DUAL-USE TOWEL PRODUCT

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Filed: Apr. 18, 2008

Related U.S. Application Data
Continuation of application No. 60/913,218, filed on Apr. 20, 2007.

ABSTRACT
A towel product that has dual functions is provided. The towel product includes a series of stacked towels sandwiched between a first support plate and a second support plate. The first support plate, stacked towels, and second support plate are all encased in an outer wrapper. In some cases, the towel product serves as a stand-alone product. In other cases, the towel product serves as an insert to be placed inside of a towel-dispensing container. The first support plate aids in the product's insert functions when placed inside of a towel-dispensing container and the second support plate aids the product's stand-alone functions.
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BACKGROUND OF THE INVENTION

[0001] Disposable absorbent wipers/towels have many uses. Disposable wipers/towels are particularly popular with do-it-yourself homeowners and trades people who find wipers valuable for cleaning tools, work areas and their hands. Disposable wipers are also used frequently in factories, on farms and in the boating industry (both commercial and recreational). These are just a few of the wide variety of people and multitude of uses of disposable wipers. Frequently, disposable wipers are used by people who are on the go, whether it be trades people moving from job to job, maintenance people moving from machine to machine within a factory or farmers dealing with issues wherever they come up. Containers of disposable wipers thus are often treated as valuable items of one’s normal equipment for performing jobs and are often carried in the back of trucks to job sites along with other tools or on maintenance carts in factories. Disposable wiper containers end up in countless types of places, wherever people do work.

[0002] Traditionally, disposable wipers have been packaged in cardboard boxes, the wipers being dispensed through an open hole in the top. Often, because these containers can be used and stored outside, they can become exposed to inclement weather or they can be indoors in dusty and dirty environments. Cardboard box dispensers, for example, of the type currently available from Kimberly-Clark Corporation under its “Rags in a Box” trademark, can become water or oil soaked if they are placed on a wet or oily support plate, resulting in towels within the dispenser becoming contaminated with water or oily residue. Cardboard boxes are also susceptible to degradation, especially upon becoming wet. When towels within a box become water-soaked, dirty or oily, they become substantially useless and are discarded. Thus, a challenge associated with dispensing absorbent towels involves the ability to keep the towels dry and clean.

[0003] Plastic, water-resistant containers have been used for retaining towels. However, once all of the towels are removed, a fresh stack of towels must be inserted into the container, and this may require an inventory of replacement or refill towel rolls to be maintained at or near the job site. It may often be inconvenient to provide a dry and clean storage space for replacement towel stacks. When a supply of replacement towel stacks is not appropriately protected, as, for example, by being stored in containers of the type described above, the supply of towels may also easily become wet or soiled.

[0004] It would be desirable to provide replacement towels in a form in which they are protected from contaminants so that they can be stored in messy working environments without harm to the towels. At the same time, it would also be desirable to provide a towel product in a stand-alone form that enables individual towels to be removed from the product without the necessity of placing it in a container. Further, it would be desirable to provide a towel product that allows a consumer to choose whether to use the product in a stand-alone form or inside of a container.

SUMMARY OF THE INVENTION

[0005] A stacked towel product suitable for use as a stand-alone supply of towels or as an insert for a towel-dispensing container is provided. In one embodiment, the product includes a plurality of towels stacked vertically one upon another to form a generally parallelepiped shape having top, bottom and side walls, top and bottom generally rectangular support plates supporting respectively the top and bottom of the towel stack, each plate having an opening permitting towels to be drawn through it from the stack, the plates having sufficient stiffness to generally maintain the parallelepiped shape of the towel stack as towels are drawn therefrom and a flexible, water-resistant protective wrapper extending about and snugly engaging the side walls and top and bottom support plate plates.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] FIG. 1 is a front view of one embodiment of a towel product;
[0007] FIG. 2 is a side view of the embodiment of FIG. 1;
[0008] FIG. 3 is a top view of one embodiment of a first support plate;
[0009] FIG. 4 is a perspective view of one embodiment of a towel product showing a top of a first support plate;
[0010] FIG. 5 is a perspective view of one embodiment of a towel product showing a towel being removed through a top of a first support plate;
[0011] FIG. 6 is a perspective view of one embodiment of a container adapted to receive a towel product;
[0012] FIG. 7 is a broken away side view of one embodiment of a container bearing a towel product;
[0013] FIG. 8 is a broken away side view of another embodiment of a container bearing a towel product;
[0014] FIG. 9 is a top view of one embodiment of a second support plate;
[0015] FIG. 10 is a perspective view of one embodiment of a towel product showing a top of a second support plate; and
[0016] FIG. 11 is a perspective view of one embodiment of a towel product showing a towel being removed from a top of a second support plate.

DETAILED DESCRIPTION

[0017] The following detailed description should be read with reference to the drawings, in which like elements in different drawings are numbered identically. The drawings depict exemplary embodiments and are not intended to limit the scope of the invention.

[0018] The Figures show a towel product 100 according to one exemplary embodiment of the invention. A series of stacked towels 50 are sandwiched between a first support plate 12 and a second support plate 14. The first support plate 12, stacked towels 50, and second support plate 14 are all encased in an outer wrapper 20 that protects the towels in all kinds of environments. The towel product 100 serves dual functions. In some cases, the towel product serves as a stand-alone product. In other cases, the towel product serves as an insert to be placed inside of a towel-dispensing container. The first support plate 12 aids in the product’s insert functions when placed inside of a towel-dispensing container and the second support plate 14 aids the product’s use when used as a stand-alone product. These will be explained in more detail. Both supports, however, serve to maintain the product in a generally parallelepiped shape as towels are removed.

[0019] The first support plate 12 and second support plate 14 will first be described. These are best illustrated in FIGS. 3 and 9, respectively. Each support plate 12, 14 can be made of any suitable rigid material, for example cardboard or plastic. In some cases, cardboard is preferred because it is eco-
nomical and light-weight. However, the support plate 12, 14 can be made of any appropriate material such as plastic, metal, stiff paper, etc. By “rigid” as used herein, we mean that the support plate plates 12, 14 should be of sufficient rigidity as to maintain the towels in a stacked configuration under different loads across different surfaces of the towel product. The towel product may be stacked on any side during storage, and it is desirable to maintain the towel product in its original stacked configuration.

The support plate plates 12, 14 partially or preferably partially cover both the top and bottom surfaces of the stacked towels 50. In preferred embodiments, the support plate plates 12, 14 entirely cover or substantially cover the periphery of the top and bottom surfaces. In the illustrated embodiments, the support plate plates 12, 14 are rectangular, although this is by no means required. Elliptical, rounded rectangular, and other shapes are also suitable.

As best shown in FIG. 3, the first support plate 12 has a centrally positioned cutout defined by perforations 70. The cutout can be removed by tearing the perforations 70, thereby exposing an opening 75 through the support plate 12. The opening 75 can have any desired size and shape for receiving towels 50. In the illustrated embodiment, the opening 75 has six sides and a generally elongated hexagonal shape, although this is by no means required. The opening 75 can also have a generally slot-shape with the center of the slot being wider than ends of the slot and the slot being sized to engage towels as they are withdrawn one-by-one from the towel stack. Thus, the opening 75 is sized and shaped to accommodate grasping of towels in the stack by reaching the fingers through the opening 75. The support plate 12 can optionally include indicia 60, such as advertising, instructions, logos, etc. When the wrapper is in place around the towel product, the seam 30 extends across the first support plate 12.

As best shown in FIG. 9, the second support plate 14 includes an opening 95. The opening 95 can also have any desired size and shape for receiving towels 50. In the illustrated embodiment, the opening 95 has a generally circular shape with diametrically opposed slots extending outwardly from the opening to define confronting lobes on each side of the opening, the lobes being effective to engage individual sheets of toweling 50 as the latter are withdrawn from the roll. The support plate 14 can also optionally include indicia 60, such as advertising, instructions, logos, etc.

A wrapper 20 is placed around the support plate plates 12, 14 and stacked towels 50. In some cases, the wrapper 20 is a flexible, water-resistant, desirably single thickness wrapper that protects the stacked towels 50. The wrapper 20 also serves to maintain the general shape of the stacked towels 50 and to keep them in a tight, stacked configuration. The wrapper 20 also has sufficient strength to restrain distortion of the stacked towels 50 when they are subjected to an axial load.

The wrapper 20 is shown in the Figures as being transparent so that the stacked towels 50 can be seen through it, but it will be understood that the wrappers can be transparent, opaque, or of any particular color, and may bear an identification of the product, together with trademarks, advertising and the like. The illustrated wrapper 20 also include holes 25 that allow for the towels to breathe and facilitate manufacture of the stack. The holes 25 can be provided in any desired arrangement and are sufficiently small to restrain water, oil and other contaminants from seeping inward. In some cases, the holes 25 are simply not provided.

The wrapper 20 includes a seam 30 that extends partially around the circumference of the stacked towels. In certain cases, the seam 30 extends along the sides and over the first support plate 12, but does not extend over the second support plate 14. The seam 30 is deliberately not provided over the second support plate 14 in order to aid in the product’s stand alone functions. Instead of a seam, the portion of the wrapper 20 that is directly over the opening 95 of the second support plate 14 also includes a wrapper opening 97. This is best illustrated in FIG. 11. The lack of a seam helps to preserve the integrity of the opening 97, so that it does not tear or otherwise fail apart in areas where a seam would have been present. In some cases, the wrapper opening 97 is simply a slit. In other cases, the wrapper opening 97 is the same or substantially similar to the opening 95 of the second support plate 14.

Any appropriate material may be employed for the wrapper 20, and a variety of flexible, heat-sealable, heat-shrinkable, and/or heat stretchable polymeric materials are available for this purpose, including bi-axially oriented polyester films, co-extruded films, and the like. Since, desirably, only a single thickness of the film is employed, it is desired to use a wrapper material that is sufficiently strong to perform its function in supporting and protecting the towel product 100 while at the same time, for reasons of economy and weight, is reasonably thin. Films of about 0.003 inches (about 0.76 mm) in thickness have given good results. The film desirably is sufficiently thin as to enable it to be flexed with the fingers, but yet is sufficiently stiff as to at least substantially hold its shape as towels 50 within the wrapper 20 are removed.

The stacked towels 50 are sandwiched between the support plate plates 12, 14 before wrapping takes place. The wrapper 20 preferably tightly engages all surfaces of the stacked towels 50, and may actually squeeze these surfaces. In this manner, the wrapper 20 tends to support plate and stabilize the stacked towels 50. Of course, in a less desired embodiment, the wrapper 20 itself may be formed so as to have areas where it does not contact the entire outer surface of the stacked towels 50.

The wrapper 20 can be applied to a towel product using known shrink packaging or stretch packaging techniques and equipment. In one embodiment, single a film, e.g., polyester film approximately 3 mils (about 0.076 mm) in thickness is applied around the stacked towels 50 and support plate plates 12, 14 and then are heat sealed about the periphery to form a seam 30. The seam 30 preferably extends around the body of the towel product, except for the area in contact with the second support plate 14. The thus wrapped towel product 100 is then subjected to heat, as in a heated shrink tunnel, to cause the film to shrink down into tight engagement with the towel product. Although shrink packaging is a preferred procedure, other procedures, such as stretch packaging, can be used.

It has been noted that both the second support plate 14 and the wrapper 20 have openings 95, 97 formed therein to permit one to reach through them with the fingers and pull toweling through the openings. In some cases, the opening 97 in the wrapper is made after the wrapper has been applied to the stacked towels 50 as discussed above. Preferably, the support plate 14 is provided with the opening 95 before it is positioned onto a surface of the stacked towels 50. However, in some embodiments, the both the openings 95, 97 are made
after the wrapper 20 has been applied. Various other methods of forming the openings will be evident to those skilled in the art.

[0030] As best shown in FIG. 10, a removable cover 90 is placed over the wrapper opening 97. The cover 90 can be made of any material and is preferably removable, resealable and water-resistant. In some cases, the cover 90 is provided in the form of a flexible plastic sheet having on all or a portion of the inner surface thereof a releasable pressure-sensitive adhesive, the cover 90 being capable of being peeled away from the wrapper 20. The adhesive, for example, may be a repositional pressure-sensitive adhesive enabling the cover 90 to be repeatedly affixed and removed from the upper surface of the wrapper, and may be of the type employed in connection with the well-known 3M Post-It® products.

[0031] The stacked towels or toweling 50 can be any of a variety of well-known paper towel materials. Desirably, the toweling is of an absorbent material, and can be made from either a woven or non-woven material. There are a wide variety of non-woven processes, and they can be either wet laid dry laid. Some examples are hydroentangled materials (sometimes called “spunlace”), double re-creped materials, air laid materials, spunbond materials and meltblown materials, etc. "Toweling" is used herein, refers in general to sheet or web-like materials that may be absorbent and that may be provided in roll form. "Toweling" is also sometimes referred to as “wipes”, “wipers” and “towels”. Individual sheets may be sized as desired to accommodate the many uses of the towels.

[0032] The dual functions of the towel product will now be described. When it is desired to use the towel product 100 as an insert, a user positions the towel product 100 so that the first support plate 12 is oriented as a top surface, for example as shown in FIG. 4. The user then removes the top portion of the wrapper 20, for example by cutting or tearing a hole in the wrapper in the area covering the first support plate 12. In certain embodiments, the entire wrapper 20 is removed, although this is not preferred. Rather, it is desirable to keep substantially all of the wrapper in place to help shape and support the stacked towels. The towel product 100 is then placed inside of a container. In cases where the wrapper 20 is in place, except for the whole formed over the first support plate, all of the stacked towels 50, support plate 12 and support plate 14 are placed inside of a container. In cases where the entire wrapper is removed, the stacked towels 50 can be alone placed in a container, optionally along with either support plates 12, 14.

[0033] Any container known in the art can be used. In containers where the towels are designed to be removed from a top, the towel product is placed in the container so the support plate 12 is a top surface. Alternatively, in containers where the towels are designed to be removed from a bottom, the towel product is placed in a container so the support plate 12 is a bottom surface. The container itself can be made of a plastic material of sufficient rigidity as to maintain its shape and also to protect the towels 50 from messy environments.

[0034] One exemplary container 200 is shown in FIGS. 6 and 7. The illustrated container has a generally rectangular shape. However, it can alternatively have other configurations. For example, the container can have a generally elliptical shape, generally rounded rectangular shape, and others. The illustrated container also has an exterior handle that can be manually grasped, although this is by no means required.

[0035] The container 200 includes a body 225 having a generally flattened bottom from which arise side walls and a top 250 that serves as a top wall. The interior height of the container 200, that is, the height between the interior of the container top 250 and the floor of the container body 225, is chosen to be approximately the same as the height of a towel product 100 of the invention. The exterior surface of the towel product, when it is inserted in the container, can touch the interior walls of the container 225 or it can be spaced slightly from these walls. The container top 250 connects with the rim of the container body 225 in any desired method known in the art. In some cases, the top 250 and rim have cooperating, facing annular shoulders such that when the top 250 is pushed down upon the rim, the annular ridge of the top 250 slips over the confronting annular ridge of the rim, often with an audible "click." The top 250 includes an opening 260 and a hinged lid 255 for sealing the opening. In certain cases, the support plate opening 75 corresponds to the opening 260 on the container. In other words, the openings 75, 260 are the same, substantially the same, or similar. Once the product 100 is inside of the container 200, a user removes the lid 255 to expose the container opening 260. Towels 50 are then pulled through both openings 75, 260 and outward. As towels are pulled, the first support plate 12 (if in place) also abuts or otherwise contacts the bottom surface of the container top 250. This abutting action helps to keep the towels 50 stacked in an orderly fashion.

[0036] Another exemplary container 300 is shown in FIG. 8. Here, the container is generally rectangular shaped and has side walls, a bottom and a top. The illustrated container 300 has a generally rectangular shape. However, it can alternatively have other configurations. For example, the container 300 can have a generally elliptical shape, generally rounded rectangular shape, and others. The interior height of the container 300, that is, the height between the top and the bottom 335, is chosen to be approximately the same as the height of a towel product 100 of the invention. The exterior surface of the towel product, when it is inserted in the container, can touch the interior walls of the container 300 or it can be spaced slightly from these walls.

[0037] The container 300 is accessible through its top. A lid 375 is provided that can be placed over and seal the top. The lid 250 can be held in place over the top using any desired method known in the art. The bottom 325 includes the opening 360. A user orients the towel product 100 (with at least the wrapping 20 over the first support torn or otherwise removed) so that the first surface plate 12 is facing downward. The towel product 100 is then placed inside of the container through its top. Once inside, the first surface plate 12 abuts the bottom 235 of the container. The opening 75 on the first support plate 12 corresponds to the opening 360 on the bottom 325. A user then reaches fingers through the openings 75, 360 and pulls the towels 50 downward and out of both the towel product 100 and container 300.

[0038] When it is desired to use the towel product 100 as a stand-alone product, a user positions the towel product so the second support plate 14 is oriented as a top surface, as shown in FIG. 10. The user then removes the cover 90 to expose both the support plate opening 95 and the wrapper opening 97. Towels 50 are then pulled through both openings 95, 97 and outward, as shown in FIG. 11. The edges of both openings 95, 97 also serve a function of separating the towels one from another as they are pulled from the roll. The peel away cover
can simply be discarded, or it can be saved to be re-applied to the wrapper to close the openings once a desired number of towels are used.

As thus described, the towel product of the invention is capable of dispensing sheets of dry, clean toweling one sheet at a time as needed. Thus, the towel product of the invention can be used either as a separate, stand alone supply of toweling, or it can be used as an insert for the container described above. In each case, the wrapper serves to support plate and protect the toweling within it. This towel product is extremely versatile and leaves consumers with many options of use.

While preferred embodiments of the present invention have been described, it should be understood that various changes, adaptations and modifications may be made therein without departing from the spirit of the invention.

1. A stacked towel product suitable for use as a stand-alone supply of towels or as an insert for a towel-dispensing container, the product comprising
   a plurality of towels stacked vertically one upon another to form a generally parallelepiped shape having top, bottom and side walls,
   top and bottom generally rectangular support plates supporting respectively the top and bottom of the towel stack, each plate having an opening permitting towels to be drawn through it from the stack, the plates having sufficient stiffness to generally maintain the parallelepiped shape of the towel stack as towels are drawn therefrom and
   a flexible, water-resistant protective wrapper extending about and snugly engaging the side walls and top and bottom support plates.

2. The towel product of claim 1 wherein the protective wrapper has an opening aligned with the opening of one support plate to enable access to the towel stack, and the product including a removable and resealable cover protectively covering the opening in the wrapper.

3. The towel product of claim 2 wherein the removable and resealable cover comprises a flexible sheet bearing a releasable pressure-sensitive adhesive adhering the sheet to the wrapper about the wrapper opening.

4. The towel product of claim 1 wherein the opening in one of the support plates is shaped differently from the opening on the other support plate.

5. The towel product of claim 2 wherein the opening in the support plate aligned with the wrapper opening is generally slot-shaped with the center of the slot being wider than ends of the slot and the slot being sized to engage towels as they are withdrawn one-by-one from the towel stack.

6. The towel product of claim 1 wherein at least one opening is defined by a perforated line.

7. The towel product of claim 1 wherein the towel-dispensing container includes an opening that aligns with an opening on one of said top and bottom rectangular support openings.

8. The towel product of claim 7 wherein the towel-dispensing container opening is substantially the same as said opening on one of said top and bottom rectangular support openings.

9. The towel product of claim 7 wherein the towel-dispensing container dispenses towels from a bottom surface.

10. The towel product of claim 7 wherein the towel-dispensing container dispenses towels from a top surface.

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