wear them.

Although the present invention has been described in detail in connection with the above examples, it is to be understood that such detail is solely for that purpose and that variations can be made by those skilled in the art without departing from the spirit of the invention except as it may be limited by the following claims.

What we claim is:

1. A belt comprising a strap to encompass a portion of the body of a worker, the belt having attached thereto a plurality of holders, at least one of the holders comprising a mechanism to the removably attach keys thereto, the belt further comprising a connector placed on the belt relative to the plurality of holders so that the connector is positioned on the side of the body of the work and the plurality of holders are readily accessible by the worker.

2. The belt of claim 1 wherein at least one of the holders is a bottle holder.

3. The belt of claim 1 wherein at least one of the holders is a bottle holder.

4. The belt of claim 1 wherein the connector is a hook-and-loop type connector.

5. The belt of claim 1 wherein the connector is readily releasable.

6. The item holder of claim 1 wherein the belt and the holders are water resistant or waterproof.

7. The item holder of claim 1 wherein the belt is fabricated from lightweight, durable and flexible material.

8. The item holder of claim 1 wherein at least one of the holders is an elongated pouch adapted to hold a pen or a pencil.

9. The belt of claim 1 further comprising an information tag comprising identification information.

10. A belt for use by a person of diminished capacity and requiring care, supervision or oversight, the belt comprising: a strap to encompass a portion of the body of the person, the belt having attached thereto a plurality of holders in which the person can carry items, the belt further comprising a fastening mechanism to retain the belt on the person that provides substantial resistance to being unfastened by the person of
diminished capacity and a communication device operable as a locator to assist in locating the person of diminished capacity.

11. The belt of claim 10 wherein at least one of the holders allows others to identify the contents thereof.

12. The belt of claim 10 further including at least one information tag.

13. The belt of claim 12 wherein the information tag provides individual identity and identity of a facility in which the patient is being cared.

14. The belt of claim 1 wherein at least a portion of the at least one of the holders that allows others to identify the content thereof is transparent.

15. The belt of claim 10 wherein the belt and the holders are waterproof.

16. The belt of claim 15 wherein the fastening mechanism is positioned on the back of the person when wearing the belt.

17. The belt of claim 10 further comprising a communication device to provide two-way communication.

18. The item holder of claim 10 wherein at least one of the holders is a pouch fabricated from a lightweight, durable and flexible material.

19. A method of caring for a person of diminished capacity requiring care, supervision or oversight including the step of providing the person with a belt having a strap to encompass a portion of the body of the person, the belt having attached thereto a plurality of holders in which the person can carry items, the belt further comprising a fastening mechanism to retain the belt on the person that provides substantial resistance to being unfastened by the person of diminished capacity and a communication device operable as a locator to assist in locating the person of diminished capacity.

20. The method of claim 19 wherein at least one of the holders is sufficiently transparent to allow others to identify the contents thereof.

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