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(54) **BROOM AND MOP COMBINATION AND METHODS FOR CONVERTING A BROOM TO MOP**

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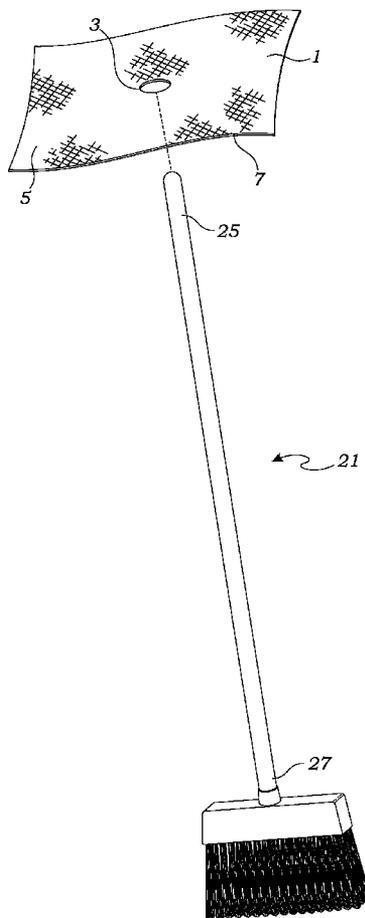
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(57) **ABSTRACT**
 A flexible fabric is provided for converting a broom into a mop. The flexible fabric has a center hole and a periphery region sufficiently large to cover the bristles of a broom. The center hole is sized so as to receive a traditional broom handle, but the center hole is sufficiently small so that it will not allow passage of the broom bristles. In use, the broom handle is projected through the flexible fabric's center hole and the fabric's edge is positioned downwardly so as to extend beyond the ends of the broom bristles so that the fabric's periphery region covers the broom bristles. Preferably, the flexible fabric is provided in a prepackaged format having a plurality of flexible fabrics which are saturated with a cleansing solution. Thus, the broom and fabric combination provide a mop construction which can be used for cleaning surfaces.



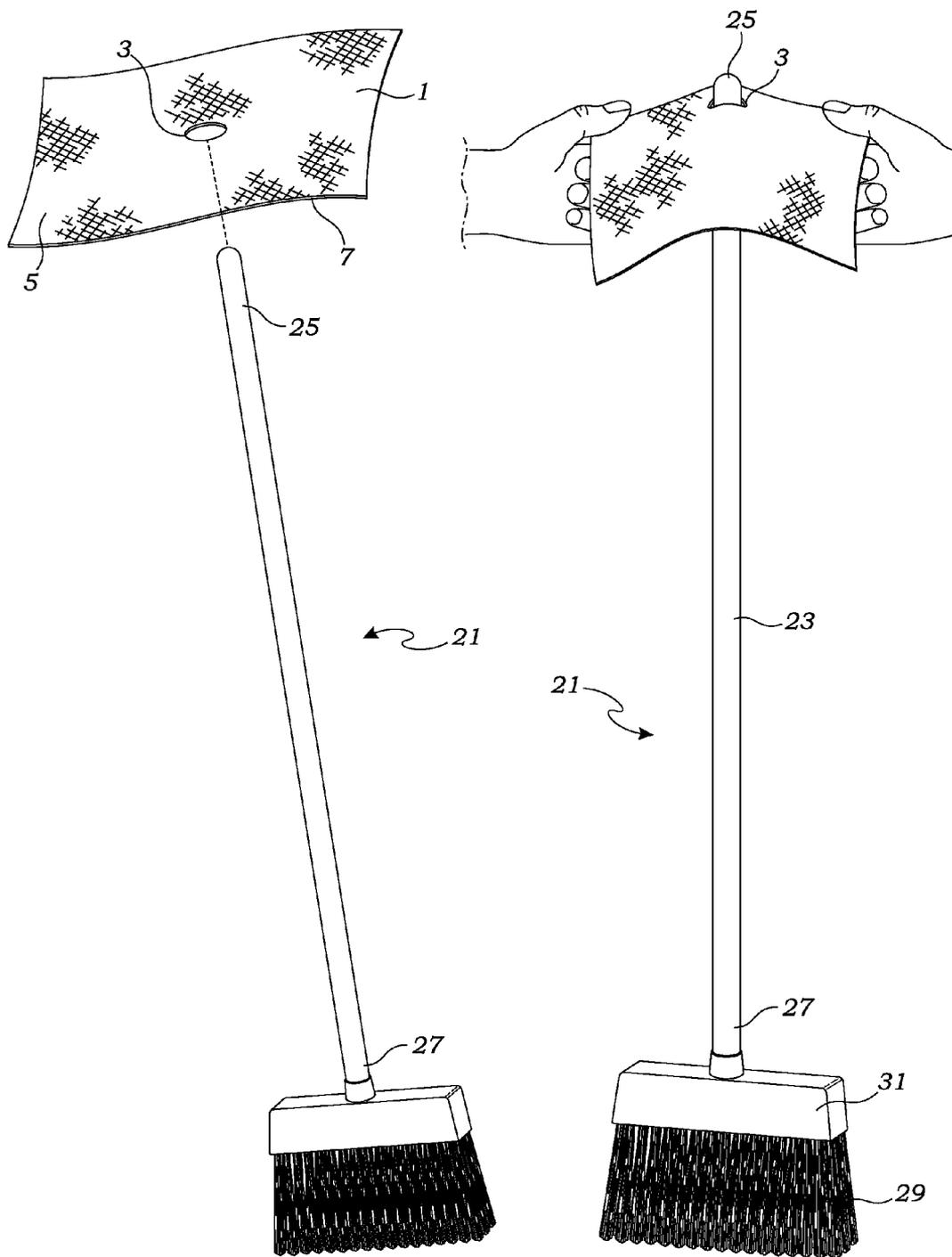


Fig. 1

Fig. 2

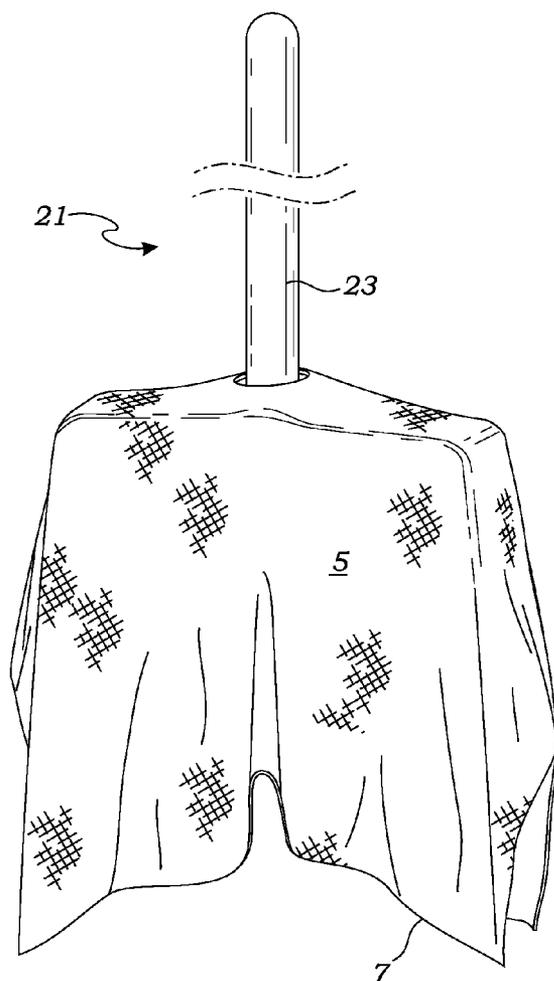


Fig. 3

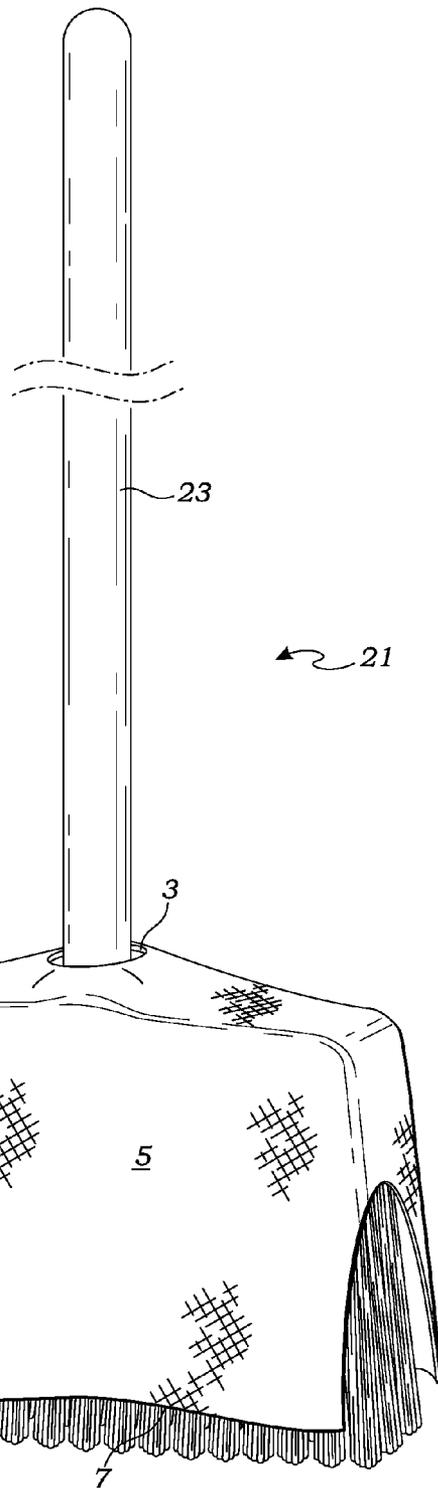


Fig. 4

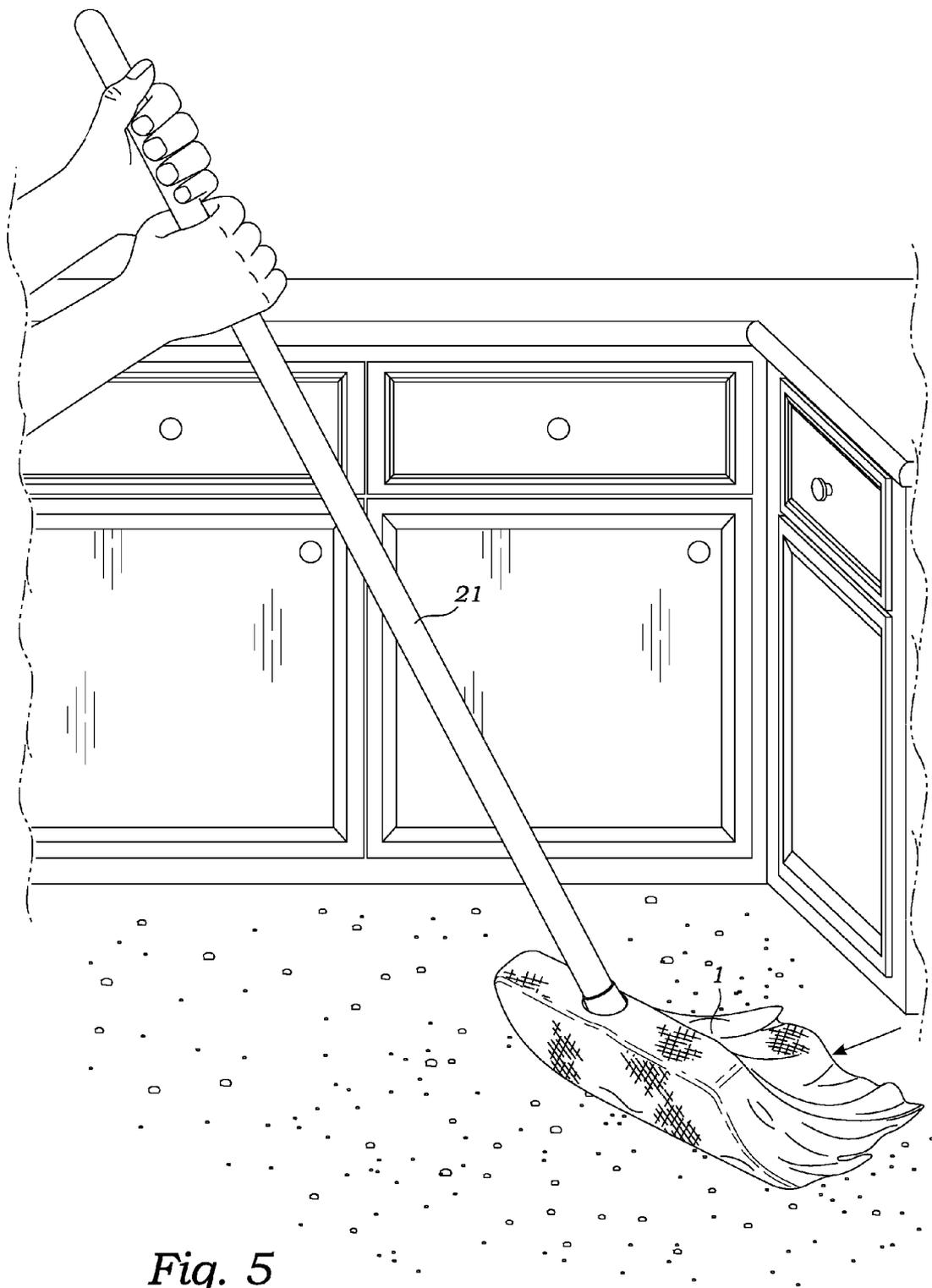


Fig. 5

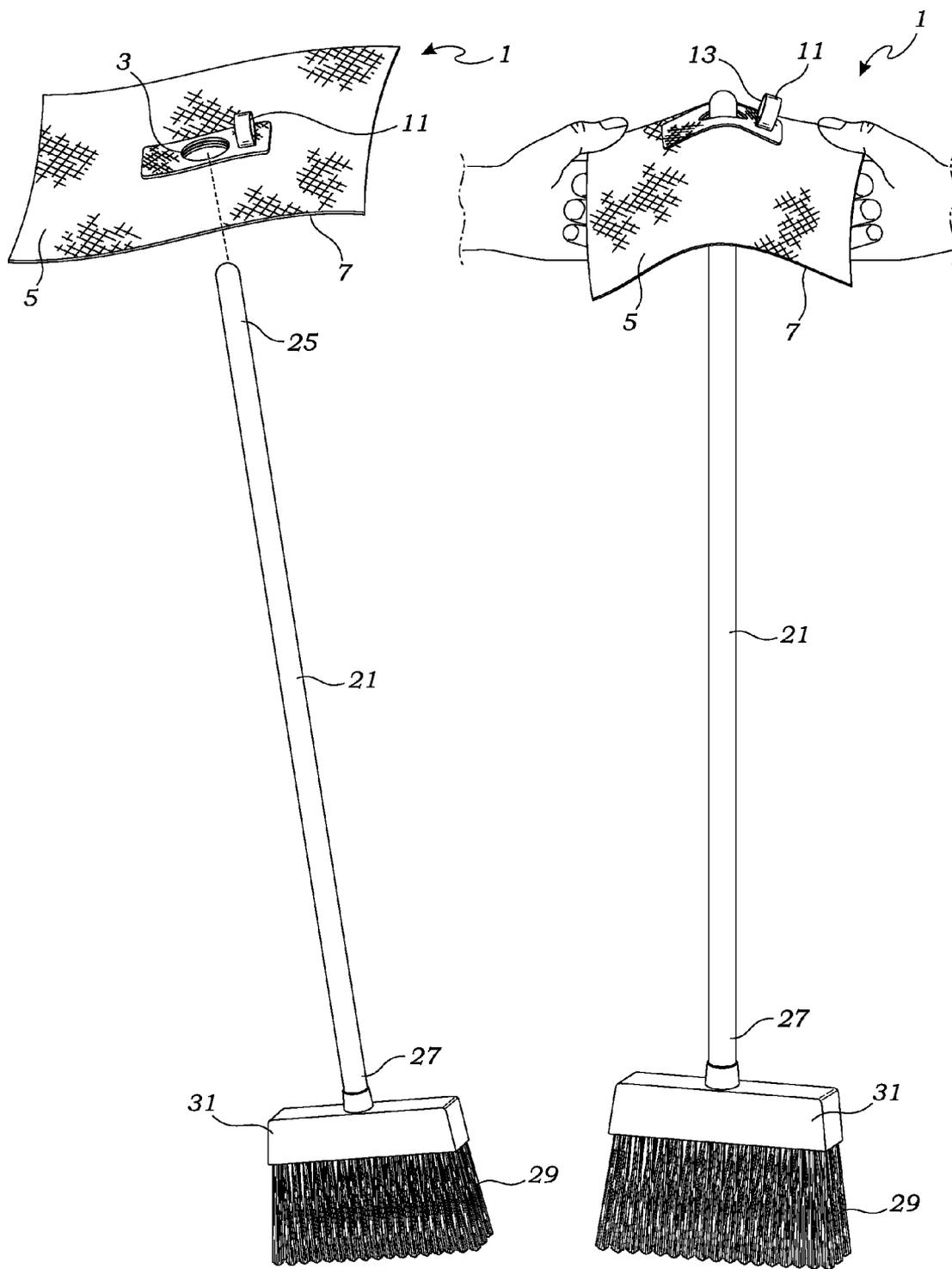


Fig. 6

Fig. 7

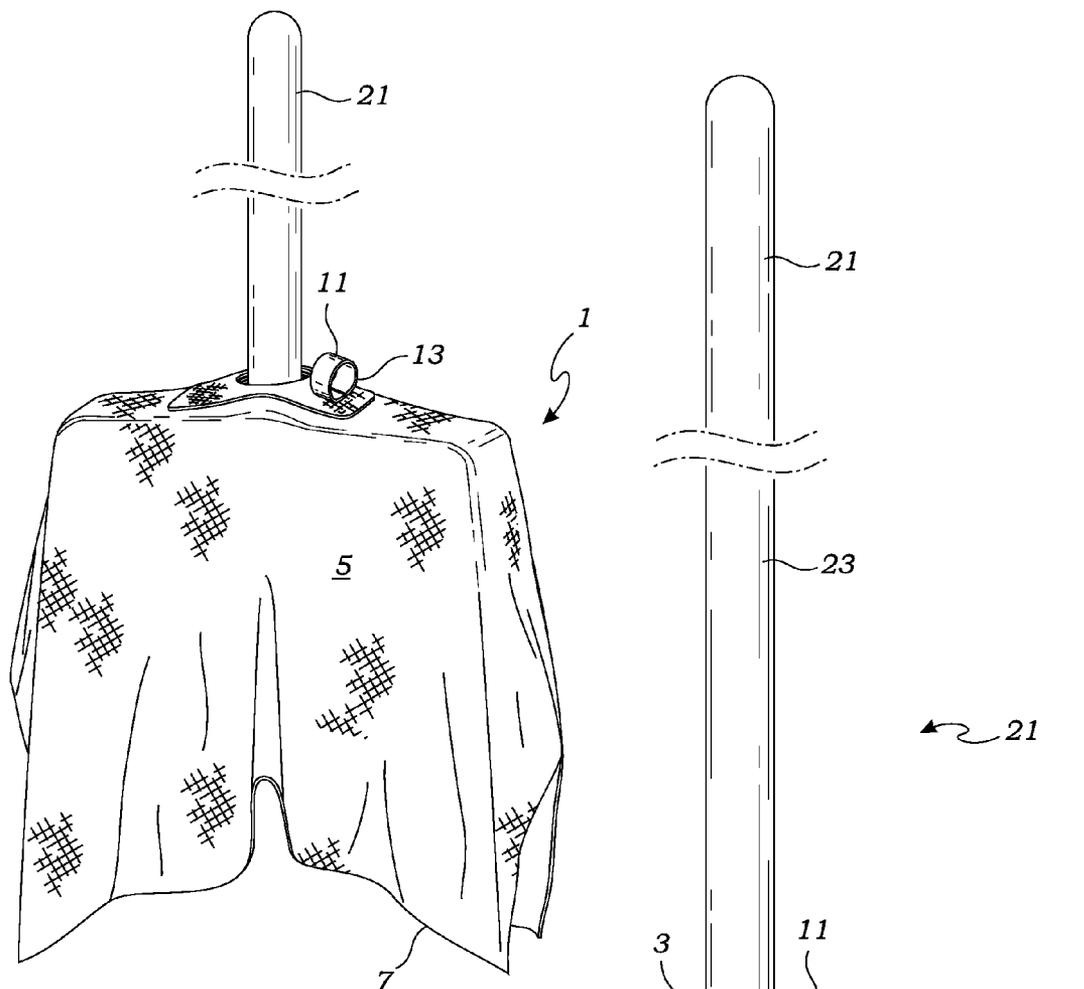


Fig. 8

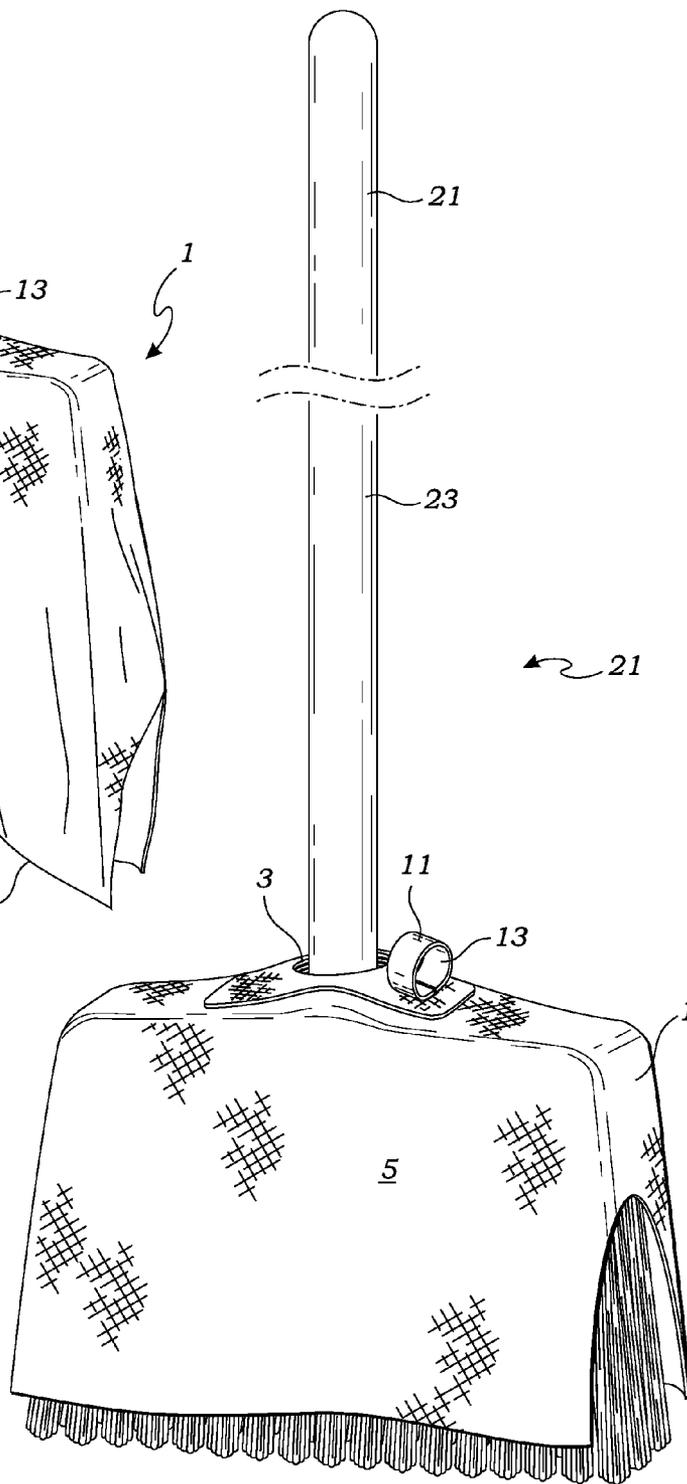


Fig. 9

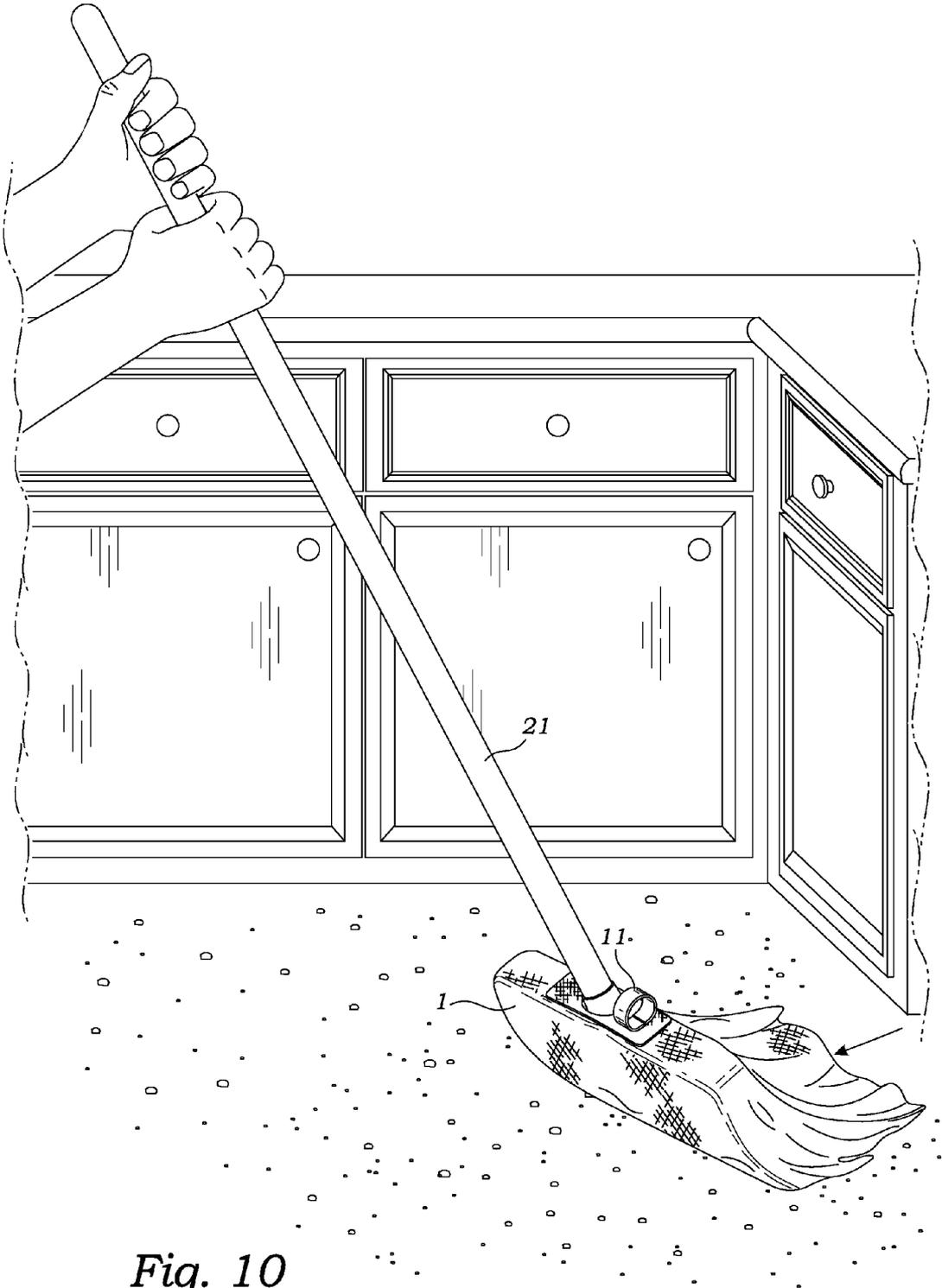


Fig. 10

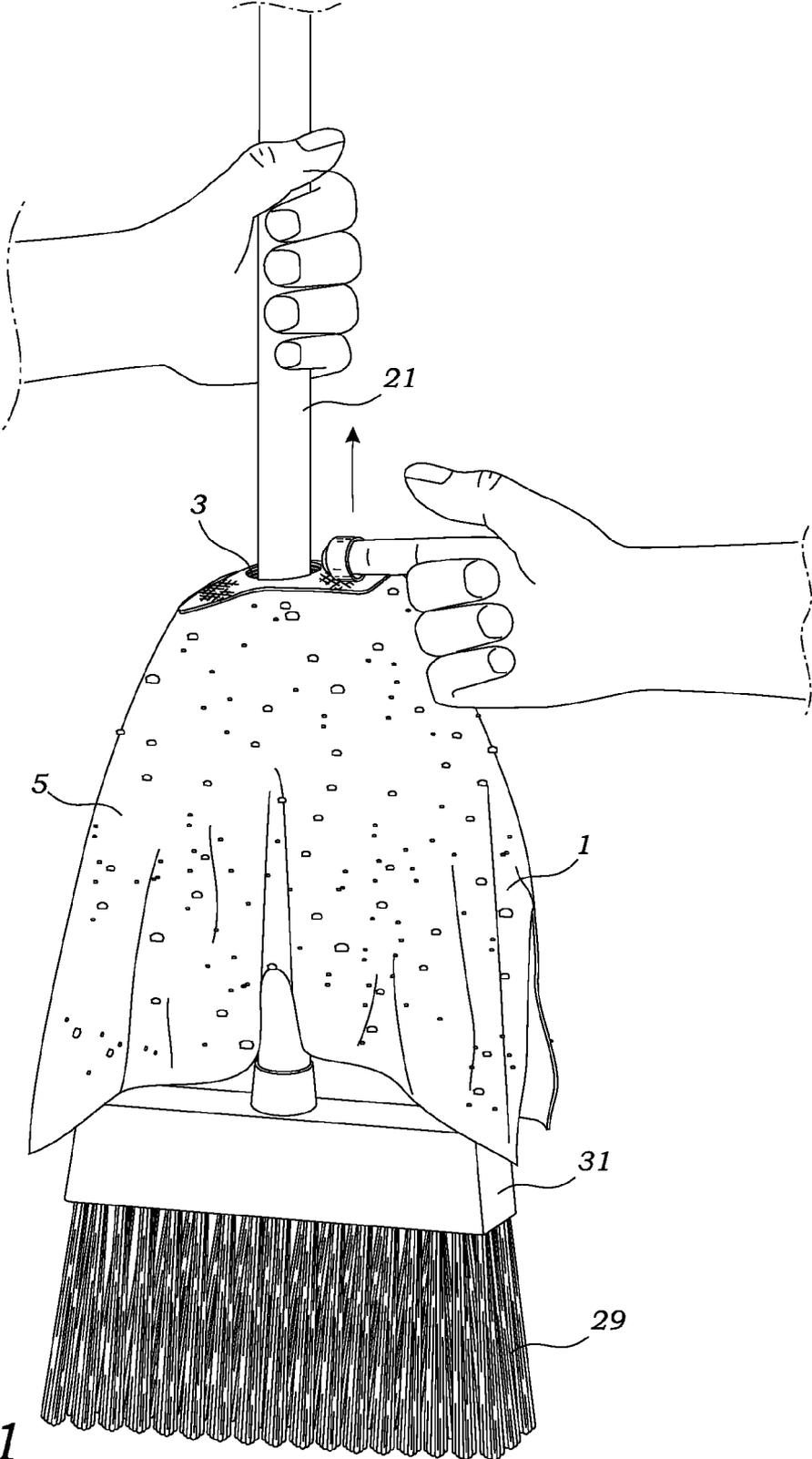


Fig. 11

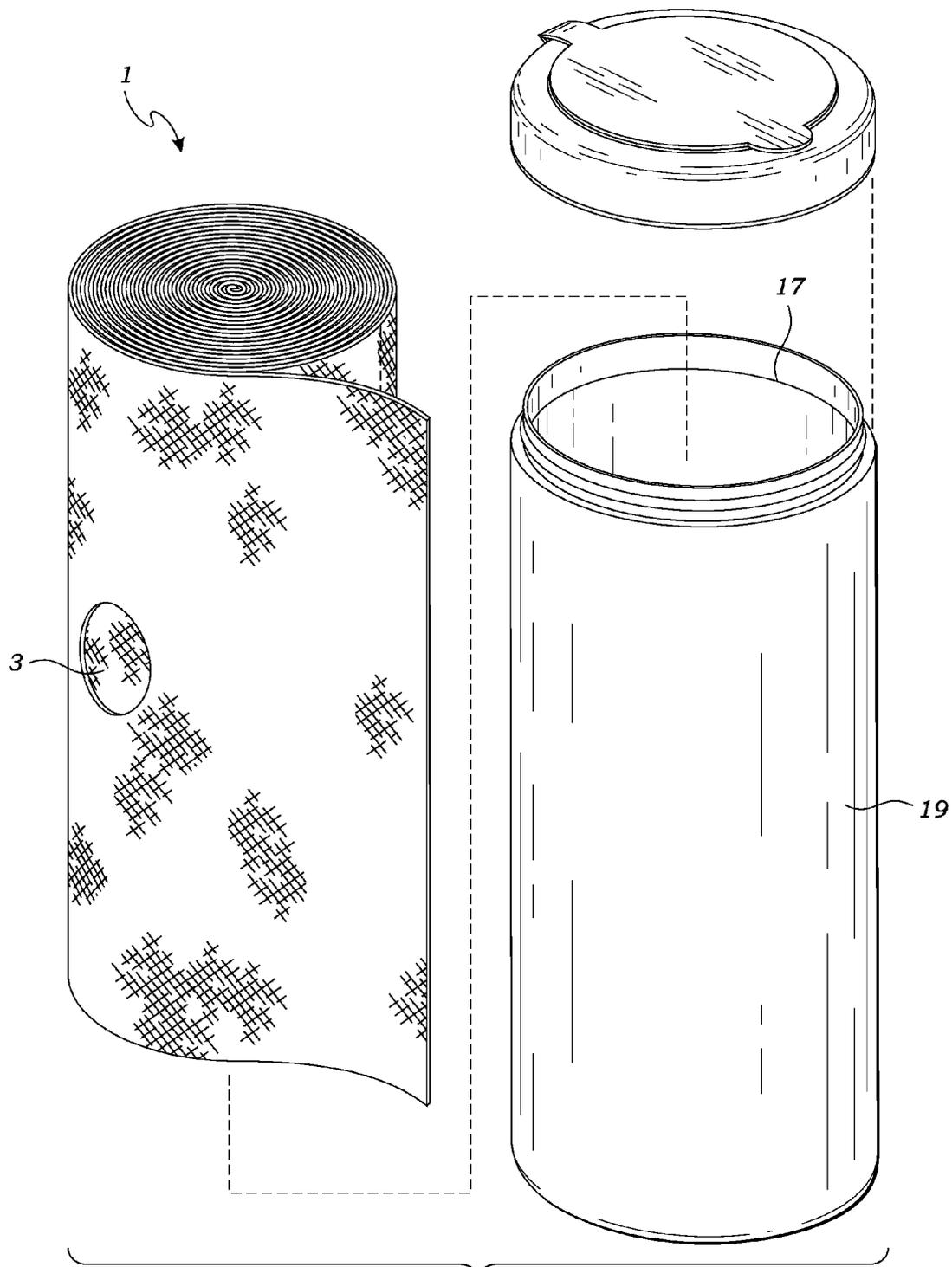


Fig. 12

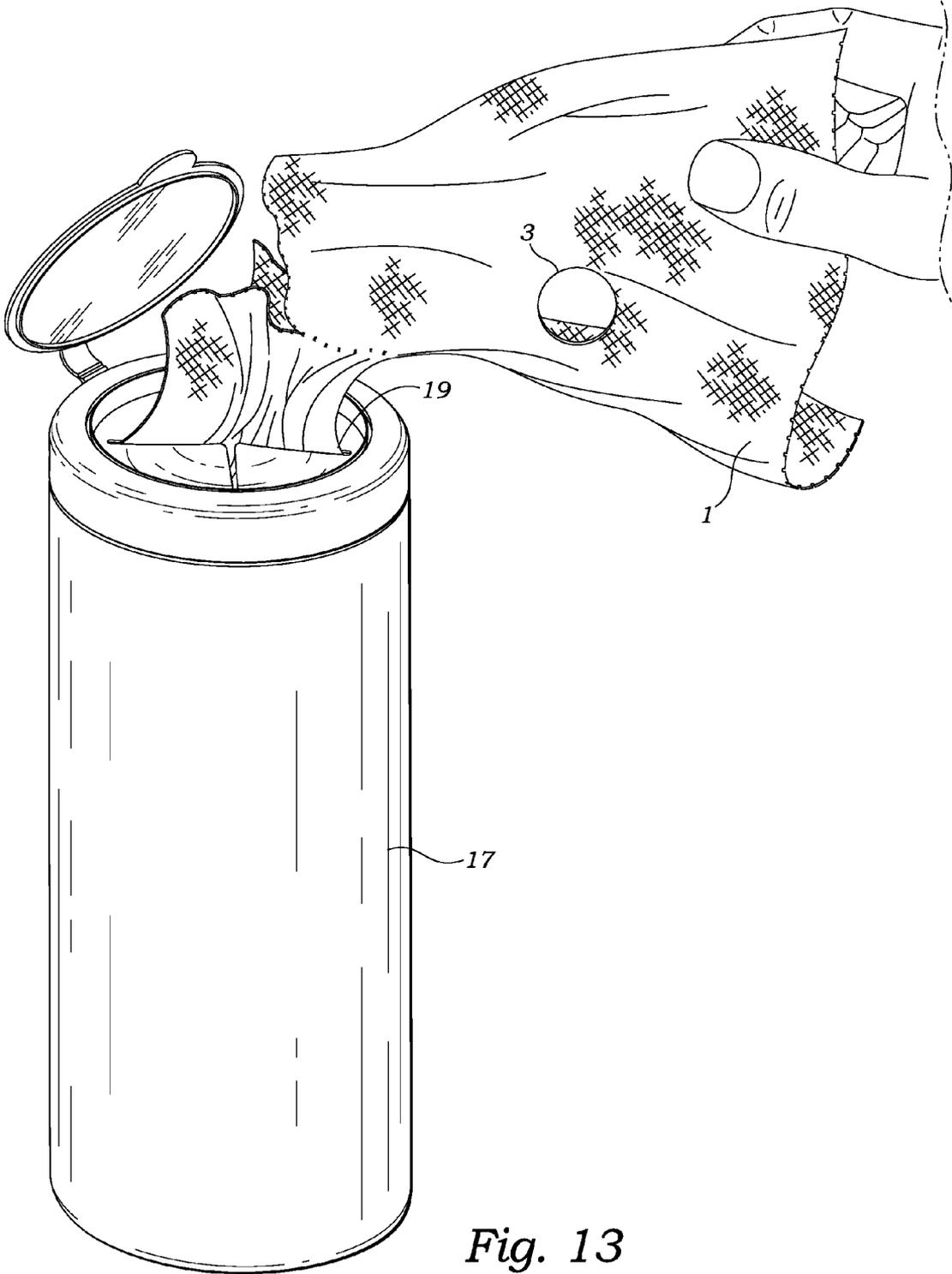


Fig. 13

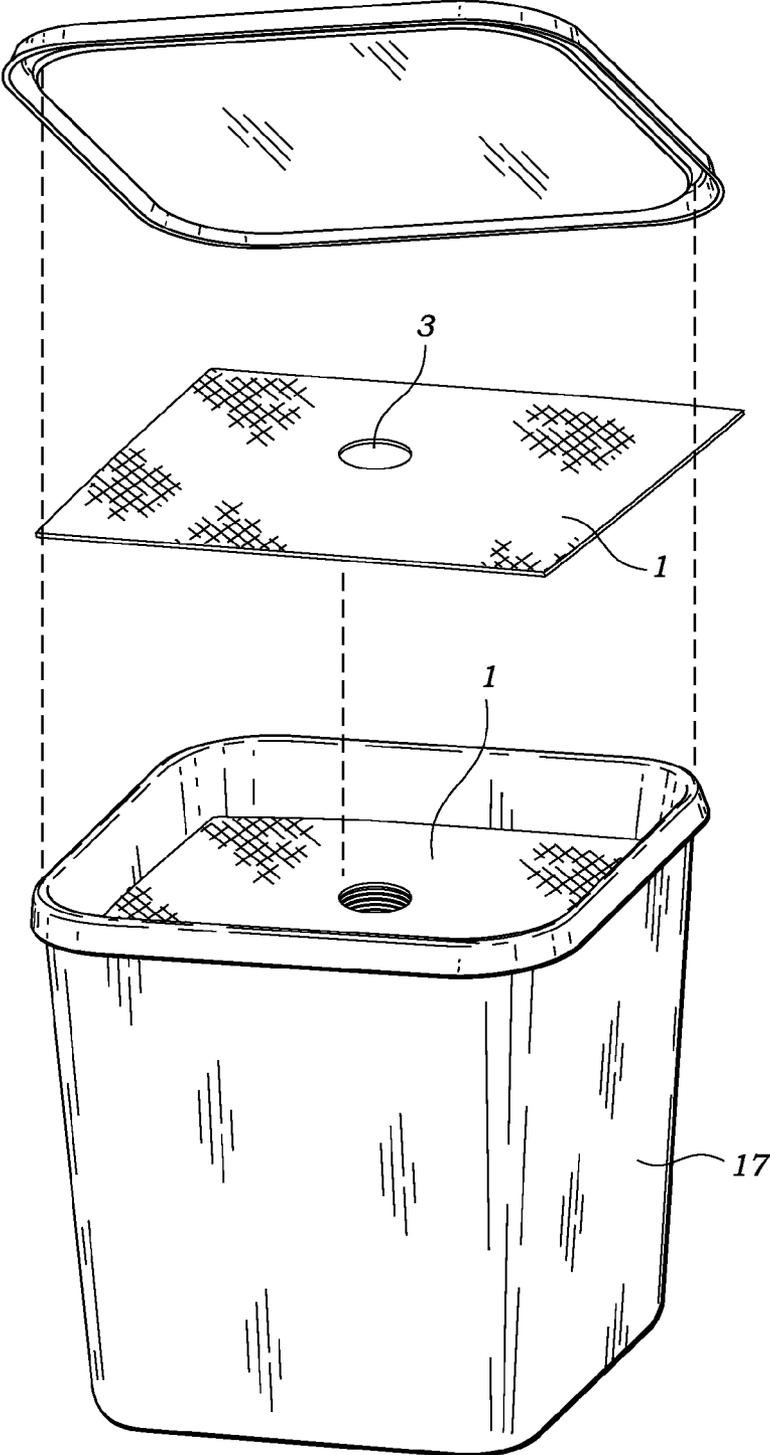


Fig. 14

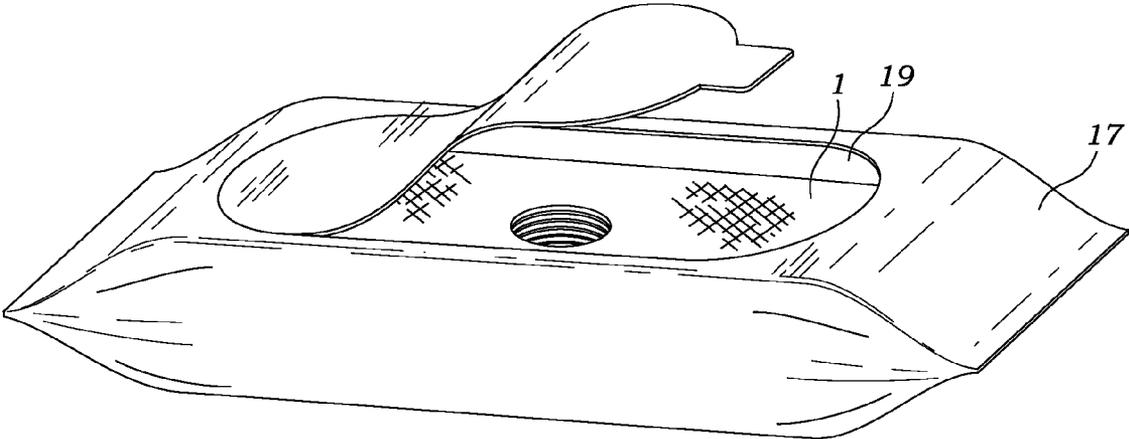


Fig. 15

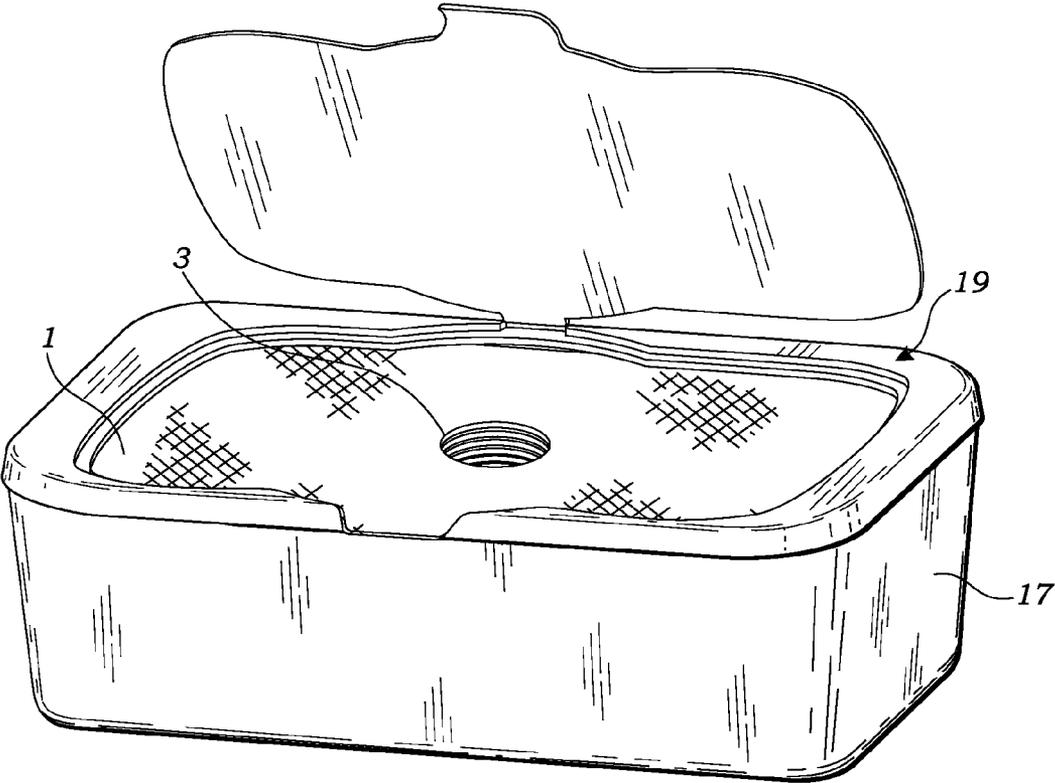


Fig. 16

BROOM AND MOP COMBINATION AND METHODS FOR CONVERTING A BROOM TO MOP

RELATED APPLICATIONS

[0001] The present application is a continuation-in-part of co-pending U.S. Patent Application Ser. No. 61/742,628 filed on Aug. 15, 2012.

BACKGROUND OF THE INVENTION

[0002] The present invention relates to fabrics for cleaning. More particularly, the present invention relates to disposable fabric sheets for cleaning a floor surface. Even more particularly the present invention relates to cleaning sheets for converting a broom into a mop.

[0003] Due to health and sanitation concerns, residential homes and business buildings must be routinely cleaned. Typical cleaning instruments include brooms, mops, cloth rags, paper towels and the like. A broom is a well known implement used for sweeping dirt or other particulates to a location for being gathered by a dust pan or vacuum cleaner. A broom has an elongate handle which is typically 2-6 feet in length and has a bundle of twigs or synthetic bristles affixed to one end of the handle.

[0004] Sponge mops are well known and widely used for cleaning floors such as hardwood floors, tile floors, marble flats and the like. Sponge mops also include an elongate handle and a disposable cleaning pad having a layer of sponge material. The sponge material is typically moisture absorbent for absorbing moisture on the floor or for accepting a cleaning solution for being applied to the floor. The mop typically has an attachment structure for attaching the cleaning pad to the handle. After being used a selected number of times, the cleaning pad is either cleaned, such as within a dishwasher, or more likely to be discarded and replaced with a refill cleaning pad. Typical sponge materials are natural sponges, polyester foams, polyurethane foams or other synthetic fibers.

[0005] Typical sponge mops include the butterfly mop, roller mop and squeeze mop. The squeeze mop includes a back plate which can be swivelled to engage and squeeze the sponge portion of the mop. Meanwhile, butterfly mops include a pair of hinged wing plates which can open and close to engage and squeeze water from the cleaning pad. Roller mops include a pair of rollers wherein the cleaning pad can be forced between the two rollers to squeeze liquid from the sponge.

[0006] Planar sheets are also well known for cleaning surfaces. Rectangular cloths, often referred to as rags, are often saturated with a cleaning solution such as water and soap and then wiped upon dirty surfaces to remove dirt and other particulates. These cloths are either thrown away or cleaned such as within a washing machine. Disposable sheets for cleaning are also well known. For example, paper towels are used to absorb unwanted spills. Paper towels are also used by saturating them with a cleaning solution and then wiping the paper towel over dirty surfaces.

[0007] Unfortunately, all of these cleaning supplies suffer from serious drawbacks. Brooms merely move dry particulates from one area of a floor surface to another. A broom will not pick up or adhere such particulates for disposal. Mops require that mop heads be cleaned or replaced with expensive substitutes. Paper towels and the like require a person bend over for cleaning a floor surface and are thus not advisable for

cleaning large floor surfaces. Moreover, it is undesirable to store both a mop and broom as they require a significant amount of storing space. It would be desirable to eliminate one of these.

SUMMARY OF THE INVENTION

[0008] The present invention is directed to one or more flexible fabrics for converting a broom into a mop-like construction. The flexible fabrics of the present invention are used with a traditional broom having an elongate handle with bristles affixed to one end of the handle. Meanwhile, the sheets are a fabric, made of any traditional textile such as cotton, terry cloth, microfiber, fleece, micro fleece or any other type of fabric or textile material made from natural or synthetic material having an absorbent or semi-absorbent property. Traditional terry cloth is considered a preferred material for the fabric because of its combination of cost effectiveness, weight and absorbency. Moreover, terry cloth cotton is pliable, washable, dryable and can be provided in a wide variety of colors.

[0009] The fabric is flexible and has a center hole which is sized for slidably receiving the broom handle so that the broom handle can be projected through the fabric's center hole. However, the fabric's center hole is sufficiently small so as to engage the bristles. The fabric further has a periphery region which extends outwardly from the fabric's center hole. The periphery region is sufficiently large so as to be able to cover the bristles of a broom. The flexible fabric may be rectangular or circular in shape. Where the fabric is circular, it is preferred that the fabric have a radius between 15 and 32 inches depending on the length of the broom bristles. Wherein the flexible fabric is rectangular, preferred dimensions include 26 inches×15 inches; 32 inches×18 inches; 25 inches×15 inches; and 30 inches×15 inches. Preferably, the fabric's center hole has a radius of 1.5-2 inches radius, as the standard broom handle in the United States market has a 1 inch diameter.

[0010] In a preferred embodiment, the flexible fabric has a finger loop adjacent to the fabric's center hole. Preferably, the finger loop is positioned about 1 inch away from the center hole and has a diameter of 0.5-2 inches so as to accept one or more fingers for manipulating the fabric. In an alternative embodiment, the fabric has two finger loops in which each finger loop is positioned on opposite sides of one another approximately 1 inch from the fabric's center hole.

[0011] Preferred materials for the finger loop include polypropylene, rayon, cotton, nylon or other traditional textiles.

[0012] In preferred embodiments, the flexible fabric is constructed and packaged so as to be inexpensive and disposable. For example, in a preferred embodiment, the flexible fabrics are packaged in sets of 20, 50, 100, 200 or even more. Various packaging known to those skilled in the art can be employed for allowing users to select and retrieve a single fabric from the packaging for use in converting a broom to a mop. In still an additional embodiment, the packaging storing a plurality of flexible fabrics is also affixed to a broom for being sold together as a kit. The kit allows one to use the broom individually for its traditional use in sweeping up dirt and the like. Flexible fabrics can be retrieved from the packaging for use with the broom to convert the broom into a mop for use of the combination as a mop to clean floor surfaces and the like.

[0013] To convert the broom into a mop, one simply slides the broom handle through the fabric's center hole until the

fabric's periphery region engages the broom's bristles, or a mounting construction which affixes the bristles in place. The fabric's peripheral region is then draped over the bristles so that the bristles are entirely covered or substantially covered. The broom and flexible fabric combination is then used in the manner of a traditional mop.

[0014] Advantageously, the bristles provide additional stiffness for the fabric's periphery region for better cleaning floor surfaces.

[0015] The broom and mop combination provides an efficient and cost effective alternative to a traditional bucket and mop combination.

[0016] The broom and flexible fabric combination alleviates the need for a traditional mop.

[0017] Still an additional advantage of the present invention is that the flexible fabric can be easily cleaned in a traditional washing machine whereas traditional mop heads cannot. Alternatively, the flexible fabric can be provided in disposable constructions and in packaging storing a large number of flexible fabrics.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018] FIG. 1 is a perspective view of a standard broom and a flexible fabric illustrating the center hole wherein the broom is to be pushed through for attachment;

[0019] FIG. 2 is a perspective view of a standard broom being pushed through a flexible fabric for attachment;

[0020] FIG. 3 is a perspective view of the flexible fabric attached to a standard broom;

[0021] FIG. 4 is a perspective view of a flexible fabric being removed from a standard broom utilizing finger loops;

[0022] FIG. 5 is a perspective view of a flexible fabric being used to mop a kitchen floor;

[0023] FIG. 6 is a perspective view of a standard broom and a flexible fabric illustrating the center hole and finger loop wherein the broom is to be pushed through for attachment;

[0024] FIG. 7 is a perspective view of a standard broom being pushed through a flexible fabric for attachment;

[0025] FIG. 8 is a perspective view of a flexible fabric attached to a standard broom;

[0026] FIG. 9 is a perspective view of a flexible fabric attached to a standard broom;

[0027] FIG. 10 is a perspective view of a flexible fabric being used to mop a kitchen floor;

[0028] FIG. 11 is a perspective view of a flexible fabric being removed from a standard broom utilizing the finger loop;

[0029] FIG. 12 is a perspective view of a cylindrical container for storage of flexible fabrics;

[0030] FIG. 13 is a perspective view of the container of FIG. 12 illustrating removal of a flexible fabric from a cylindrical container;

[0031] FIG. 14 is a perspective view of a box packaging for storage of flexible fabrics;

[0032] FIG. 15 is a perspective view of an alternative packaging for storage of flexible fabrics; and

[0033] FIG. 16 is a perspective view of an alternative method packaging for storage of flexible fabrics.

DETAILED DESCRIPTION OF THE INVENTION

[0034] While the present invention is susceptible of embodiment of various forms, as shown in the drawings, hereinafter will be described the presently preferred embodi-

ments of the invention with the understanding that the present disclosure is to be considered as an exemplification of the invention and it is not intended to limit the invention to the specific embodiments illustrated.

[0035] With reference to FIGS. 1-14, the present invention is directed to numerous embodiments including a flexible fabric 1 combined with a broom for creating a mop; a method of converting a broom into a mop utilizing a flexible fabric; and a kit including one or more flexible fabrics and a broom for creating a mop. In all embodiments, a flexible fabric 1 is employed. The flexible fabric 1 may be made of any traditional absorbent or semi-absorbent textile. As explained in greater detail below, the flexible fabric may be made to be extremely inexpensive so as to be disposed of after a single use. Preferred materials for a disposable fabric include non-woven fabrics similar to those typically used for baby wipes and dryer sheets. These traditional fabrics are made by a process that presses a single sheet of material from a mass of separate fibers. Fibers such as cotton and rayon are often used in this process as well as plastic resins including polyester, polyethylene and polypropylene.

[0036] Where the flexible fabric is made to be reusable and cleaned after use, it is preferred that the flexible fabric be made of a more durable construction such as woven cotton, terry cloth, fleece or other fabric. Terry cloth, with its use of absorbent cotton and uncut loops for additional absorbency, is considered a preferred reusable material for the flexible fabric. In addition, the flexible fabric may be provided in a pre-moistened condition so as to be partially or entirely saturated with a cleansing solution. Preferably, water is the main moisturizing agent for the fabric. However, preferably the water acts as a carrier for cleaning detergents, humectants such as propylene glycol and glycerine to prevent premature drying, and preservatives, such as methyl and ethylparabens, to prevent microbial growth. Fragrances may also be added to the cleansing solution.

[0037] A flexible fabric of the present invention has a center hole 3 which is sized for inserting a broom handle through the fabric's center hole 3 and preferably has a radius of 1.5-2 inches. Moreover, the use of the term "radius" is not intended to imply that the hole must be circular, and instead the center hole 3 may be elliptical or even a simple slot wherein the elliptical, slotted or other shape can be distorted so as to have a roughly 1.5-2 inch radius to allow insertion of a standard broom handle having a 1 inch diameter.

[0038] The flexible fabric 1 has a periphery region 5 which extends from the flexible fabric's center hole 3 to the fabric's edge 7. The periphery region must be sufficiently large so as to be able to cover the bristles of a broom. Because the bristles of a broom come in various shapes and sizes, the flexible fabric's periphery region may also be shaped differently. As examples, a besom broom has a round bundle of twigs affixed to an elongate handle. For use with such a broom, it is preferred that the flexible fabric have a circular edge with a substantially consistent radius defining the new fabric's periphery region 5. A more traditional broom is the "flat broom" which has a flat even trimmed bottom. For such a broom, it is preferred that the flexible fabric be circular, square or rectangular, but have a sufficient periphery region so as to cover the bristles of such a broom. Meanwhile, a push broom has a wide bristle area wherein the bristles are typically shorter in length. A flexible fabric for a push broom is preferably rectangular in shape. Where the fabric is circular, it is preferred that the fabric have a radius of at least 15 inches,

though preferred periphery regions may have a range of 15 to 32 inches depending on the length of the broom bristles. Wherein the flexible fabric is rectangular, preferred dimensions include 26 inches×15 inches; 32 inches×18 inches; 30 inches×15 inches. The periphery region may also include reinforcement layer around the circular hole 3 to prevent the fabric from tearing.

[0039] Though not required, it is preferred that the flexible fabric include a finger loop 11. The finger loop 11 is simply a loop of flexible material positioned about 1 inch away from the fabric’s center hole. The loop 11 has a diameter sized to accept one or more fingers for manipulating the fabric. Preferred diameters include 0.5-2 inches. Preferred materials for the finger loop include polypropylene, rayon, cotton, nylon or other traditional textiles. In an additional embodiment, the flexible fabric 1 has two finger loops with each finger loop positioned at opposing sides of the flexible fabric’s center hole 3.

[0040] The flexible fabric is intended for use in converting a traditional broom 21 into a mop. A traditional broom has a handle having a proximal end 25 and a distal end 27. Extending from the handle distal end are bristles 29. Depending on the type of broom, the bristles may be attached by simply tying the bristles to the distal end of the broom. However, it is much more common for present day brooms to have a mounting structure 31 which affixes to the distal end of the broom but also affixes the bristles in place. Examples of a bristle mounting structure can be best seen in FIGS. 1, 2, 6, 7 and 11.

[0041] As illustrated in FIGS. 1, 2, 6 and 7, to convert the broom 1 into a mop, one simply slides the proximal end 25 of the broom handle 23 through a flexible fabric’s center hole 3. The flexible fabric 1 is then manually forced downwardly until it engages the broom’s bristles 29 for the broom’s bristle mounting structure 31 as illustrated in FIGS. 4 and 9. As illustrated in FIG. 11 the finger loop 11 may be used to install or remove the flexible fabric 1 without requiring the user to touch the fabric’s periphery region 5. Preferably, the fabric’s periphery region 5 is sufficiently long so as to completely cover the broom’s bristles 29, as illustrated in FIGS. 3 and 8. Though flexible fabrics having lesser materials so as to not cover the bristles entirely may be employed, as illustrated in FIGS. 4 and 9, this is not a preferred embodiment of the invention.

[0042] Once the broom and flexible fabric have been combined so that the fabric’s edge 7 extends beyond the bristles 29, it is preferred that this combination be used in the manner of the traditional mop. Where the flexible fabric 1 is provided so as to be saturated with a cleaning solution in a prepackaged format, the broom can be manipulated so that the fabric can simply engage and be wiped across a surface to be cleaned. Alternatively, where the fabric is not saturated a cleaning solution can be applied to the fabric in a prepackaged format, the flexible fabric can be applied with a cleaning solution such as by simply running the flexible fabric under water, prior to combining it with the broom. In still an alternative cleansing embodiment, a cleaning solution can be applied directly to the surface to be cleaned and then wiped with the broom and flexible fabric combination.

[0043] In still an additional preferred embodiment, it is preferred that the plurality of flexible fabric’s be prepackaged and sold with a broom to form a kit. For example, it is preferred that any of the packaging embodiments illustrated in FIGS. 12-16 be affixed to a broom handle 21 for sale within a store. The kit allows individuals to use the broom in a

traditional sense without a flexible fabric, or to install individual flexible fabrics 1 for use in the combination as a mop to clean floor surfaces.

[0044] As illustrated in FIGS. 12-16, it is preferred that where the flexible fabric is manufactured to be disposable that the flexible fabric be prepackaged in sets of large numbers such as 20, 50, 100 or even more flexible fabrics. FIG. 12 illustrates an embodiment where a plurality of flexible fabrics are provided in a rolled form wherein the flexible fabrics are rectangular and rolled to reside within cylindrical packaging. As illustrated in FIG. 13, in this embodiment, individual flexible fabrics can be removed from the packaging 17 through an opening which can be closed. Alternative packaging embodiments are illustrated in FIGS. 14-16 which allow removal of individual sheets of flexible fabric for use, and thereafter allow the packaging to be resealed. As would be understood by those skilled in the art, it is preferred that the packaging be resealable so as to prevent any cleaning solution within the packaging from evaporating.

[0045] While several particular forms of the invention have been illustrated and described, it will be apparent that various modifications can be made without departing from the spirit and scope of the invention. Accordingly, it is not intended that the invention be limited except by the following claims. Having described my invention in such terms so as to enable a person skilled in the art to understand the invention, recreate the invention, and practice it, and having presently identified the presently preferred embodiments thereof, I claim:

- 1. A broom and mop combination comprising:
 - a broom having an elongate handle having a proximal end and a distal end, said broom further having bristles extending distally from the distal end of said handle;
 - a flexible fabric having a center hole and a periphery region extending outward from said hole, said broom handle projecting through said hole until said fabric engages said bristles and said periphery region sufficiently large so as to substantially cover said bristles.
- 2. The broom and mop combination of claim 1 further comprising a finger loop affixed to said flexible fabric adjacent to said hole.
- 3. The broom and mop combination of claim 1 wherein said flexible fabric is made of cotton.
- 4. A method of converting a broom into a mop comprising the steps of:
 - providing a broom having an elongate handle having a proximal end and a distal end, the broom further having bristles extending distally from the distal end of the handle;
 - providing a flexible fabric having a center hole and a periphery region extending outward from said hole, the periphery region have an area sufficient to cover the broom bristles;
 - positioning the fabric upon the broom wherein broom handle projects through said hole until said fabric engages said bristles to form a mop construction.
- 5. The method of converting a broom into a mop of claim 4 further comprises the step of:
 - cleaning a floor surface by manually handling the broom handle so as to wipe the flexible fabric against the floor surface to adhere dirt in the flexible fabric.
- 6. The method of converting a broom into a mop of claim 4 wherein the step of providing a flexible fabric includes providing a plurality of flexible fabrics having a center hole and a periphery region in a prepackaged container.

7. The method of converting a broom into a mop of claim 6 wherein the prepackaged flexible fabrics are partially saturated with a cleansing solution.

8. The method of converting a broom into a mop of claim 4 wherein flexible fabric has a finger loop adjacent to the center hole.

9. A kit for making broom and mop combination comprising:

a broom having an elongate handle having a proximal end and a distal end, said broom further having bristles extending distally from the distal end of said handle;
a plurality of flexible fabrics in a prepackaged container with each flexible fabric having a center hole and a periphery region extending outward from said hole and said periphery region being sufficiently large so as to substantially cover said bristles.

10. The kit for making a broom and mop combination of claim 9 wherein each of said flexible fabrics has a finger loop affixed to said flexible fabric adjacent to said center hole.

11. The kit for making a broom and mop combination of claim 9 wherein the prepackaged flexible fabrics are partially saturated with a cleansing solution.

* * * * *