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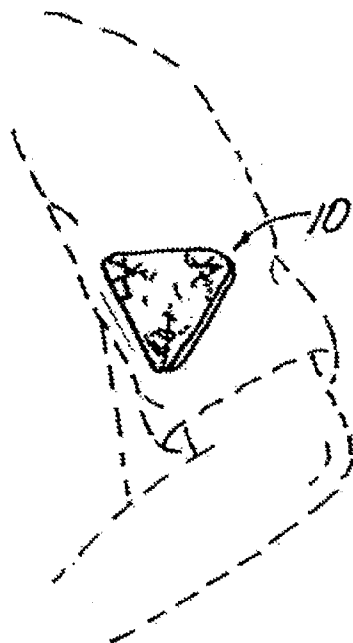
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(54) Title: METHOD AND APPARATUS FOR PREVENTING THE SPREAD OF GERMS WHILE COUGHING OR SNEEZING



(57) Abstract: A wearable tissue/handkerchief, cough/sneeze absorbent pad according to the invention comprises a washable, reusable armband or alternately, a completely disposable unit consisting of an adhesive strip, either to which is attached one or more disposable absorbent pads/tissues. These pads can be peeled off and used while held in the hand as a conventional tissue but preferably, when worn on one's arm, can be coughed/sneezed into while the device is on the arm. This allows the device to be utilized even when one's hands are not available, such as for anyone working in a health care setting, a chef preparing food or a waiter carrying plates of food. This prevents the common occurrence of sneezing/coughing out into the air or into one's hands or sleeve, which are unsanitary practices. The present invention has a pad shaped to receive a user's nose and mouth, and a raised welt and/or a baffle around the perimeter greatly reduces the amount of germs that escape, as does the shape which conforms generally to the position of the user's nose and mouth. Optionally, a pocket or pockets contained within the armband can hold gloves, facemask(s) and antibacterial wipes.

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METHOD AND APPARATUS FOR PREVENTING THE SPREAD OF
GERMS WHILE COUGHING OR SNEEZING

CROSS REFERENCE TO RELATED APPLICATIONS

This application claims priority from U.S. Provisional Patent Application Ser. No. 60/732,353 filed November 1, 2005, and is incorporated by reference herein in its entirety.

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates to tissues & handkerchiefs, and more particularly a tissue or absorbent pad which is worn on an arm and can be used while it is in that position even when both hands are occupied.

Description of Related Art

In the health care and food preparation field, as well as in everyday life, the prevention of the spread of germs through what the Centers for Disease Control and the U.S. Dept. of Health and Human Services calls the practice of "respiratory etiquette" (i.e. covering ones' mouth when coughing and sneezing) has become a priority. Facemasks, while effective at blocking many of these germs, are not worn in many situations. The problem is that often a cough or sneeze occurs with little warning and the individual does not have the time to reach into his or her pocket for a tissue or is carrying an object and is unable to obtain or use a conventional tissue.

A sneeze can travel up to 100 MPH, and stifling or attempting to stop a sneeze can cause serious injuries, including broken facial bones. There exist various devices designed primarily to be worn on ones' arm, wrist or glove during winter outdoor activities for wiping a dripping nose, but these are not suitable for the purpose of stopping the spread of germs caused by the forceful expulsion of germ-laden air created by coughs & sneezes.

U.S. Patent No. D446,381 discloses a handkerchief attachable to a user's wrist. The shape is not conformed to a human nose and mouth, nor are a welt and baffle disclosed. A protective sheet is also not disclosed.

U.S. Patent No. 4,244,057 discloses a nasal drip absorbing device wearable on a cuff or back of a glove. The shape is not conformed to a human nose and mouth, nor are a welt and baffle disclosed. A protective sheet is also not disclosed.

U.S. Patent No. 4,401,233 discloses a dispenser for tissues. The dispenser is not made to be coughed or sneezed into. The shape is not conformed to a human nose and mouth, nor are a welt and baffle disclosed.

U.S. Patent No. 4,536,889 discloses a wearable absorbent pad for wiping a wearer's nose. A protective sheet (31) is disclosed. The shape is not conformed to a human nose and mouth, nor are a welt and baffle disclosed.

U.S. Patent No. 5,678,728 discloses a dispenser for flexible sheets. The dispenser is not made to be coughed or sneezed into. The shape is not conformed to a human nose and mouth, nor are a welt and baffle disclosed.

U.S. Publication No. 20020084279 discloses a dispenser for tissues. The dispenser is not made to be coughed or sneezed into. The shape is not conformed to a human nose and mouth, nor are a welt and baffle disclosed. A protective sheet is also not disclosed.

Accordingly there is a need for a simple wearable device that can hold a single or multiple disposable tissue/absorbent pads which are designed to greatly reduce the amount of germs expelled into the air when it is coughed or sneezed into and can optionally contain a pocket or pockets which can store latex gloves, a facemask, and antibacterial wipes, all important items for preventing the spread of disease.

SUMMARY OF THE INVENTION

A wearable tissue/handkerchief, cough/sneeze absorbent pad according to the invention comprises a washable, reusable armband or alternately, a completely disposable unit consisting of an adhesive strip, either to which is attached one or more disposable absorbent pads/tissues. These pads can be peeled off and used while held in the hand as a conventional tissue but preferably, when worn on one's arm, can be coughed/sneezed into while the device is on the arm. This allows the device to be utilized even when one's hands are not available, such as for anyone working in a health care setting, a chef preparing food or a waiter carrying plates of food. This prevents the common occurrence of sneezing/coughing out into the air or into one's hands or sleeve, which are unsanitary practices. The present invention has a pad shaped to receive a user's nose and mouth, and a raised welt and/or a baffle around the perimeter greatly reduces the amount of germs that escape, as does the shape which conforms generally to the position of the user's nose and mouth. Optionally, a pocket or pockets contained within the armband can hold gloves, facemask(s) and antibacterial wipes.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will be more fully understood from the detailed description below when viewed in conjunction with the accompanying drawings in which:

Fig. 1 is a view showing an entirely disposable version with sneeze/cough pads worn on a sleeve of a shirt;

Fig. 2 shows the back side of a sneeze/cough pad shaped to cover a user's nose and mouth area and showing how a layer is peeled off of the back to allow an adhesive surface to be exposed so the pad can be attached to the sleeve of a garment or to a bare arm;

Fig. 3 is an exploded perspective view of the pad to show how several layers of pads nest together and are removable one at a time;

Fig. 4 is a cross-sectional view of one of the contoured sneeze/cough pads taken along line 4-4 of Fig. 3:

Fig. 5 shows a nurse in a hospital carrying a tray of food while using the present invention;

Fig. 6 shows the nurse of Fig. 5 coughing or sneezing into the pad of the present invention while holding the tray of food;

Fig. 7 shows a nurse in a hospital carrying a glass and a pitcher of liquid while using the present invention;

Fig. 8 shows the nurse of Fig. 7 coughing or sneezing into the pad of the present invention while holding the glass and pitcher;

Fig. 9 shows the nurse of Figs. 5-8 peeling off the top layer of the pad into which the nurse had sneezed or coughed, exposing a fresh layer of pad beneath;

Fig. 10 shows the nurse of Figs. 5-8 holding the removed top layer of the pad into which the nurse had sneezed or coughed;

Fig. 11 shows the nurse of Figs. 5-8 throwing away the top layer of the pad into which the nurse had sneezed or coughed;

Fig. 12 shows an alternate embodiment of the present invention with a VELCRO secured arm band with the pad of the present invention attached thereto and shows a tissue/bacterial wipe/vinyl glove extending from a pocket in the armband;

Fig. 13 is a view of the invention of Fig. 12 with a nurse in a hospital carrying a tray of food while using the present invention;

Fig. 14 shows the nurse of Fig. 12 coughing or sneezing into the pad of the present invention while holding a glass and a pitcher, the pad being worn on the forearm; and

Fig. 15 shows an alternate embodiment of the present invention with the pad being attached to an elastic band that can be placed on a person's arm and showing the pad in a rectangular shape to illustrate that the pad can be made in a variety of shapes consistent with the present invention.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to the drawings wherein like reference numerals designate identical or corresponding parts throughout the several views, Fig. 1 shows a pad **10** constructed in accordance with a preferred embodiment of the present invention attached to the sleeve of a person shown in dashed lines.

The pad **10** is shown in more detail in Figs. 2-4. The back of each layer of the pad has an adhesive layer **12** which is exposed when layer **11** is peeled off of it as shown in Fig. 2. That allows the pad to stick to the sleeve of a person or to an arm or hand of such person. Each layer **13** of the pad can be an entirely disposable unit that adheres to the user with the adhesive surface **12**.

Each layer **13** of the pad **10** includes a clean and dry absorbent cloth or the like can optionally have a bacterial wipe on the back side of for wiping a user's hands and mouth before

throwing the entire layer **13** away. Also, optionally, each layer of the pad would have the back with an adhesive surface **12** thereon, which back is constructed of an impermeable material such as vinyl or some other flexible plastic material to prevent the germs from the top layer from passing on to the next lower layer **13**. Of course non-plastic impermeable materials could be used instead of plastic ones. So it will be appreciated that each layer **13** of the pad would preferably have the clean and dry absorbent layer attached to the impermeable material with adhesive **12** on the back of it. Only the extreme bottom layer **13** shown in Fig. 1 would have the layer **11** thereon.

The present invention **10** can also be attached with an arm band **17** like that shown in Fig. 12, which can be washable, adjustable and closed via straps, hook and loop fasteners **18** and **19**, ties, or adhesive. Various attaching means can be utilized without departing from the spirit of the invention and would be familiar to those skilled in the art. The invention could be worn anywhere along the shoulder, arm or hand, wherever the user finds it most comfortable. Because this invention can be worn on the arm, it is always readily available and can even be used when both hands are occupied as shown in Figs.5-11, 13 and 14. Each layer **13** of the sneeze/cough pads **10** are preferably are shaped to conform to the general outline of a user's nose and mouth region thus helping to better block the escape of germs and requiring less material for manufacture, or it can be three-dimensionally contoured as shown in Figs 3 and 4. The invention **10** preferably has a raised welt and/or a baffle **16** around the outer periphery of each layer **13** of the pad **10** of the side to be sneezed/coughed into, to prevent cough/sneeze by products (mucous, germs, saliva) from being expelled out from the edges of the pad. The raised welt and/or baffle **16** preferably also has a downwardly extending portion **16a** as shown in Fig. 4. Ideally the welt **16** and **16a** extend completely around the periphery of each layer **13** of the pad**10**.

Within this arm band **17**, constructed of a washable material, such as but not limited to, vinyl or plastic, resides a pocket **21** or pockets. These pockets **21** could have a cover over their openings, secured by another hook and loop fastener (not shown) or other type of closure. The user can store objects **22** such as surgical type face masks, gloves of latex or similar materials, and antibacterial wipes within these pockets **21** for ready access. These “wipes” **22** can be used to disinfect stethoscopes, hands and other objects, which spread germs in a health care or food service environment.

The arm band **17** could optionally be made in various colors/materials to match uniforms and could be imprinted with a business or institutions' name or logo etc. After each use, i.e. after being sneezed or coughed into as shown in Fig. 6, the user would peel off or otherwise remove and dispose of the used layer **13** of the pad **10** as shown in Figs. 9 and 10, which would reveal a fresh layer **13** beneath it as illustrated in Fig.3. The invention, in a preferred embodiment, could contain from one to six layers **13**, but more could be used without departing from the concept of the invention. Each of the layers **13** could optionally be made to make usage evident by means of a pressure or moisture activated color change. Although, for most uses, the layers **13** do not have to be sterile, optionally each layer **13** could include a removable cover (not shown) so that if a user has time one could remove the cover, if not, one could cough/sneeze directly into the cover.

Figs. 14 and 15 show an alternate form of the invention using an elastic arm band **23** having a rectangular pad **24** with several layers that can be peeled off, one by one by pulling on tabs **25**. Ideally this embodiment will also use a raised outer periphery portion (not shown).

In operation, Fig. 5 shows a nurse carrying a tray of food. When the nurse has to cough or sneeze, it is done into the pad **10** as shown in Fig. 6. Also, if the nurse has a glass of liquid, such

as water in one hand and a pitcher of liquid, such a water, in the other hand as shown in Fig. 7, the nurse can sneeze or cough into the pad **10** as shown in Fig. 8, preferably by putting his or her nose and mouth firmly against the pad **10** to catch air, germs, mucus or the like. After the sneeze or cough, the nurse can peel off the top layer **13** as shown in Figs. 9 and 10 and throw the used top layer **13** away as shown in Fig. 11. Fig. 14 shows the nurse coughing or sneezing into the pad **24** of arm band **23**, shown being worn on the forearm of the nurse.

Accordingly, it will be appreciated that the preferred embodiments do indeed overcome the deficiencies of the prior art. Obviously many modifications and variations of the present invention are possible in light of the above teachings. It is therefore to be understood that, within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

CLAIMS

1. Apparatus for catching the by-products of a cough or sneeze comprising:
a pad of an absorbent material, the pad having a top, a bottom and a perimeter;
the perimeter of the pad extending in a direction away from the top of the pad to form a barrier around the perimeter of the pad for catching by-products of a cough or sneeze such as germs, mucus and saliva when a person coughs or sneezes into the pad;
means for operatively attaching the pad to a person's arm.
2. The apparatus of claim 1 wherein the perimeter extends radially inwardly.
3. The apparatus of claim 2 wherein the perimeter also extends back generally towards the top of the pad.
4. The apparatus of claim 1 wherein the means for attachment to a person's arm is an adhesive backing for the pad which will stick to the sleeve of a garment or directly to a person's arm.
5. The apparatus of claim 1 wherein the pad comprises more than one layer of absorbent material, each layer being backed by an impermeable material.
6. The apparatus of claim 1 wherein the each layer includes a tab extending therefrom for making it easier to grasp each respective layer.

7. The apparatus of claim 5 wherein each layer of the pad is substantially the same shape.
8. The apparatus of claim 5 wherein a top layer is removable so that it can be removed and discarded after a person sneezes or coughs in such top layer.
9. The apparatus of claim 8 wherein a clean layer below the top layer becomes useable to cough or sneeze into after the top layer is removed.
10. The apparatus of claim 5 wherein there are more than three layers of absorbent material.
11. The apparatus of claim 5 wherein each layer of absorbent material has a front absorbent surface for receiving germs from a cough or sneeze and an anti-bacterial substance on the back side thereof which can be used to wipe the user's hands and mouth and then be thrown away with the layer that has been coughed or sneezed into.
12. The apparatus of claim 1 wherein the means for attachment to a person's arm is an arm band.
13. The apparatus of claim 12 wherein the means for attachment to a person's arm is an armband is attached with a hook and loop fastener.

14. The apparatus of claim 12 wherein the means for attachment to a person's arm comprises an elastic band.

15. A method of using an apparatus for catching the by-products of a cough or sneeze of a type comprising a pad of an absorbent material, the pad having a top, a bottom and a perimeter wherein the perimeter of the pad extending in a direction away from the top of the pad to form a barrier around the perimeter of the pad for catching by-products of a cough or sneeze such as germs, mucus and saliva when a person coughs or sneezes into the pad; said method comprising:

operatively attaching the pad to the person's arm in a position wherein the person can touch the front of the pad with his or her nose and/or mouth; and

sneezing or coughing into the pad while the person's nose and/or mouth are adjacent to the front of the pad.

16. The method of claim 15 wherein a top layer of the pad is removed and discarded.

17. The method of claim 16 comprising sneezing or coughing into a layer below the top layer after the top layer is removed and removing and discarding the layer below the top layer.

18. The method of claim 15 wherein the sneezing or coughing is done while the person is holding an object in at least one hand.

19. The method of claim 18 wherein the person is holding an object using two hands.

20. The method of claim 18 wherein the person is holding one object in one hand and another object in another hand.



Fig. 1

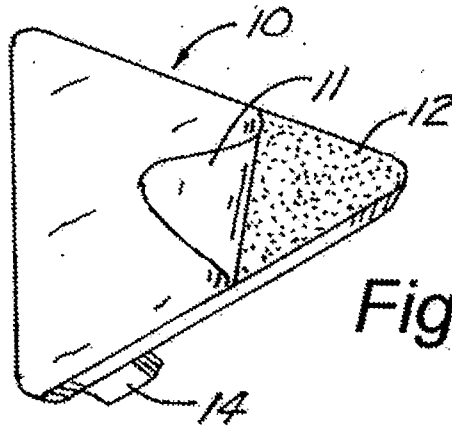


Fig. 2

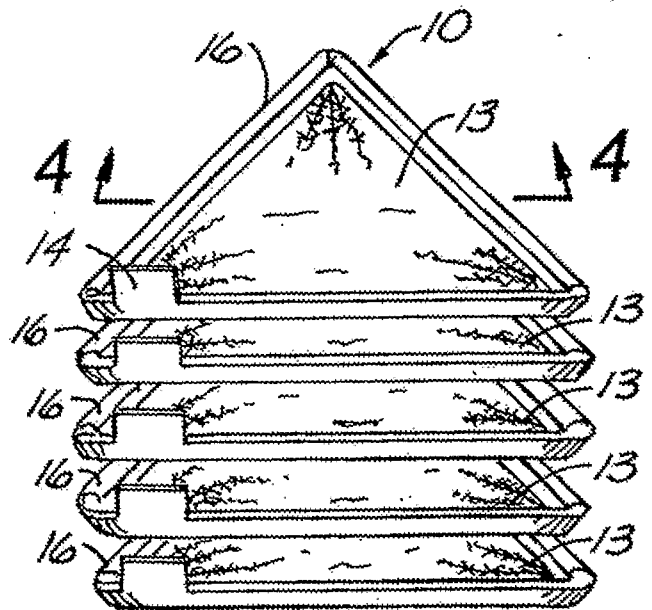


Fig. 3

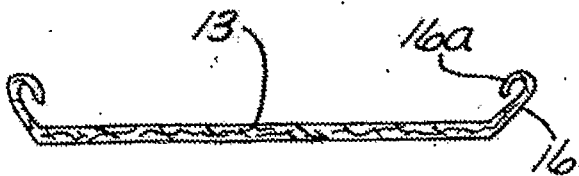


Fig. 4

Fig. 5

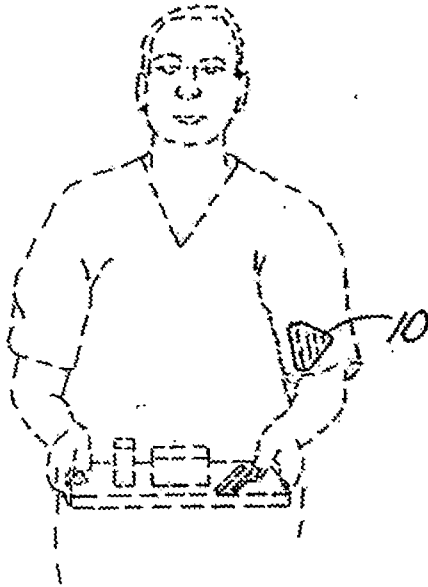


Fig. 6

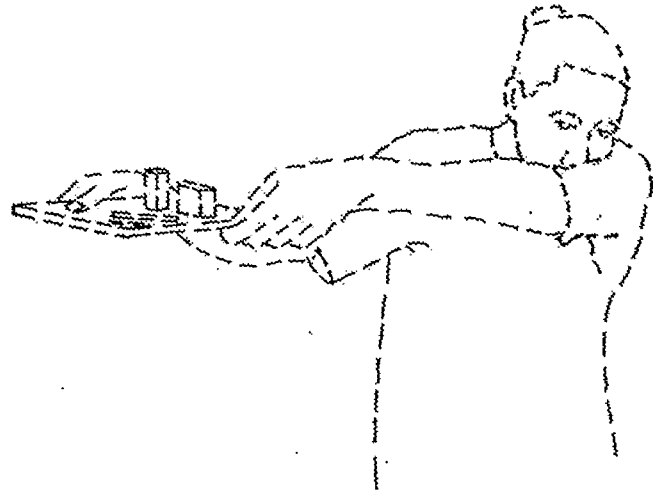


Fig. 7



Fig. 8

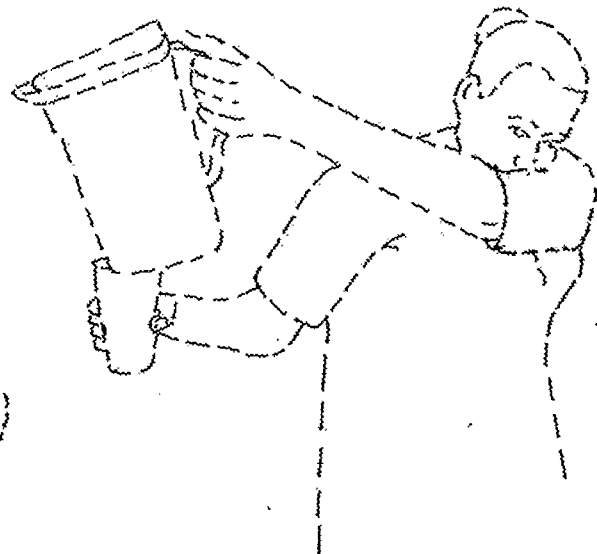


Fig. 9



Fig. 10

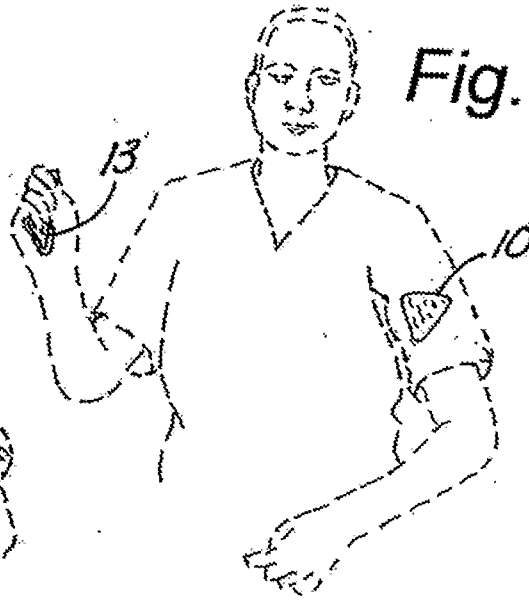
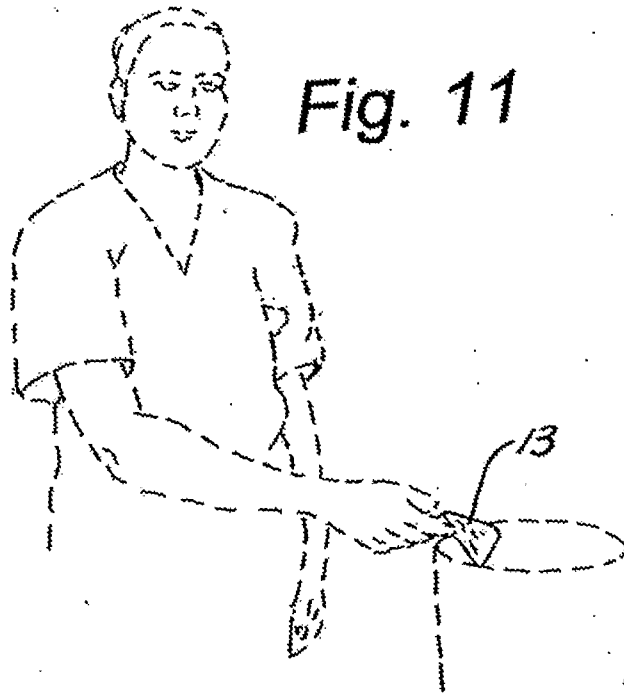


Fig. 11



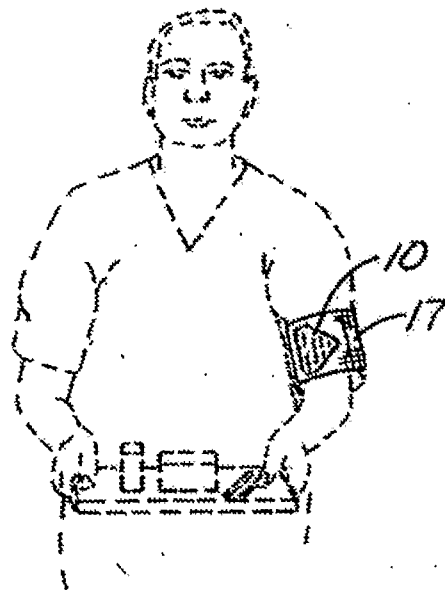
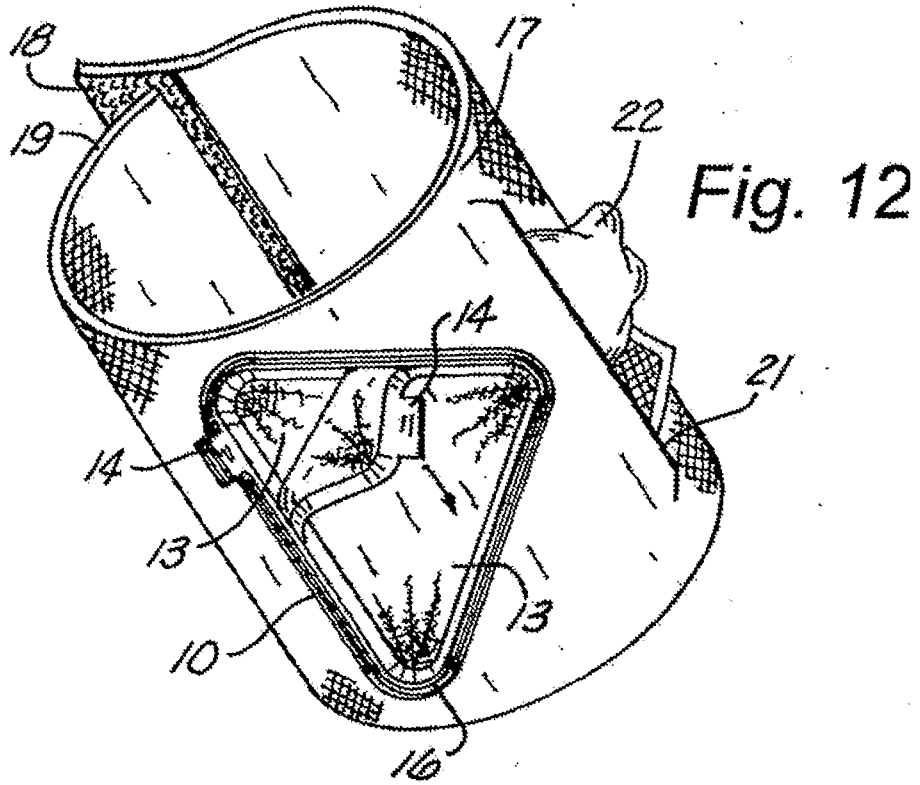


Fig. 13

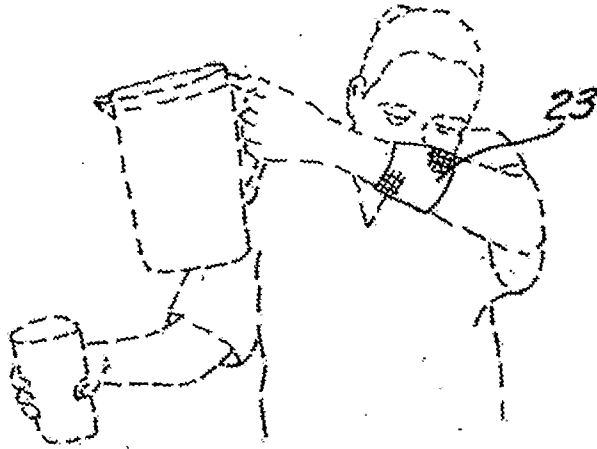


Fig. 14

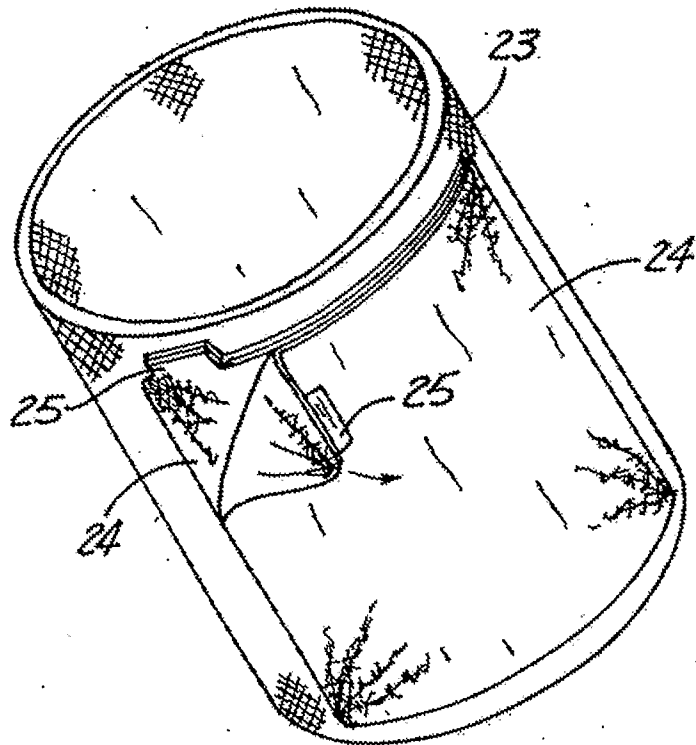


Fig. 15