

UTILITY BAG

FIELD OF THE INVENTION

The present invention is directed to the field of utility bag and, in particular to a utility bag for unrest suppression.

BACKGROUND

Riots and unrest in public or private places, or in institutions such as a prison are common problems facing the society. During riots or unrest, the mobs involved must be tactfully handled so as to minimise injury and damages to physical properties. Often, law enforcement agencies, such as police, military, or prison guards are called to suppress or control riots and unrest. These enforcement agencies use various unrest suppression equipment, such as batons, shields, helmets, respirators, gloves, hand-guards, leg-guards etc. to control riots.

Presently, there is no proper carrier for carrying the equipment. These unrest suppression equipment are classified and stored separately on shelves, and are, therefore, prone to adverse conditions, such as heat, dust, moisture, corrosion or fungal attacks. During emergencies, it takes time to issue these equipment to each individual of a law enforcement agency and often results in commotion as individuals have to queue up to get these equipment. After their issuance, it is difficult for the individuals to carry all these discrete equipment. This results in a slower response time.

Discrete equipment consumes more storage space and are difficult to maintain. Each one of them must be periodically taken out from the storage shelves by an individual for maintenance. Poor maintenance not only causes physical damage to the equipment, but is also harmful to the individuals using them.

Handling the inventory especially when large equipment are involved is very complicated, as the equipment are improperly stored.

Presently, the purposes of each equipment are limited. i.e. each equipment has only limited utility. For instance, a shield worn on hand or body is only used for guarding from attacks. In case of a fire, the individuals have to call a fire squad or use separate fire blankets to put out the fire. In case a stretcher is required to carry an injured person, the services of a medical

team or ambulance is called for. Moreover, to restrain a riot mob or whisk an individual away from the riot scene, at least a group of people is required, which may need additional manpower.

Accordingly there is a need for utility bag which at least partially overcomes the above problems.

SUMMARY

According a first aspect of the invention, there is provided a utility bag comprising: a first utility sheet, at least two handles connected to the first utility sheet, wherein, in an unfolded state, the first utility sheet is fully extended with the handles spaced apart to manipulate the first utility sheet, and wherein, in a folded state, the folded first utility sheet forms side walls of the bag, wherein said utility bag further comprises: a second utility sheet, at least two handles connected to the second utility sheet, wherein, in an unfolded state, the second utility sheet is fully extended with the handles connected to the second utility sheet spaced apart to manipulate the second utility sheet, and wherein, in a folded state, the folded second utility sheet collapses on the side walls of the bag.

The first and second utility sheets may have a common central portion. The first utility sheet may comprise: an inner surface and an outer surface, wherein a portion of the outer surface, in the folded state, faces outward from the bag, and the handles connected to the first utility sheet are positioned on the outer surface.

The first utility sheet may comprise foam padding. The first utility sheet may comprise ribs for enhancing the rigidity.

The first utility sheet may comprise: the central portion and one or more side portions, wherein the side portions are operable to fold over the central portion in the folded state.

The surfaces of the central portion and/or side portion may comprise means for fastening or storing riot control equipment.

The means for fastening the riot control equipment may comprise one or more of a group comprising a lace, tag, strap, a buckle, a clip, and a fastener.

The means for storing the riot control equipment may comprise one or more of a group comprising a pocket, a compartment, and a niche.

The riot control equipment may comprise one or more of a group comprising a leg guard, a baton, gloves, a helmet, a respirator, a hand guard, a canister, and a skim mask.

The central portion may further comprise at least one shoulder strap for carrying the bag in the folded state.

The central portion may further comprise at least one waist strap for carrying the bag in the folded state

The first side portion may comprise a strip of hook portion of a Velcro tape, and the second side portion may comprise a strip of loop portion of a Velcro tape, wherein the hook portion of the Velcro tape is operable to engage and lock with the loop portion of the Velcro tape for securing the first and second side portions to each other.

The second utility sheet may comprise: a top and/or a bottom portion connected to the central portion, the portions being operable to fold over the central portion.

One of each pair of handles is attached to each of the top and bottom portions on the opposite ends of the top and bottom portions respectively.

Each of the handles may comprise a strip of hook portion of a Velcro tape, and the top and bottom portions each comprise a strip of loop portion of a Velcro tape, wherein said hook portion of the Velcro tape is operable to engage and lock with the loop portion of the Velcro tape for fastening the handles to the top and bottom portions respectively.

The top portion may comprise a strip of hook portion of a Velcro tape, and the bottom portion may a strip of loop portion of a Velcro tape, wherein the hook portion of the Velcro tape is operable to engage and lock with the loop portion of the Velcro tape for securing the top and bottom side portions to each other.

The top portion may comprise at least one first fastening means and the bottom portion may comprise at least one second fastening means, wherein the first and second fastening

3a

means co-operably engage each other to fasten the bag in folded position.

One or more of the side portions, the top portions, and the bottom portions may be formed integrally with the central portion.

The surfaces of the bag are made of a waterproof and/or heavy-duty material. The material may be heavy-duty canvas.

In accordance with a second aspect of the present invention, there is provided a method of controlling or immobilising a person utilising the utility bag of the first aspect.

In accordance with a third aspect of the present invention, there is provided a method of restraining a person by utilising the utility bag of the first aspect.

In accordance with a fourth aspect of the present invention, there is provided a method of carrying a person by utilising the utility bag of the first aspect.

In accordance with a fifth aspect of the present invention, there is provided a method of controlling a fire by utilising the utility bag of the first aspect.

BRIEF DESCRIPTION OF THE DRAWINGS

Non-limiting embodiments of the invention are described hereinafter with reference to the drawings, in which:

Figure 1 is a front view of a utility bag in accordance with a first embodiment of the invention; and

Figure 2 is a back view of the utility bag of Figure 1.

DETAILED DESCRIPTION

Figure 1 illustrates a front view (showing the inner surface) of a utility bag 1 in accordance with an embodiment of the present invention. The utility bag 1 has inner and outer surfaces, which are separated by a shock absorbent material, such as foam pads. The utility bag 1 consists of a restraint sheet 3 and a stretcher sheet 5, both of which are foldable. In its folded position, the utility bag 1 is portable and hence easy to store. The utility bag 1 is made from heavy-duty waterproof canvas in the example embodiment, unless mentioned otherwise.

The restraint sheet 3 has a central portion 4 and two side portions 2, 6. The central portion 4 and side portions 2, 6 are usually rectangular or square shaped. The side portions 2, 6 are integral with the central portion 4 in the example embodiment and extend from opposite

sides of the central portion 4. The side portions 2, 6 are foldable along their respective edges along the central portion 4.

A pair of flexible handles 12, 14 are attached (by sewing in the example embodiment) on the outer surface of the restraint sheet 3. The first handle 12 (shown hidden) is attached to the junction of the central portion 4 and the side portion 2. The other handle 16 is attached along the outer edge of side portion 6 such that the two handles are juxtaposed.

A plurality of flexible straps (e.g.16, 20) are attached (by sewing in the example embodiment) to the inner surface of the restraint sheet 3. These straps 16, 20 are made of nylon in the example embodiment. Some straps (e.g.16) are generally parallel to the outer edges of the left and right side portions. Other straps (e.g.20) are shorter and are attached to the central portion 4 in a direction transverse to the direction of the longer straps (e.g.16). The longer straps (e.g.16) are appropriately attached (by sewing in the example embodiment) to the inner surface of the utility bag 1 at portions (e.g.18), whilst smaller straps (e.g. 20) are appropriately attached (by sewing in the example embodiment) to the inner surface of the utility bag 1 at portions (e.g.19). The ends of the flexible straps are shown to be bare. However, they may have other attaching means, such as a clip, buckle, Velcro etc.

The longer straps (e.g.16) are used for attaching larger equipment, such as leg-guards, baton, helmet etc. The shorter straps (e.g.20) are utilised to attach smaller equipment, such as arm guards, gloves, skim mask, canisters etc.

Pockets (e.g.26, 28) are also provided in the central portion 4 for storing equipment, such as a helmet or a respirator. Larger equipment, such as a baton can also be attached on the outer surface e.g. the left 2, central, or right portions 2, 4, 6 in which case the baton is slotted into a pocket located on the outer surface and the handle of the baton being fastened by a Velcro.

All along its edge the inner surface of the side portion 6 is attached with a strip of hook portion of a Velcro tape 60. The hook portion of the Velcro tape 60 engages and locks with a loop portion 64 (refer Figure 2) located on the outer surface of the side portion 2. The loop portion of the Velcro 64 is wider than the hook portion 60 and the loop portion of the Velcro 64 covers almost half the outer surface area of the side portion 2 in the example embodiment.

Like the restraint sheet 3, the stretcher sheet 5 is also foldable. The stretcher sheet 5 comprises, in the example embodiment, a first portion 8 and a second portion 10, the axis of the second and first portions 8, 10 being perpendicular to the longitudinal axis of the side portions 2, 6.

One edge of the first portion 8 and the second portion 10 are integral with the central portion 4 in the example embodiment and extend from the opposite sides of the central portion 4. The first and second portions 8, 10 are usually rectangular or square shaped. The first portion 8 and the second portion 10 are foldable along their respective edges along the central portion 4.

The first portion 8 has a pair of flexible stretcher handles 30, 32 which are attached to the outer surface of the utility bag 1 by sewing in the example embodiment. The handles 30, 32 are located on the opposing faces of the first portion 8 such that the two stretcher handles 30, 32 are juxtaposed.

On the middle portion of the stretcher handles 30, 32, a patch of hook portion of a Velcro tape 34, 36 is affixed. A patch of loop portion of a Velcro tape 38, 40 is affixed on the inner surface of the first portion 8 to engage with a corresponding hook portion of Velcro tapes 34, 36 of a respective stretcher handle 30, 32. When the stretcher is not in use, the handles are folded, such that the hook portion of the Velcro 34 on the handle 30 is fixed against the loop portion of the Velcro 38. Similarly, the hook portion of the Velcro 36 of the handle 32 is fixed against the loop portion of the Velcro 40.

The second portion 10 has a pair of flexible stretcher handles 42, 44 which are attached to the outer surface of the utility bag 1 by sewing in the example embodiment. The handles 42, 44 are located on the opposing faces of the second portion 10.

On the middle portions of the stretcher handles 42, 44, a patch of hook portion of a Velcro tape 46, 48 is attached. A patch of loop portion of Velcro tape 50, 52 is attached to the inner surface of the second portion 10 to engage with a corresponding hook portion of the Velcro tape 46, 48 of a respective stretcher handle 42, 44. When the stretcher is not in use, the handles are folded, such that the hook portion of the Velcro 46 on the handle 42 is fixed against the loop portion of the Velcro 50. Similarly, the hook portion of the Velcro 48 on the handle 44 is fixed against the loop portion of the Velcro 52.

All along its edge the inner surface of the second portion 10 is affixed with a strip of hook portion of a Velcro tape 68 which engages and locks with a broader loop portion of a Velcro 66 (shown in Figure 2) on the outer surface of the first portion 6.

The central portion 4 has a pair of back straps 58, 62 (refer Figure 2) to enable a user to wear the utility bag 1 on his the back.. The second portion has a pair of straps 70, 72. The proximate ends of the straps 70, 72 are attached to the central portion 4, whilst the distal ends terminate with a fastening means 54 such as a buckle, clip, Velcro etc. Straps 70, 72 are joined to straps 58, 62 as shoulder straps when wearing the utility bag 1.

Figure 2 illustrates a back view of the utility bag of Figure 1 clearly indicating the positioning of the handles 12 and 14 of the restraint sheet 3. Almost half of the side portion 2 has a strip of loop portion 64 of a Velcro tape.

Waist strap 61 is provided (by sewing in the example embodiment) in the central portion 4, near the intersecting edge of the central portion 4 and first portion 8. The middle portion of the waist strap 61 is sewed (in the example embodiment) to the central portion 4, while the terminal portions 63, 65 are free. The terminal portions 63, 65 have co-operating fasteners 67, 69 to enable a user to detachably wear around his waist.

The loaded utility bag 1 can be folded to make it portable and easy to carry or store. To fold, the first portion 2 of the utility bag is folded towards the central portion 4. The second portion 6 is then folded over the folded first portion 2 which is followed by folding the first portion 8 and second portion 10. To secure the folded bag 1, the clips 56 on the second portion 10 are connected to the respective clips 76 on straps 74. The buckles 54 located on the straps 70, 72 are inserted in to a respective fastening means located on the first portion of the back straps 58, 62 to form shoulder straps.

The utility bag 1 can be used as a temporary restraint jacket, temporary stretcher, or a fire blanket to put out fire over a small surface area.

When used as temporary restraint jacket the utility bag is helpful to immobilise, subdue or dis-arm a person involved in a riot or unrest. To do so, a user releases the bag fasteners and unfolds all the four portions 2, 6, 8, 10 of the bag. Using one or both the handles 12, 14, the user flings the bag around the person and fastens the utility bag 1 using the hook portion 60 and loop portion 64.

To be used as a temporary stretcher, the fasteners 54, 56 of the bag are first released. The second portion 10 and first portion 8 are unfolded one after the other. The handles 30, 32, 42, 44 are pulled out by releasing the relevant Velcro portions. The central portion 4 together with the unfolded second portion 10 and first portion 8 on either sides serves as a stretcher. While being used as a stretcher, the side portions 2, 6 may remain folded or may be wrapped around an injured person to prevent from falling or to restraint/secure the injured person on the stretcher to prevent further mishaps.

The utility bag 1 can also be used as a temporary fire blanket in case of minor fires during riots or unrest situations as the inner and outer surfaces of the utility bag 1 are usually made of waterproof heavy duty canvas. To put out minor fires (e.g. fire on a small surface area), a user unfolds the bag and uses it as blanket to cover an area on fire and control the fire by cutting the supply of oxygen.

The shapes of the four foldable portions 2, 6, 8, 10 and central portions are shown to be square or rectangle. However, they may have other shapes, such as arcuate, triangular, hexagonal, polygonal etc. The number, shape, position and type of the handles 12, 14 in the restraint sheet 3 may be altered. Similarly, the number, shape, position and type of the handles 30, 32, 42, 44 may be altered.

The fasteners 60, 62, 66, 68 are illustrated as Velcro tapes. However, other fasteners such as magnetic strips, hooks etc. can also be used. Similarly, instead of buckles 54, 56 other fasteners, such as a hook may also be used. The number, shape, position and type of the shorter and longer straps located on the inner surface of the restraint sheet 3 may also be varied to match a desired set of unrest suppression equipment.

The first, second, second and first portions are shown as single folds. Multiple folds may also be employed. The first, second, second and first portions are shown as formed integrally with the central portion, but may also be separate and e.g. sewn together in different embodiments.

The invention is not limited the above embodiments. However, those skilled in the art will recognise that the invention can be practised, with modification, in the light of the information contained herein without departing from the scope of the invention.

CLAIMS:

1. A foldable utility bag comprising:
 - a first utility sheet,
 - at least two handles connected to the first utility sheet,
 - wherein, in an unfolded state, the first utility sheet is fully extended with the handles spaced apart to manipulate the first utility sheet, and
 - wherein, in a folded state, the folded first utility sheet forms side walls of the bag, wherein said utility bag further comprises:
 - a second utility sheet,
 - at least two handles connected to the second utility sheet,
 - wherein, in an unfolded state, the second utility sheet is fully extended with the handles connected to the second utility sheet spaced apart to manipulate the second utility sheet, and
 - wherein, in a folded state, the folded second utility sheet collapses on the side walls of the bag.
2. The utility bag of claim 1, wherein the first and second utility sheets have a common central portion.
3. The utility bag of claims 1, or 2, wherein said first utility sheet comprises:
 - an inner surface and an outer surface, wherein a portion of the outer surface, in the folded state, faces outward from the bag, and the handles connected to the first utility sheet are positioned on the outer surface.
4. The utility bag of any one of the preceding claims, wherein the first utility sheet comprises foam padding.
5. The utility bag of any one of the preceding claims, wherein the first utility sheet comprises ribs for enhancing the rigidity of the first utility sheet.
6. The utility bag of any one of the preceding claims, wherein the first utility sheet comprises:
 - the central portion and one or more side portions, wherein the side portions are operable to fold over the central portion in the folded state.

7. The utility bag of claim 6, wherein surfaces of the central portion and/or side portion comprise means for fastening or storing riot control equipment.
8. The utility bag of claim 7, wherein the means for fastening the riot control equipment comprise one or more of a group comprising a lace, tag, strap, a buckle, a clip, and a fastener.
9. The utility bag of claim 7 or 8, wherein the means for storing said riot control equipment comprises one or more of a group comprising a pocket, a compartment, and a niche.
10. The utility bag of any one of claims 7 to 9, wherein the riot control equipment comprises one or more of a group comprising a leg guard, a baton, gloves, a helmet, a respirator, a hand guard, a canister, and a skim mask.
11. The utility bag of any one of claims 2 to 10, wherein the central portion further comprises at least one shoulder strap for carrying the bag in the folded state.
12. The utility bag of any one of claims 2 to 11, wherein the central portion further comprises at least one waist strap for carrying the bag in the folded state.
13. The utility bag of any one of claims 6 to 11, wherein the first side portion comprises a strip of hook portion of a Velcro tape, and the second side portion comprises a strip of loop portion of a Velcro tape, wherein the hook portion of the Velcro tape is operable to engage and lock with the loop portion of the Velcro tape for securing the first and second side portions to each other.
14. The utility bag of any one of the preceding claims, wherein the second utility sheet comprises:
 - a top and/or a bottom portion connected to the central portion, the portions being operable to fold over the central portion.
15. The utility bag of claim 14, wherein one of each pair of handles is attached to each of the top and bottom portions, on the opposite ends of the top and bottom portions respectively.

16. The utility bag of claim 15, wherein each of the handles comprises a strip of hook portion of a Velcro tape, and the top and bottom portions each comprise a strip of loop portion of a Velcro tape, wherein said hook portion of the Velcro tape is operable to engage and lock with the loop portion of the Velcro tape for fastening the handles to the top and bottom portions respectively.
17. The utility bag of any one of claims 14 to 16, wherein the top portion comprises a strip of hook portion of a Velcro tape, and the bottom portion comprises a strip of loop portion of a Velcro tape, wherein the hook portion of the Velcro tape is operable to engage and lock with the loop portion of the Velcro tape for securing the top and bottom side portions to each other.
18. The utility bag of any one of claims 14 to 17, wherein the top portion comprises at least one first fastening means and the bottom portion comprises at least one second fastening means, wherein the first and second fastening means co-operably engage each other to fasten the bag in folded position.
19. The utility bag of any one of claims 7 to 18, wherein one or more of the side portions, the top portions, and the bottom portions are formed integrally with the central portion.
20. The utility bag of any one of the preceding claims, wherein surfaces of the bag are made of a waterproof and/or heavy-duty material.
21. The utility bag of claim 20, wherein the material is heavy-duty canvas.
22. A method of controlling or immobilising a person utilising the utility bag of any one of the preceding claims.
23. A method of restraining a person by utilising the utility bag of any one of the preceding claims.
24. A method of carrying a person by utilising the utility bag of any one of the preceding claims.

25. A method of controlling a fire by utilising the utility bag of any one of the preceding claims.