Abstract: Disclosed is a disinfectant wipe dispenser. The dispenser may assist in the prevention of nosocomial infection transmission, such as staff and MRSA infections. Such a dispenser may comprise a housing for holding disinfectant wipes and a fastener. The fastener may be adapted to removably attach the housing to a medical implement and/or an article of clothing. For example, the housing may be attached to a stethoscope.
DISINFECTANT WIPE DISPENSER

CROSS REFERENCE TO RELATED APPLICATIONS

This application claims priority to U.S. Application No. 11/851,184, filed September 6, 2007 entitled "DISINFECTANT WIPE DISPENSER," which claimed the benefit of U.S. Provisional Application No. 60/828,989, filed October 11, 2006 entitled "ALCOHOL SWAB DISPENSER."

TECHNOLOGY FIELD

[0001] The technology is directed toward a disinfectant wipe dispenser. This technology is particularly suited, but by no means limited, for attachment to a stethoscope for use by medical personnel in sterilizing medical instruments, such as a stethoscope.

BACKGROUND

[0002] The danger of nosocomial infections is a growing concern in the healthcare world. A major cause of such infections is the repeated use of non-sterilized medical devices. For example, medical personnel may use a stethoscope on one patient and may forget to sterilize the stethoscope before using it on the next patient.

[0003] Typically, the medical devices are to be sterilized with pre-moistened alcohol swabs before use on each patient. Such pre-moistened alcohol swabs are usually stored in a receptacle that is often times placed in a user's pocket, on a shelf, in a cabinet or on a cart. As a result, the swabs are not readily accessible, and therefore not used. Therefore, non-sterile
medical devices, such as stethoscopes, are often times being used on patients. Such a practice may spread pathogens and may cause serious health risks to the patients.

SUMMARY

[0004] In light of the aforementioned shortcomings, the present disinfectant wipe dispenser may provide many benefits. For example, the disinfectant wipe dispenser may assist in the prevention of nosocomial infection transmission, such as staff and MRSA infections, may be conveniently located, and may be readily accessible to medical personnel. The disinfectant wipe dispenser may also serve as a visual reminder for patients and healthcare workers, assuring them that the proper sanitary steps are being taken for the prevention of spreading infections. The disinfectant wipe dispenser may be further beneficial in the healthcare field to ideallistically decrease lawsuit damages and in-patient stays that result from nosocomial infections, thus benefiting healthcare insurance companies, and decreasing hospital costs.

[0005] In one embodiment, the disinfectant wipe dispenser may comprise a portable housing for holding the disinfectant wipes and a fastener. The fastener may be adapted so that the housing may be removably attached to a medical implement that is typically carried by a medial personnel and/or an article of clothing. For example, the dispenser may be attached to a stethoscope.

[0006] The fastener of the dispenser may be adapted to releasably attach the housing to a medical implement and/or an article of clothing. For example medical personnel may want to attach the dispenser to a stethoscope, a belt, or a shirt. That is, the dispenser may be located in a position that is readily accessible to medical personnel.

[0007] The fastener may include a variety of features to allow a user to releasably attach the housing. For example, the fastener may include at least one clip. Such a clip may be semi-circular in shape and may allow the housing to attach to the tubing of a stethoscope without substantially pinching the flexible tube of the stethoscope. The fastener may also include, a belt clip or a pinch clip.

[0008] The housing may include a variety of features to allow access to the disinfectant wipes. For example, the housing may be openable, thereby providing access to the disinfectant wipes when the housing is in an open position, and preserving the disinfectant wipes when the housing is in a closed position. The disinfectant wipes may also be dispensed through an opening in the housing.

[0009] The housing may also include a feed mechanism. The feed mechanism may be adapted to advance a second disinfectant wipe after a first disinfectant wipe has been removed
from the housing. For example, the feed mechanism may include a spring to urge the disinfectant wipes toward an opening of the housing.

[0010] The disinfectant wipe dispenser may also be used to advertise. For example, a surface of the dispenser may be used to display the owner's name, the name of a hospital, the name of a school, the name of a health care company, and/or the name of a pharmaceutical company.

[0011] Additional features and advantages of the dispenser will be made apparent from the following detailed description of illustrative embodiments that proceeds with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] The invention is best understood from the following detailed description when read in connection with the accompanying figures. It is emphasized that, according to common practice, the various features of the figures are not to scale. On the contrary, the dimensions of the various features are arbitrarily expanded or reduced for clarity.

[0013] FIG. 1 is a plan view of an embodiment of a disinfectant wipe dispenser;

[0014] FIG. 2 is a plan view of the exemplary disinfectant wipe dispenser of FIG. 1 in an open position;

[0015] FIG. 3 is a cross sectional view of the exemplary disinfectant wipe dispenser of FIG. 1;

[0016] FIG. 4 is a cross sectional view of the exemplary disinfectant wipe dispenser of FIG. 3 with the addition of disinfectant wipes;

[0017] FIG. 5 is a perspective view of the disinfectant wipe dispenser of FIG. 1 attached to a standard stethoscope;

[0018] FIG. 6 is perspective view of the underside of the exemplary disinfectant wipe dispenser of FIG. 5;

[0019] FIG. 7 is an enhanced perspective view of the exemplary disinfectant wipe dispenser of FIG. 6;

[0020] FIG. 8 is a plan back view of an exemplary disinfectant wipe dispenser depicting a fastener positioned transverse to a length of the dispenser;

[0021] FIG. 9 is a plan back view of an exemplary disinfectant wipe dispenser depicting a fastener positioned in line with a length of the dispenser;

[0022] FIG. 10 is a detail view of an exemplary disinfectant wipe dispenser depicting an exemplary fastener having a semi-circular shape;
FIG. 11 is a side view of an exemplary disinfectant wipe dispenser depicting an exemplary fastener having an exemplary belt clip;

FIG. 12 is a side view of an exemplary disinfectant wipe dispenser depicting an exemplary fastener having a pinch clip;

FIG. 13 is an overhead view of another embodiment of a disinfectant wipe dispenser; and

FIG. 14 is a perspective view of the exemplary disinfectant wipe dispenser of FIG. 13 attached to a standard stethoscope.

DETAILED DESCRIPTION OF ILLUSTRATIVE EMBODIMENTS

The following is a description of several exemplary embodiments of a portable disinfectant wipe dispenser that is readily accessible, so that medical devices, such as a stethoscope, can be sterilized before and/or after each use. Such a dispensing device may serve as a constant visual reminder to swab the stethoscope between patients. Additionally, the dispenser may be easy to use, cost effective, may be designed for long term use, and may be refillable. The dispensing device, while shown and described in the context of a stethoscope, can easily be used for other medical implements, such as an otoscope, for example.

FIG. 1 depicts an exemplary embodiment of the disinfectant wipe dispenser. As shown, a disinfectant wipe dispenser 10 may include a housing 14 for storing disinfectant wipes. The housing 14 may include a top cover 18 and a bottom cover 22. The housing 14 may be made of a lightweight material, such as plastic, for example. The housing 14 may be slightly longer and wider than a standard sized disinfectant wipe. For example the housing 14 may be 2 1/8 inches long by 2 inches wide. It should be appreciated, however, that the housing 14 is not limited to such a shape and dimensions, and that the housing 14 may include other configurations. For example, the housing 14 may be cylindrical in shape.

The housing 14 may be manufactured using standard methods known in the art. For example, the housing 14 may be molded. Additionally, the housing 14 may be manufactured as a single unit, or the top cover 18 and the bottom cover 22 of the housing 14 may be manufactured separately.

The housing 14 can preferably store a plurality of disinfectant wipes. As shown, the disinfectant wipes may be rectangular in shape. The wipes may be separate or combined by a perforated edge, to assist in separating one wipe from an adjacent wipe. The wipes may include a pre-applied disinfectant. For example, the wipes may be impregnated with an alcohol solution. Furthermore, the wipes may be odorless. It shall be understood, however, that the wipes are not limited to the disclosed embodiment and may include other embodiments as may be appropriate.
to safely sterilize the medical implement, the user's hands, or even a patient's skin whenever a disinfectant wipe is required. Additionally, the wipes may include other embodiments depending on the particular structure and shape of the dispenser housing 14.

[0031] As depicted, the housing 14 may include an opening 26. The opening 26, may be designed so that a single prepackaged disinfectant wipe may be removed with a user's finger. For example, the opening 26 may include a valley 30 having a rounded bottom 34 and sloped edges 38 and 42. The sloped edges 38 and 42 may merge into the rounded bottom 34 in one direction, and may terminate at a top edge 46 of the top cover 18 in the other direction. As shown, the opening 26 may be located at a top portion 50 of the top cover 18. It shall be appreciated that the opening 26 depicted in FIG. 1 is for exemplary purposes only, and that the opening 26 may include other configurations and locations on the housing 14 (see e.g. FIG. 13).

[0032] As depicted in FIG. 2, the housing 14 may be openable. Therefore, the housing 14 may provide access to the disinfectant wipes when it is in an open position, and may help preserve the disinfectant wipes when it is in a closed position. Additionally, by having an openable housing, a user may be able to reload the dispenser with replacement wipes when the disinfectant wipes have all been used. For example, the user may reload with any standard size pre-packaged alcohol swab.

[0033] As shown, the housing 14 may be opened and closed using a hinge configuration 54. That is, the top cover 18 and the bottom cover 22 may be connected by the hinge configuration 54. It shall be appreciated that the housing 14 is not limited to a hinge configuration 54. For example, the top cover 18 and the bottom cover 22 may each include snaps (not shown), thereby enabling the top cover 18 and the bottom cover 22 to be snapped together. Additionally, the housing 14 is not limited to a configuration where the entire disinfectant wipe is exposed when the housing 14 is in an open position. For example, in some embodiments only a portion of a disinfectant wipe may be exposed when the housing 14 is in an open position.

[0034] The housing 14 may also include a feed mechanism 58. The feed mechanism 58 may be adapted to advance a second disinfectant wipe after a first disinfectant wipe has been removed from the housing. As shown, the feed mechanism 58 may be disposed inside the housing 14. However, it shall be appreciated that the feed mechanism 58 is not limited to configurations located inside the housing 14. For example, the feed mechanism 58 may be disposed on an exterior portion of the housing 14.

[0035] As shown, the feed mechanism 58 may be a spring clip 62. The spring clip 62 may include a spring portion 66, and a body portion 70. The spring portion 66 may be connected
to an interior surface of the bottom cover 22. The body portion 70 may angle up from the spring portion 66 toward the top cover 18. The end of the body portion 70 may curl to form a blunt edge 74.

[0036] FIG. 3 depicts a cross-sectional view, where the dispenser 10 is empty and the spring clip 62, is in the raised position. FIG. 4 depicts a cross-sectional view, where the dispenser 10 is filled with disinfectant wipes 78. As shown, when dispenser 10 is filled with the disinfectant wipes 78, the spring clip 62 is in a depressed position. The spring clip 62 may urge the disinfectant wipes 78 toward the opening. That is, the pressure applied by the spring clip 62 may push the disinfectant wipes 78 toward the top cover 18 of the housing 14, so that an individual wipe 78 may be removed and then conveniently replaced by the wipe 78 below, which will then be positioned for removal. It should be appreciated that the feed mechanism 58 is not limited to the spring clip 62 embodiment, and that other configurations are envisioned. For example, the feed mechanism 58 may be a roller (not shown), where a user may be required to turn a knob to produce the disinfectant wipe.

[0037] FIGs. 5 and 6 depict the disinfectant wipe dispenser 10 attached to a standard stethoscope 82. The stethoscope 82 may include an ear piece 90, a chest piece 94, and a tube 98. The ear piece 90 may include a left ear piece 91 and a right ear piece 93. The ear piece 90 may be constructed of a durable material such as metal or plastic, for example. The tube 98 may connect the chest piece 94 to the ear piece 90. The tube 98 may split into a first tube 102, a second tube 104, and a third tube 106 at a T-point 108. As shown, the first tube 102 may connect to the left ear piece 91, the second tube 104 may connect to the right ear piece 93 and the third tube 106 may connect to the chest piece 94. The tube 98 may be constructed of a flexible material such as synthetic rubber for example.

[0038] As shown in FIGs. 6 and 7, the dispenser 10 may include a fastener 110. The fastener 110 may be coupled to or extend from the housing 14 and may be adapted to releasably attach the dispenser 10 to a portable object. As depicted for example, the fastener 110 may releasably attach the dispenser 10 to a stethoscope.

[0039] As depicted, the fastener 110 may be attached to or extend from the bottom cover 22 of the housing 14. As shown, the fastener 110 may include a first clip 114 and a second clip 118. The clips 114 and 118 may extend from the housing 14 in any number of configurations. For example, the clips 114 and 118 may be transverse to a length L of the housing 14 as shown in FIG. 8 or the clips 114 and 118 may be in line with the length L of the housing 14 as shown in FIG. 9. It should be appreciated, however, that the fastener 110 is not
limited to the described two clips and configurations, and that any number of clips and configurations are envisioned. For example, the fastener 110 may include one clip.

[0040] Furthermore, the fastener 110 may be adapted to rotate. For example, as shown in FIG. 9 when the dispenser 10 is attached to a portable object, the housing 14 may be able to rotate relative to the fastener 110 about a point 120 on a surface 130 of the housing 14, thereby allowing a user to determine the most convenient and effective dispensing position.

[0041] As shown in FIG. 10, the fastener 110 may include a semi-circular clip 134. Such a fastener 110 may be adapted to follow the shape of the stethoscope tubing, for example. Therefore, sound travel through the tubing may not be interrupted when the dispenser is fastened to the stethoscope. As shown, the semi-circular clip 134 may comprise a cavity 136, a first arm 138 and a second arm 142 that opposes the first arm 138. The first and second arms 138 and 142 may extend from the housing 14 to form the semi-circular clip 134. As shown, the arms 138 and 142 do not meet and an opening 144 may allow for attachment and removal of the disinfectant wipe dispenser from the medical device, such as the flexible tube of a stethoscope. In operation, the tube of the stethoscope may be pushed into the semi-circular clip 134. For example, the flexible tube may be squeezed to fit into the semi-circular clip 134, or alternatively, arms 138 and 142 may separate to accept the tube and then may return back together in order to hold the dispenser to the stethoscope.

[0042] While the dispenser 10 is shown in FIGs. 5-7 as being attached to the tube 98 at the T-point 108, it should be appreciated that the dispenser may be attached to any part of the stethoscope 82. For example, the dispenser 10 may be attached to any one of the left ear piece 91, the right ear piece 93, the first tube 102, the second tube 104, or the third tube 106, etc.

[0043] Other embodiments of the fastener 110 are envisioned. For example, the fastener 110 may include a belt clip, hook and loop fasteners, snaps, an elastic clip or a pinch clip. For example, the fastener 110 may include a belt clip 146 as shown in FIG. 11 or a pinch clip 150 as shown in FIG. 12. By having a variety of fastener embodiments, the dispenser may be releasably attached to other moveable objects such as a user's belt, pocket, jacket collar, ID holder, and other medical implements. Preferably, the disinfectant wipe dispenser may be attached to an object that is typically carried by medical personnel.

[0044] As shown in FIG. 1, the dispenser 10 may have a surface 154 that is ideal for advertisements and promotional messages. For example, when the dispenser 10 is fastened to the stethoscope, the surface 154 may be in an ideal position for a patient to view. Accordingly, companies, such as pharmaceutical companies, may place ads on the surface 154 thereby promoting their products and services.
FIGs. 13 and 14 depict another embodiment of the disinfectant wipe dispenser. As shown, a disinfectant wipe dispenser 210 may include a housing 214 that may be attached to a stethoscope 82. In this embodiment, the housing 214 may include an opening 226 in a top 230 of the housing 214. As shown, a disinfectant wipe 278 may be removed through the opening 226.

While systems and methods have been described and illustrated with reference to specific embodiments, those skilled in the art will recognize that modification and variations may be made without departing from the principles described above and set forth in the following claims. Accordingly, reference should be made to the following claims as describing the scope of disclosed embodiments.
What is Claimed:

1. A disinfectant wipe dispenser and stethoscope system comprising:
   a stethoscope comprising an ear piece, a chest piece, and flexible tubing coupling the ear piece to the chest piece; and
   a portable disinfectant wipe dispenser comprising a housing for storing disinfectant wipes, and a clip extending from the housing;
   wherein the clip is releasably attached to the flexible tubing such that sound traveling through the flexible tubing is substantially uninterrupted.

2. The system of claim 1, wherein the clip defines a semi-circle having a cavity sized to receive the flexible tubing of the stethoscope.

3. The system of claim 2, wherein the clip comprises a first arm extending in a first direction and a second arm extending in a second direction, the first and second arms defining an opening for receiving the flexible tubing.

4. The system of claim 1, wherein the housing includes a feed mechanism, wherein the feed mechanism is adapted to urge the disinfectant wipes toward an opening of the housing, thereby advancing a second disinfectant wipe after a first disinfectant wipe has been removed from the housing.

5. A disinfectant wipe dispenser for cleaning a medial implement, the dispenser comprising:
   a portable housing for storing disinfectant wipes; and
   a fastener extending from the housing, the fastener being adapted to removably connect the housing to a portable object capable of being carried by a person.

6. The dispenser of claim 5, wherein the fastener comprises at least one clip adapted to fasten the housing onto the portable object.

7. The dispenser of claim 6, wherein the clip defines a semi-circle having a cavity sized to receive a tube of a stethoscope.

8. The dispenser of claim 5, wherein the portable object is a stethoscope.
9. The dispenser of claim 5, wherein the housing comprises a top cover, a bottom cover, and a hinge coupling the top cover to the bottom cover.

10. The dispenser of claim 5, wherein the housing comprises an opening for dispensement of the disinfectant wipes.

11. The dispenser of claim 5, wherein the fastener is rotatably attached to the housing.

12. The dispenser of claim 5, wherein the housing includes a feed mechanism, wherein the feed mechanism is adapted to urge the disinfectant wipes toward an opening of the housing, thereby advancing a second disinfectant wipe after a first disinfectant wipe has been removed from the housing.

13. The dispenser of claim 5, wherein the fastener comprises a belt clip.

14. The dispenser of claim 5, wherein the fastener comprises a press clip.

15. The dispenser of claim 5, wherein a surface of the housing is used for advertising.

16. The dispenser of claim 5, wherein the fastener comprises two clips.

17. A portable disinfectant wipe dispenser comprising:
   a portable housing for storing disinfectant wipes; and
   at least two clips extending from the housing, the clips being adapted to removably connect the housing to a tube of a stethoscope.

18. The dispenser of claim 17, wherein the housing comprises a top cover, a bottom cover, and a hinge coupling the top cover to the bottom cover.

19. The dispenser of claim 17, wherein the housing includes a feed mechanism, wherein the feed mechanism is adapted to urge the disinfectant wipes toward an opening of the housing, thereby advancing a second disinfectant wipe after a first disinfectant wipe has been removed from the housing.

20. The dispenser of claim 17, wherein the clips are positioned in line with a length of the housing.
21. The dispenser of claim 17, wherein the clips are positioned transverse to a length of the housing.

22. The system of claim 17, wherein each clip defines a semi-circle having a cavity sized to receive the flexible tubing of the stethoscope.

23. The system of claim 22, wherein each clip comprises a first arm extending in a first direction and a second arm extending in a second direction, the first and second arms defining an opening for receiving the flexible tubing.