CANTEEN CUP INSULATOR

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ABSTRACT

The canteen cup insulator of the present invention implements an insulating layer that can be deployed in conjunction with the standard military issue canteen and cup. The canteen cup insulator is most preferably manufactured from a durable material that has at least some insulating value. The exact nature and thickness of the insulating material may vary depending on the specific application. The canteen cup insulator may be selectively attached to and removed from the canteen cup, thereby providing insulation for the canteen cup. Additionally, the canteen cup insulator has an integral “foot” formed around the lower edge, thereby providing a wider base and additional stability for the canteen cup and liquid contents during use.
BACKGROUND OF THE INVENTION

1. Field of the Invention
The present invention relates generally to the use of portable water storage devices and more particularly to an apparatus used in conjunction with a standard military-style canteen.

2. Background Art
The use of portable water storage containers such as the flask and the canteen is well known, with many varieties being made available for use all over the world. One of the most well-known versions is the standard military issue canteen employed by the military forces of the United States of America and other countries as well. The standard design of this canteen has not changed for decades and is well known to all those who have served in the various branches of the military. The canteen is used to store and transport water or other beverages so that the user of the canteen will have ready access to liquids on an as-needed or as-desired basis.

In one of the most commonly known embodiments of the standard military issue canteen, both the canteen and the cup have a substantially rounded kidney-shaped or reinfom cross section, thereby adapting the canteen for deployment in conjunction with a belt to be worn on the hip. In this most basic form, the canteen is typically fitted with a screw on lid and the canteen is removably placed into the form-fitting cup portion. The form-fitting cup portion may be used to contain liquid poured from the canteen, thereby providing liquid for consumption. The reinfom cross section provides a canteen may be worn against the waist/hip of a human and thereby provides for a canteen that can be comfortably carried on the hip in close proximity to the body.

While the basic design of the standard military issue canteen has been broadly accepted over the years, the presently known military canteen is not without certain drawbacks. This situation is evidenced by the large number of accessory objects that have been developed for use with the standard military issue canteen. For example, cups with foldable and/or retractable handles have been implemented. Various types of canteen covers, including insulated covers to keep the contents of the canteen hot or cold, have also been developed and implemented with some degree of success. In addition, various types of heating elements, drink-through the-cap straws, etc. have also been adopted in a wide variety of applications.

While these various adaptations for improving the functionality of the canteen have shown various levels of adoption, some shortcomings remain. One feature of the canteen cup that leaves room for improvement is directly related to the typical construction associated with the standard canteen cup. In order to produce a sturdy yet relatively lightweight product, most canteen cups are manufactured using a thin-walled metal. Given the nature of the metal used in the manufacturing process, thermal conduction can lead to undesirable results.

For example, once a warm or hot liquid is poured into the canteen cup, the liquid in the cup will generally begin to get colder through the process of thermal transfer. Similarly, if a cool or cold liquid is poured into the canteen cup, the liquid will typically begin to warm up. In either case, the liquid that is poured into the canteen cup will generally reach the ambient temperature of the surrounding air in relatively short order. This is true even for those situations where the body of the canteen is protected by an insulated covering because the walls of the canteen cup are typically fairly thin and the thermal transfer from the air to the liquid in the canteen cup (or vice versa) is rapidly accomplished.

In addition to the lack of adequate temperature control for the liquid poured into the canteen cup, the overall stability of the canteen cup and, by extension, the contents of the canteen cup, can be compromised by the types of surfaces where the canteen cup may be placed. For example, it is not uncommon for the canteen cup to be used in the field by soldiers in less than accommodating conditions. Typically, the soldier will place the canteen cup on rocks, logs, and sloping surfaces such as the side of a hill, etc. In all of these situations, it is possible for the canteen cup to be inadvertently tipped over, thereby spilling the contents of the canteen cup. This loss of liquid from spillage is generally considered to be undesirable.

Accordingly, without some additional improvements in the state-of-the-art for standard canteens and the associated canteen cups, including the well-known military issue canteen, access to and consumption of liquid from the canteen will continue to be sub-optimal.

SUMMARY OF THE INVENTION

The canteen cup insulator of the present invention implements an insulating layer that can be deployed in conjunction with the standard military issue canteen and cup. The canteen cup insulator is most preferably manufactured from a durable material that has at least some insulating value. The exact nature and thickness of the insulating material may vary depending on the specific application. The canteen cup insulator may be selectively attached to and removed from the canteen cup, thereby providing insulation for the canteen cup. Additionally, the canteen cup insulator has an integral “foot” formed around the lower edge, thereby providing a wider base and additional stability for the canteen cup and liquid contents during use.

BRIEF DESCRIPTION OF THE DRAWINGS

The preferred embodiments of the present invention will hereinafter be described in conjunction with the appended wherein like designations denote like elements and:

FIG. 1 is a prior art canteen and canteen cup combination; and

FIG. 2 is a perspective view of a canteen cup and canteen cup insulator in accordance with a preferred exemplary embodiment of the present invention;

FIG. 3 is a rear view of a canteen cup insulator in accordance with a preferred exemplary embodiment of the present invention; and

FIG. 4 is a close up view of a handle-engaging flap mechanism for a canteen cup insulator in accordance with a preferred exemplary embodiment of the present invention.

DETAILED DESCRIPTION

The apparatus of the present invention implements a cover that can be deployed in conjunction with the standard military issue canteen and cup. The canteen cup cover is most preferably manufactured from a durable and flexible food-grade material. The cross-section of the cover features a ridge and groove arrangement that has been specifically configured to receive the edge of the canteen cup, which typically defines
approximately a 45° angle with the body portion of the canteen cup. The cover may be selectively attached to and removed from the canteen cup, thereby providing enhanced functionality for the canteen cup.

[0018] Referring now to FIG. 1, a standard military issue canteen 110 and cup 120 are shown. As shown in FIG. 1, the main body of canteen 110 is formed so as to be removably inserted into cup 120 whenever cup 120 is not in use. This allows cup 120 to be easily carried with canteen 110 and provides a certain ease of use when storing the combination of canteen 110 and cup 120. The combination of canteen 110 and canteen cup 120 are typically carried in a belt container that is worn around the hips of the user. In addition, it is common for cup 120 to be provided with a pair of wire handles 121 that can be used to hold cup 120 for drinking. Wire handles 121 are typically affixed to the body of cup 120 using one or more hinge configurations, thereby allowing wire handles 121 to be folded flat against the body of cup 120 when not in use.

[0019] Lid 130 is typically a screw-type lid that can be removed to provide access to the interior of canteen 110. In normal usage, lid 130 is removed from canteen 110 and a liquid is poured into canteen 110. Then, lid 130 is replaced, thereby securing the liquid contents of canteen 110. Whenever the user desires to dispense liquid from canteen 110, lid 130 is removed and the liquid contained within canteen 110 can be consumed directly from canteen 110 or poured into canteen cup 120 and then consumed from canteen cup 120. In either case, lid 130 will then be placed back into position on canteen 110.

[0020] Those skilled in the art will recognize that canteen cup 120 typically has a flared “lip” around the rim that protrudes outwardly from the body of canteen cup 120 at approximately a 45° angle. This lip serves several purposes. First, the outward protrusion of the lip provides an opening that is tapered and slightly larger at the top than at the bottom of canteen cup 120. This allows canteen 110 to be easily inserted into the open mouth portion of canteen cup 120. As canteen 110 is inserted into canteen cup 120 by exerting a slight downward pressure, the slightly narrowing body of canteen cup 120 will frictionally contact the surface of canteen 110, thereby providing a snug “holder” for canteen 110. Additionally, the outwardly protruding lip or edge of canteen cup 120 provides a more functional drinking cup for the user of canteen cup 120.

[0021] Referring now to FIG. 2, a perspective view of a canteen cup insulator 210 in accordance with a preferred exemplary embodiment of the present invention is depicted. As shown in FIG. 2, the most preferred embodiments of the canteen cup insulator 210 will be substantially reenforced in shape and will be formed from a sidewall 205 and will be sized to receive canteen cup 120. The size and shape of canteen cup insulator 210 are carefully selected so as to ensure that canteen cup 120 will fit snugly and tightly into the opening of canteen cup insulator 210, thereby providing a “jacket” or insulating layer around the body of canteen cup 120. Sidewall 205 defines a substantially reenformed shape with an upper perimeter 206 and a lower perimeter 207. Upper perimeter 206 is typically greater than lower perimeter 207. Foot 220 defines a graduated connection where lower perimeter 207 is connected to foot 220.

[0022] Canteen cup insulator 210 is most preferably manufactured from a material that is both durable and flexible. Those skilled in the art will recognize that many insulative and non-insulative materials may be suitably employed for the fabrication of canteen cup insulator 210. The use of a durable material in fabricating canteen cup insulator 210 is desirable so as to permit long-term usage of canteen cup cover 210 without undesirable degradation of the performance of canteen cup insulator 210. The use of a flexible material in fabricating canteen cup insulator 210 is desirable so as to ensure that canteen cup insulator 210 will fit snugly and securely around the body of canteen cup 120.

[0023] One suitable material for canteen cup insulator 210 is leather. Those skilled in the art will recognize that leather is a durable and pliable material that has at least some insulative capacity. Leather can be readily adapted for use as canteen cup insulator 210 by methods well known to those skilled in the art. Another suitable material for use in fabricating canteen cup insulator 210 is neoprene and other similar foam-like materials. These materials, while less durable than leather, may provide more insulation for canteen cup 120. Other materials may also be used as well.

[0024] Foot 220 is provided to increase the stability of canteen cup 120 during use. Since the bottom of most canteen cups 120 are somewhat rounded, canteen cup 120 may be susceptible to tipping over when placed on an uneven surface. By providing foot 220 along the bottom ridge of canteen cup insulator 210, a broader and more stable base is provided, thereby reducing the possibility of undesired spills. Foot 220 is a bottom surface that has a perimeter that is slightly greater than the lower perimeter of sidewall 205. In this fashion, foot 220 can provide stability.

[0025] Flap 230 is attached to the sidewall of canteen cup insulator 210 and is a handle engaging mechanism that is designed to receive and selectively secure handles 121 of canteen cup 120, thereby securing canteen cup insulator 210 to canteen cup 120. Additional details about using flap 230 to securely attach canteen cup insulator 210 to canteen cup 120 are presented below in conjunction with FIG. 3 and FIG. 4.

[0026] Referring now to FIG. 3, a rear view of a canteen cup insulator 210 in accordance with an alternative preferred exemplary embodiment of the present invention is depicted. In addition to the previous characteristics of canteen cup insulator 210 described in conjunction with FIG. 2, canteen cup insulator 210 most preferably comprises an a flap 230. Flap 230 is attached to canteen cup insulator 210 by a connection point 212. Connection point 212 acts as a hinge and allows flap 230 to be selectively positionable for additional attachment to canteen cup insulator 210 at fastening point 211.

[0027] Connection point 212 may be a permanent or semipermanent connection point. For example, if a leather material is used to fabricate canteen cup insulator 210, then connection point 212 may be a simple seam that is formed by traditional leather stitching techniques. Alternatively, connection point 212 may be a standard hook-and-loop mechanism such as Velcro® or similar material, thereby allowing flap 230 to be completely removed from canteen cup insulator 210. The most preferred embodiments of the present invention employ a relatively permanent connection for connection point 212, thereby ensuring that flap 230 is not inadvertently detached from canteen cup insulator 210, thereby preventing the loss of flap 230. Those skilled in the art will recognize that many other suitable materials and mechanisms are available for this use and no such materials are excluded by the lack of explicit reference to these materials herein.
Fastening point 211 is somewhat similar in function to connection point 212 inasmuch as it allows for the attachment of flap 230 to the body canteen cup insulator 210. However, in the most preferred embodiments of the present invention, fastening point 211 is not a permanent connection but allows for selectively attaching and detaching flap 230 to the body of canteen cup insulator 210. For example, in the most preferred embodiments of the present invention, fastening point 211 is a simple snap. Alternatively, fastening point 211 may also be implemented as a standard hook-and-loop mechanism such as Velcro® or similar material. The selectively attachable nature of flap 230 at fastening point 211 allows the user of canteen cup insulator 210 to secure canteen cup insulator 210 to canteen cup 120 at desired times while also providing for the removal of canteen cup insulator 210 from canteen cup 120 when desired.

When canteen cup insulator 210 is to be attached to canteen cup 120, flap 230 is detached from fastening point 211, and repositioned or moved away from the body of canteen cup insulator 210, thereby exposing a somewhat U-shaped “slot” or opening in the body of canteen cup insulator 210. The U-shaped opening is sized to receive the extended wire handles 121 (not shown this FIG.) of canteen cup 120, thereby allowing canteen cup 120 to be inserted into canteen cup insulator 210. Wire handles 121 are positioned away from the body of canteen cup 120. Once canteen cup 120 has been inserted into canteen cup insulator 210, and wire handles 121 are positioned away from the body of canteen cup 120, then flap 230 may be passed through the openings formed by wire handles 121, thereby engaging wire handles 121. Once flap 230 has been passed through the openings formed by wire handles 121, flap 230 may be secured in position by using fastening point 211.

To detach canteen cup insulator 210 from canteen cup 120, the process is reversed and flap 230 is detached from fastening point 211 and flap 230 is repositioned so that it no longer engages wire handles 121. After disengagement of flap 230 from wire handles 121, canteen cup insulator 210 may then be removed from canteen cup 120.

Referring now to FIG. 4, a close up view of flap 230 of FIG. 3 engaging wire handles 121 of FIG. 1 in accordance with a preferred exemplary embodiment of the present invention is depicted. As shown in FIG. 4, flap 230 has been threaded through wire handles 121 and affixed to fastening point 211. Flap 230 is tightly secured over wire handles 121 by attaching flap 230 to fastening point 211. In this preferred embodiment of the present invention, fastening point 211 comprises a standard hook-and-loop mechanism.

Referring now to FIG. 5, a canteen cup insulator 210 in accordance with a preferred embodiment of the present invention is shown attached with canteen cup 120 inserted into canteen cup insulator 210 and being engaged by flap 230. As shown in FIG. 5, flap 230 has been threaded through wire handles 121, thereby securing canteen cup insulator 210 to canteen cup 120. Those skilled in the art will recognize that wire handles 121 may be on either side of canteen cup 120 and that the various embodiments of the present invention are easily adapted for either configuration.

In summary, the present invention provides an effective and efficient means of providing a canteen cup insulator for maintaining the temperature of the liquid contained in a canteen cup. The various preferred embodiments of the canteen cup insulator of the present invention provide an insulating blanket around a standard canteen cup and can slow the process of thermal transfer, thereby helping to keep warm liquids warm and cool liquids cool after the liquid has been poured into the canteen cup.

Additionally, at least one preferred embodiment of the canteen cup insulator of the present invention is formed with an integral foot along the lower edge, thereby providing a broader base and additional stability when the canteen cup is placed on a surface. In this fashion, the liquid or other contents of the canteen cup will be less likely to suffer from inadvertent spillage due to uneven surfaces.

Lastly, it should be appreciated that the illustrated embodiments are preferred exemplary embodiments only, and are not intended to limit the scope, applicability, or configuration of the present invention in any way. Rather, the foregoing detailed description provides those skilled in the art with a convenient road map for implementing a preferred exemplary embodiment of the present invention. Accordingly, it should be understood that various changes may be made in the function and arrangement of elements described in the exemplary preferred embodiments without departing from the spirit and scope of the present invention as set forth in the appended claims.

1. A canteen cup insulator, said insulator comprising:
   - a sidewall, said sidewall defining a substantially reniform shape, said sidewall comprising an upper perimeter and a lower perimeter, said sidewall defining a slot for receiving at least one canteen cup handle;
   - a substantially reniform bottom surface connected to said lower perimeter of said sidewall, said bottom surface defining an outer perimeter that is greater than said lower perimeter;
   - and a graduated foot formed where said sidewall is connected to said bottom surface.

2. The canteen cup insulator of claim 1 wherein said canteen cup insulator comprises one of a neoprene canteen cup insulator or a leather canteen cup insulator.

3. The canteen cup insulator of claim 1 further comprising a handle engaging mechanism.

4. The canteen cup insulator of claim 3 wherein said handle engaging mechanism comprises:
   - a repositionable flap;
   - a connection point connecting said flap to said sidewall;
   - and a fastening point, said fastening point being attached to said sidewall, said fastening point being configured to selectively receive said repositionable flap.

5. The canteen cup insulator of claim 4 wherein said fastening point comprises a hook and loop fastener.

6. The canteen cup insulator of claim 4 wherein said fastening point comprises a snap.

7. A leather canteen cup insulator, said insulator comprising:
   - a sidewall, said sidewall defining a substantially reniform shape, said sidewall comprising an upper perimeter and a lower perimeter, said upper perimeter being greater than said lower perimeter, said sidewall defining a slot for receiving at least one canteen cup handle;
   - a substantially reniform bottom surface connected to said lower perimeter of said sidewall, said bottom surface defining an outer perimeter that is greater than said lower perimeter;
   - a repositionable flap;
   - a connection point connecting said repositionable flap to said sidewall;
a fastening point, said fastening point being attached to said sidewall, said fastening point being configured to selectively receive said repositionable flap; and a graduated foot formed where said sidewall is connected to said bottom surface.

8. The canteen cup insulator of claim 7 wherein said fastening point comprises a hook and loop fastener.

9. The canteen cup insulator of claim 7 wherein said fastening point comprises a snap.

10. The canteen cup insulator of claim 7 wherein said slot is a u-shaped slot.

11. A method comprising the steps of: placing a canteen cup into a canteen cup insulator, said canteen cup insulator comprising: a sidewall, said sidewall defining a substantially reniform shape, said sidewall comprising an upper perimeter and a lower perimeter, said sidewall defining a slot for receiving at least one canteen cup handle; a substantially reniform bottom surface connected to said lower perimeter of said sidewall, said bottom surface defining an outer perimeter that is greater than said lower perimeter; and a graduated foot formed where said sidewall is connected to said bottom surface.

12. The method of claim 11 wherein said canteen cup insulator comprises one of a neoprene canteen cup insulator or a leather canteen cup insulator.

13. The method of claim 11 wherein said canteen cup insulator further comprises a handle engaging mechanism.

14. The method of claim 11 wherein said sidewall further comprises a u-shaped slot.

15. The method of claim 14 wherein said handle engaging mechanism comprises: a repositionable flap; a connection point connecting said flap to said sidewall; and a fastening point, said fastening point being attached to said sidewall, said fastening point being configured to selectively receive said repositionable flap.

16. The method of claim 15 further comprising the steps of: positioning at least one canteen handle into said u-shaped slot; positioning said flap through at least one opening in said at least one canteen cup handle; and fastening said flap to said sidewall by attaching said flap to said connection point.

17. The method of claim 15 wherein said fastening point comprises a hook and loop fastener.

18. The canteen cup insulator of claim 14 wherein said fastening point comprises a snap.

19. The method of claim 15 further comprising the steps of: removing said flap from said sidewall; and removing said canteen cup from said canteen cup insulator.

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