An apparatus is provided for removal of pet hair or other debris from an article placed in a rotatable drum of a tumble dryer. The apparatus features a plurality of adhesive sheets compiled atop one another in a stack, which is attachable to the rotatable drum within an interior thereof. The apparatus is secured to an interior surface of the rotatable drum with an innermost adhesive sheet in the stack situated nearest to a center of said rotatable drum. Rotation of the drum during operation of the dryer brings in the article into repeated contact with the innermost sheet, to which the pet hair or other debris from the article becomes adhered. After use, the innermost adhesive sheet of the stack is removed to reveal an underlying adhesive sheet for collection of additional pet hair or other debris on said underlying adhesive sheet during subsequent use of the apparatus.
DEVICES AND METHODS FOR ADHESIVE-BASED REMOVAL OF PET HAIR, LINT OR OTHER DEBRIS USING A TUMBLE DRYER

FIELD OF THE INVENTION

[0001] The present invention relates generally to removal of pet hair, lint or the like from fabric articles such as clothing, blankets, bedding etc., and more particularly to the removal of such debris using adhesive sheets placed within the rotatable drum of a tumble dryer.

BACKGROUND

[0002] Accumulation of pet hair on fabric articles such as clothing, blankets, bedding, curtains, and others is a well-known problem.

[0003] A common method of removing pet hair is the use of a hand-held lint roller which features a long continuous roll of adhesive sheet material that has an adhesive coating on one side thereof. The roll is rotatably disposed around a cylindrical portion of a plastic dispenser that features a handle extending axially from one end thereof. The adhesive face of the sheet material faces radially outward from the dispenser, whereby rolling movement of the roll over a pet hair contaminated article will cause the pet hair to adhere to the outside of the roll, thus removing the hair from the article. The sheet material has cross-wise perforation lines at regular intervals therealong that divide the roll into separable sheets, whereby once the exposed adhesive surfaces at the exterior of the roll have a substantial accumulation of hair thereon, these outer sheets can be torn off at one of the perforation lines to reveal the fresh adhesive surface of the underlying remainder of the roll.

[0004] Such lint rollers work relatively well for removing small amounts of pet hair from individual pieces of clothing or the like, but require significant effort for larger pet hair accumulations, for example as may occur on larger articles such as bedding, blankets, curtains, etc. Some pet owners may opt to avoid the time-intensive manual removal of pet hair with a lint roller by machine washing the fabric article in a laundry washer, typically followed by drying of the article in a conventional tumble dryer. However, this is also not an ideal solution, as pet hair is not fully removed by conventional machine washing and drying processes, and remnant hair left behind in the washing machine can become attached to subsequent loads of laundry placed therein.

[0005] U.S. Pat. No. 7,441,345 of Taylor discloses a laundering aid intended to help remove pet hair or other debris from laundry during a conventional drying cycle in a tumble dryer. An elastomeric ball with an abrasive or brush-like material is placed in the rotatable drum of the tumble dryer along with the fabric articles, and a normal heated-air drying cycle is carried out, during which the aid freely tumbles around inside the drum along with the fabric articles, collecting pet hair therefrom as it comes into contact with the tumbling articles.

[0006] U.S. Pat. No. 4,920,662 of Seeburger discloses placement of a free-tumbling article with adhesive surfaces inside the rotatable drum of a tumble dryer to remove lint or hair from fabric articles, or placement of an adhesive sheet on interior surfaces of the rotatable drum for the same purpose.

[0007] Applicant has developed a new solution that improves on the adhesive-sheet dryer-based pet hair solution proposed by Seeburger.

SUMMARY OF THE INVENTION

[0008] According to a first aspect of the invention, there is provided an apparatus for removal of pet hair or other debris from an article placed in a rotatable drum, the apparatus comprising a plurality of adhesive sheets compiled atop one another in a stack, the stack of sheets being attachable to the rotatable drum within an interior thereof.

[0009] Preferably the adhesive sheets in the stack have respective adhesive faces that face in a same common direction, and except for a lowermost adhesive sheet in the stack, each adhesive sheet is connected to an underlying adhesive sheet in the stack only by the adhesive face of said underlying adhesive sheet.

[0010] Preferably there is provided a base arranged for attachment to the rotatable drum within the interior thereof, the plurality of adhesive sheets being stacked atop the base member with an adhesive face of each of said adhesive sheets facing away from said base member.

[0011] Preferably the base is planar.

[0012] Preferably the adhesive sheets are stacked flat atop the base.

[0013] Preferably the base is a flexible member having a greater strength than the adhesive sheets.

[0014] Preferably a lowermost adhesive sheet in the stack is adhesively attached to the base, and each other sheet in the stack is secured to an underlying adhesive sheet in the stack by the adhesive face of said underlying adhesive sheet.

[0015] Preferably the plurality of adhesive sheets are discrete adhesive sheets.

[0016] Preferably the discrete adhesive sheets in the stack have respective adhesive faces that face in a same common direction, and except for a lowermost adhesive sheet in the stack, each adhesive sheet is connected to an underlying adhesive sheet in the stack only by the adhesive face of said underlying adhesive sheet.

[0017] Preferably there is provided a release liner overlying the adhesive face of an uppermost adhesive sheet in the stack to maintain a clean state thereof until installation and use of the apparatus.

[0018] In one embodiment, there is provided a fastener for securing the stack of adhesive sheets to the rotatable drum. In such instance, preferably the fastener comprises a hook and loop fastener.

[0019] Preferably the hook and loop fastener comprises two mateable components, one of which is attached to the base on a side thereof opposite the adhesive sheets, and the other of which is attachable to the rotatable drum.

[0020] In another embodiment, there is provided at least one magnet for securing the stack of adhesive sheets to the rotatable drum.

[0021] Preferably the at least one magnet is attached to the base for magnetic retention of the base on the rotatable drum.

[0022] There may be provided a re-fill pack of stacked adhesive sheets for replenishing said apparatus by mounting the stacked adhesive sheet of said re-fill pack atop the base after depletion of the original plurality of adhesive sheets.

[0023] Preferably each adhesive sheet in the stack comprises a peripheral tab projecting outward from a perimeter edge of said adhesive sheet for to define a manual grip for
peeling of said sheet from the stack after use of said sheet to collect hair or other debris at a top end of the stack.

[0024] Preferably the peripheral tabs of adjacent sheets in the stack reside at distinct positions from one another.

[0025] Preferably the peripheral tabs of adjacent sheets in the stack are in non-overlapping relation to one another.

[0026] Preferably the peripheral tabs of the adhesive sheets are adhesive-free.

[0027] According to a second aspect of the invention, there is provided a method of preparing a rotatable drum for use in removal of pet hair or other debris from an article, the method comprising securing the foregoing apparatus of claim 1 to an interior surface of the rotatable drum with an innermost adhesive sheet in the stack situated nearest to a center of said rotatable drum is in an exposed position.

[0028] According to a third aspect of the invention, there is provided a method of replenishing the foregoing apparatus after depletion of the plurality of adhesive sheets from the stack, the method comprising mounting a re-fill pack of stacked adhesive sheets atop the base after depletion in place of the original plurality of adhesive sheets.

[0029] According to a fourth aspect of the invention, there is provided a method of preparing the foregoing apparatus for a subsequent use after a prior use thereof, the method comprising removing an innermost adhesive sheet of the stack that is closest to a center of the rotatable drum and to which pet or other debris adhered during said prior use, and thereby revealing an underlying adhesive sheet of said stack from beneath the innermost adhesive sheet for collection of additional pet hair or other debris on said underlying adhesive sheet during the subsequent use of the apparatus.

[0030] Preferably, removing the innermost adhesive sheet from the stack comprises peeling the innermost adhesive sheet from the stack using a peripheral tab of said innermost sheet that projects outward from a perimeter edge thereof.

[0031] According to a fifth aspect of the invention, there is provided a method of removing pet hair or other debris from an article, the method comprising, with the article in a dry state, placing the article in a rotatable drum of a laundry dryer that features one or more adhesively coated surfaces on an interior of the drum, and operating the laundry dryer to drive rotation of the drum, during which movement of the article within the rotating drum brings in the article into repeated contact with the one or more adhesively coated surfaces, to which the pet hair or other debris from the article becomes adhered.

[0032] To remove pet hair, operating said laundry dryer preferably comprises operating said laundry dryer in a non-heated operating mode.

[0033] According to a sixth aspect of the invention, there is provided a drum for rotational use in a pet hair removal or other debris removal process, the drum comprising a stack of adhesive sheets positioned with an innermost adhesive sheet in the stack situated nearest to a center of said drum in an exposed position within an interior of said drum, and each adhesive sheet having an adhesively coated surface facing toward said center of said drum.

BRIEF DESCRIPTION OF THE DRAWINGS

[0034] Preferred embodiments of the invention will now be described in conjunction with the accompanying drawings in which:

[0035] FIG. 1 is a partially exploded perspective view of a first embodiment pet hair removal device of the present invention, featuring a collection of tabbed adhesive sheets stacked atop a flexible base with hook and loop fasteners for attachment to an internal surface of a tumble dryer’s rotatable drum.

[0036] FIG. 2 is an exploded elevational view of the pet hair removal device of FIG. 1.

[0037] FIG. 3 is an exploded elevational view similar to FIG. 2, but showing a second embodiment pet hair removal device employing magnets for removable attachment of the flexible base to an internal surface a tumble dryer’s rotatable drum.

[0038] FIG. 4 is a schematic elevational view of a rotatable drum of a tumble dryer, illustrating placement of three pet hair removal devices of the present invention on inwardly projecting baffles of the drum.

[0039] FIG. 5 is a schematic elevational view similar to FIG. 4, but illustrating alternate placement of the pet hair removal devices on a circumferential wall of the drum at areas thereof between the baffles.

[0040] FIG. 6 is a partially exploded view of a re-fill pack for the device of FIG. 1 or 3.

[0041] In the drawings like characters of reference indicate corresponding parts in the different figures.

DETAILED DESCRIPTION

[0042] FIG. 1 shows a pet hair removal device 10 of the present invention, which features a normally planar base member 12 in the form of a sheet of plastic or other flexible material, a plurality of tabbed adhesive sheets 14 stacked one over the other atop the base member 12, and a thin release liner 16 placed atop the uppermost adhesive sheet 14a in the stack. A sheet of double sided tape 18 is disposed between the base member 12 and the lowermost adhesive sheet 14b in the stack, whereby an adhesively coated upper surface of the double sided tape 18 adheres to the underside of the lowermost adhesive sheet 14b, and an adhesively coated lower surface of the double sided tape 18 adheres to the topside of the base member 12, thereby securing the lowermost adhesive sheet 14b to the base member 12 at the topside thereof. Each adhesive sheet has a tacky adhesive coating on its upper face, and features an absence of adhesive on its opposing lower face. With the exception of the lowermost adhesive sheet 14b, each adhesive sheet is secured to the underlying adhesive sheet in the stack by the adhesively coated upper face of the underlying adhesive sheet. Accordingly, the adhesive sheets self-retain themselves in a stacked configuration atop one another in the fully assembled pet hair removal product of the present invention.

[0043] Prototypes of the present invention have employed adhesives sheets of the type used in commercially available lint rollers of the type described in the foregoing background section of the present disclosure, but in the form of discrete sheets that are not interconnected together in a continuous roll. That is, the prototypes were produced by detaching the originally integral sheets of the continuous roll from one another along the perforation lies of the roll, and then stacking the sheets atop one another to create a layered stack having only a single sheet in each layer. As a result, the stack of adhesive sheets are connected to one another solely by the adherence provided between each pair of adjacent sheets by the adhesively coated upper face of the lower sheet in the pair. Accordingly, the illustrated embodiment, like the aforementioned prototypes, lacks any connection between the
one-sided adhesive sheets other than this direct face-to-face adhesive attachment between the sheets, and the perimeter edges of each adhesive sheet are therefore free of any integral connection to the other sheets (unlike the continuous roll of the aforementioned lint rollers of the prior art).

[0044] Hook and loop fasteners 20 are used to secure the base 12 to an interior of a rotatable drum of a tumble dryer, for example that of an otherwise conventional laundry dryer. Each hook and loop fastener features a hook component 20a in the form of a fabric piece having hook material projecting from one side thereof, and a mating loop component 20b in the form of a fabric piece of equal or similar size having loop material projecting from one side thereof. One component 20a of each fastener 20 is affixed to the underside of the base member 12, for example adhered or sewn thereto, with its fastening material facing oppositely away from the base (i.e. facing downward in the illustrated orientation of the device in FIGS. 1 and 2). To install the device 10 on the drum of a tumble dryer, the other component 20b of each fastener 20 is attached to an internal surface of the drum by adhesive or other suitable fastening means. Commercially available hook and loop fasteners having a double sided adhesive tape on the side of each component opposite its hook or loop fastening material may be used, in which case one fastener component 20a is adhered to the base of the device 10, and the other component 20b is likewise adhered to the drum of the tumble dryer.

[0045] The release liner 16 is a piece of flexible plastic film laid over the adhesively coated upper face of the uppermost adhesive sheet 14 in the stack. The release liner 16 remains adhered to this uppermost adhesive sheet 14 in a position fully covering the adhesive upper face thereof until such time as the device is installed in a dryer drum for use. This protects the adhesive upper face of the uppermost sheet 14 from the accumulation of any debris thereon, thereby maintaining the same in a clean state until such time as the device is intended for use in a tumble dryer. Likewise, the adhesive upper face of each of the other adhesive sheets is covered and protected by the neighbouring sheet disposed above it.

[0046] The base 12 is preferably a sheet of plastic of greater thickness, or at least greater strength, than each of the individual adhesive sheets in order to provide greater resistance to tearing, puncture or other damage to the overall device, while still being flexible to allow conformation of the device to the shape of a surface to which the device is to be mounted for use, as described herein in more detail below. The base is preferably also of greater thickness and/or strength than the release liner. Prototypes of the invention employed the flexible plastic cover of a three-ring binder as the base material. Other flexible or pliable materials may alternatively be employed, for example including cardboard or cardstock, although use of a flexible plastic is likely to provide an improved wear life, and also provide better conformation to the underlying surface to which the device is mounted.

[0047] With reference to FIG. 1, each adhesive sheet in the illustrated embodiment is generally rectangular in shape, departing from a true rectangle only the existence of a single peripheral tab 22 projecting outwardly from what would otherwise be a purely linear perimeter side of the rectangular sheet. The peripheral tab 22 of each sheet is at a uniquely distinct position around the perimeter of the adhesive sheet relative to the tabs of the other adhesive sheets. In the illustrated embodiment, the tabs of the adhesive sheets all reside on a same common side of the stack, i.e. along a same common side of the shared and aligned rectangular shape of the equally sized adhesive sheets in the stack. Each tab resides at a discrete position along this side of the stack in non-overlapping relation to the tabs of the other sheets. The tab allows for easily manual gripping of a single individual sheet independently of the other sheets for the reasons set our herein further below.

[0048] Each tab is absent of any adhesive material thereon. That is, the adhesive upper face of each adhesive sheet does not occupy the entire area of the sheet’s topside, specially terminating short of the outwardly projecting peripheral grip tab 22 of the sheet. The adhesive coating of the upper face may occupy the entire remainder of the sheet’s topside (i.e. all areas other than the tab 22), and preferably spans at least a substantial majority of the sheet’s topside, for example terminating a short distance inward from each perimeter edge of the sheet to prevent potential exposure of the adhesive of the sheets out from under the other sheets and release liner at the perimeter of the stack.

[0049] In the illustrated embodiment, the release liner 16 and the base member 12 are rectangular in shape, each having a surface area at least as large as the adhesive upper faces of the stacked adhesive sheets. On the other hand, the release liner and base member 12 of the illustrated embodiment do not overly the peripheral tabs 22 of the adhesive sheets, which remain exposed at the respective side of the stack in positions jutting outwardly beyond the respective perimeter edges of the release liner 16 and base 12. This is perhaps best seen in FIG. 2, where the tabs 22 can be seen to reach outwardly beyond the area occupied by the release liner 16 and base 12, which as shown, may be of equal size to one another. While the illustrated embodiment has the tabs projecting outwardly beyond the release liner and the base, one or both of the base and the release liner may respectively overlie and underlie the tabs.

[0050] While the illustrated embodiment of FIGS. 1 and 2 features sixteen adhesive sheets 14 of generally rectangular shape tabbed on a singular common side of the stack, a rectangular base 12, a rectangular release liner 16, and four hook and loop fasteners positioned at the four corners of the rectangular base, it will be appreciated that the shape of the sheets, base and release linear may vary, as may the number of fasteners 30, and the number of sides on which the adhesive sheets are tabbed. Each sheet may be tabbed on more than one side, or single-tabbed sheets having their tabs positioned on various sides of the stack may be employed. While the illustrated embodiment is described as having the hook component 20a of each hook and loop fasteners 20 attached to the base, the loop component could alternatively be affixed to the base and the cooperating hook component installed on the dryer drum. While the illustrated embodiment features a singular sheet of double sided tape that is comparable in overall size to the adhesive sheets stacked above it and the base member lying beneath it, other embodiments may feature one or more smaller pieces of double sided tape to adhere the lowermost adhesive sheet in the stack to the underlying base.

[0051] Having described the structure of the device, attention is now turned to its use. FIG. 4 illustrates installation of pet hair removal devices of the forgoing type on the baffles of a tumble dryer’s rotatable drum 100. The illustrated drum 100 features three baffles 102, each equipped with a respec-
tive pet hair removal device 10. Each baffle features two faces 102a, 102b facing in opposing directions around the central axis 104 of the drum 100. The circumferential wall 106 is centered on this axis 104 and closes therearound, and the drum is rotated on this axis by the drive motor of the tumble dryer. To install each device 10, one of the two components of each hook and loop fastener 20 is secured to the respective baffle 102. For each fastener, this drum-mounted fastener component may be either the hook component 20a or the loop component 20b, depending on which component is affixed to the base 12 of the pet hair removal device 10, and which component is therefore available for mounting to the dryer drum.

[0052] Half of the fasteners 20 have their drum-mounted component secured to one side 102a of the baffle 102, and the other half of the fasteners 20 have their drum-mounted component secured to the other side 102b of the baffle 102. The base 12 of the pet hair removal device 10 is then laid over the baffle 102 in a position folding or curving over the peak or edge of the baffle that defines its innermost free end that points inwardly toward the central axis 104 of the drum 100. Accordingly, two halves of the folded or curved base reside on opposite sides of the fold or curved bend of the base, and the fastener components 20a on the two halves of the base 12 mate with the respective fastener components on the respective side 102a, 102b of the baffle. The term ‘halves’ does not necessarily denote two equally sized portions each denoting 50% of the overall base, as the base need not be perfectly centered on the baffle. The stack of adhesive sheets attached to the flexible base 102 are likewise flexed into a folded or curved configuration spanning over the free of the baffle to place the two halves of each sheet on respective sides of the baffle. Accordingly, one half of each adhesive sheet faces one direction around the central axis 104, and the other half faces the other way around the central axis.

[0053] FIG. 5 shows an alternate installation of three pet hair removal devices 10 on the same three-baffle dryer drum 100. Here, the drum-mounted fastener components of each device 10 are secured to the circumferential wall 106 of the dryer drum 100 at an area between a respective pair of the baffles 102. The flexibility of the base 12 likewise allows conformance of the device to the shape of the drum, with the base 12 taking on an arcuate shape when fastened to the drum wall by mating the base-carried fastener components 20a with the drum-mounted fastener components 20b. The adhesive sheets 14 in the stack likewise take on an arcuate form dictated by the mounting of the base 12 to the drum wall. In this circumferential wall installation of FIG. 5, the adhesively coated upper surface of each adhesive sheet in the stack faces radially inward toward the central axis of the dryer drum 100, instead of facing circumferentially therearound in the baffle installation of FIG. 4. In either the baffle-mounted or wall-mounted installation, the stack of adhesive sheets resides on the side of the base 12 that faces inwardly into the hollow interior of the drum 100 from the interior baffle or wall surface of the drum to which the base is mounted. Prior or subsequent to the securing of the base 12 to the dryer drum, the release liner 16 is removed to expose the adhesively coated upper face of the uppermost adhesive sheet 14a in the stack, which in the installed state of the device may be referred to as the innermost sheet, since it resides nearest to the central axis 104 of the dryer drum.

[0054] With one or more of the devices installed on the dryer drum and the adhesive face of the innermost adhesive sheet in an exposed position within the dryer drum, one or more fabric articles (clothing, bedding, blankets, drapes, etc.) having pet hair thereto is placed within the dryer drum, and the dryer is operated in a tumbling laundry cycle driving the drum in a rotating fashion about its central axis, whereupon the rotational motion and the inwardly projecting baffles of the drum cause the fabric article(s) to tumble within the interior space of drum on an ongoing basis. During this process, the article(s) repeatedly come into contact with the exposed adhesive face of the innermost adhesive sheet 14a in the stack, whereupon the pet hair previously clinging to the fabric article becomes adhered to this adhesive face of the innermost adhesive sheet, thereby removing the pet hair from the article. The ongoing tumbling motion ensures that different areas of the article will come into contact with the exposed adhesive face of the innermost adhesive during the laundry cycle, thereby providing an effective pet hair removal action.

[0055] Applicant tested prototypes of the present invention in various conditions, including heated and unheated dryer cycles and dry and wet states of the articles being cleaned. Applicant found the best pet hair removal results to occur when a fabric article is placed within a tumble-dry clothes dryer in a dry condition, and allowed to run through a laundry cycle. Testing found that when used on dry articles, the pet hair removal process did not seem to benefit from a heated drying cycle versus an air-flush cycle, in which unheated room-temperature air is circulated through the dryer. Accordingly, it is preferred that the dry-processing of fabric articles for pet hair removal is performed with an unheated cycle in order to avoid wasting energy on the generation of an unnecessary supply of heated air. In testing performance of the device on wet articles, i.e. fabric articles run through a conventional clothes washing machine prior to placement thereof in the device, applicant found that while the device was effective at collecting lint from the fabric articles, the wet-article process was less effective at removing pet hair. Accordingly, the device can be employed for removal of debris other than pet hair, but is best employed in a dry-article process when particularly trying to address the removal of pet hair from fabric articles. Accordingly, a unique hair removal method of the present invention involves placement of fabric articles into a clothes dryer while in an already-dry state, and running the dryer in an unheated drum-rotating cycle in order to collect pet hair and other debris (e.g. lint) from the article without having performed a prior wet cleaning of the article.

[0056] The base 12 and the removable attachment thereof to the dryer drum allows the stack of adhesive sheets to be easily removed after use thereof in an unheated hair-removal process, for example in order to avoid expending any of the sheets in a subsequent conventional heated drying cycle used to dry wet laundry from a hand-washed or machine-washed operation. By attaching the base 12 to the dryer drum 100, instead of attaching the lowermost sheet 14b in the stack directly to the drum 100, no damage to the device will occur upon attempting to remove the device from the drum 100. For example, if the lowermost adhesive sheet were equipped with hook or loop fastening elements on the underside thereof in order to avoid the base 12 of the illustrated embodiment, the strength of an adhesive sheet of the commercially available type employed for lint rollers would be insufficient to withstand the pulling force required to separate a robust hook and loop fastener, and so attempts
to the pull a baseless device free of its fastened condition to the drum wall would result in ripping, tearing, puncture or other damage to the lowermost sheet, rendering it unsuitable for reattachment to the dryer drum for subsequent use.

Accordingly, the combination of a stacked collection of adhesive sheets atop a materially distinct base provides an optimal solution for a re-usable pet-hair removal device that can be repeatedly attached and detached to the interior of a dryer drum. After each use of the device to remove pet hair from an article in a tumbling operation of the dryer, the uppermost adhesive sheet in the stack can be conveniently removed by pulling upward on its respective peripheral tab 22 in order to release the sheet’s originally adhered state to the next underlying sheet. This removal of the uppermost sheet exposes the adhesive-coated upper face of the next underlying sheet in order to act as a newly exposed adhesive surface in the dryer drum for collection of pet hair, lint or other debris thereon.

FIG. 3 shows a second embodiment 10’ which is substantially similar to that of FIGS. 1 and 2, differing only in the substitution of magnets 30 for the hook and loop fasteners 20 of the first embodiment. The magnets are attached to the base, for example adhered thereto or embedded therein (for example, molded in place during manufacture of a flexible plastic base), whereby the flexible base becomes self-sealing to the metal drum of a clothes dryer. The magnetic embodiment avoids the need to install one half of each hook and loop fastener to the drum in a manner arranging the drum-mounted components of the fasteners in a layout on the drum that will properly align with the respective components affixed to the base of the pet hair removal device, as each magnet will self-attach to any magnetically-attractable area of the drum. Depending on relative costs of suitable magnets versus hook and loop fasteners, one option may be preferable to the other on a cost-efficiency basis. Alternatively, easier installation using hook and loop fasteners may result from the use of a single relatively large hook and loop fastener spanning a substantial majority or entirety of the base’s underside, or from the use of a pair of relatively large fasteners each spanning a substantial majority or entirety of a respective half of the base’s underside. These options avoid the need to worry about accurate alignment when mating the two halves of a plurality of smaller hook and loop fasteners, as required for the illustrated embodiment featuring four relatively small fasteners at the corners of the device.

Magnets and hook and loop fasteners are only two examples by which a device of the present invention may be installed on a dryer drum, but may be preferable over other options such as use of threaded fasteners to secure the base to the dryer drum, which would make for less convenient removal of the base from the drum and possibly introduce other undesirable complications. However, the uniqueness of a re-usable product with a collection of stacked adhesive sheets remains regardless of how the stack is held in place, and regardless of whether it uses a materially distinct base as part of its attachment to the drum. However, the base-equipped embodiments provide the potential sale of re-fill packs, where a consumer makes a one-time purchase of a base (preferably including a first stack of adhesive sheets supplied therewith in an attached or unattached relation to the base), and then can separately purchase re-fill packs, each featuring a stacked collection of adhesive sheets for replenishing of the device after multiple uses. The lowermost sheet in each re-fill pack may come with an adhesive on the underside thereof (whether as an integral part of the sheet, i.e. an adhesive coating applied thereto during manufacture of the sheet, or as a separate piece of double sided tape attached thereto). In such embodiments, the underside adhesive on the lowermost sheet in the re-fill pack is initially covered by a bottom release liner, which is removed when the re-fill pack is ready for attachment to the base in place of a previously depleted stack. FIG. 6 shows such a re-fill pack, which features the same stack of adhesive sheets as the devices of FIGS. 1 and 3, but with a second release liner 16 disposed beneath the double sided tape 18 instead of the flexible base.

While the illustrated embodiments present a pet hair removal device to be sold to consumers separately from a dryer drum for consumer installation on the drum of their existing clothes dryer to adapt the same for use in the described pet hair removal or other debris removal process, the present invention also extends to a dryer drum that comes equipped with one more stacks of adhesive sheets thereon for use in a pet hair removal or other debris removal process. In addition, while described primarily in the context of a clothes dryer, the stacked adhesive sheets may be employed on tumble dryers or other rotateable drums originally used for purposes other than drying of laundry, especially since it has been found that unheated tumbling cycles provide the best pet-hair removal results, and so a heated-air machine is not explicitly required for a pet hair removal process of the present invention.

Since various modifications can be made in my invention as herein above described, and many apparently widely different embodiments of same made within the scope of the claims without departure from such scope, it is intended that all matter contained in the accompanying specification shall be interpreted as illustrative only and not in a limiting sense.

1. An apparatus for removal of pet hair or other debris from an article placed in a rotatable drum, the apparatus comprising a plurality of adhesive sheets compiled atop one another in a stack, the stack of sheets being attachable to the rotatable drum within an interior thereof.

2. The apparatus of claim 1 wherein the adhesive sheets in the stack have respective adhesive faces that face in a same common direction, and except for a lowestadhesive sheet in the stack, each adhesive sheet is connected to an underlying adhesive sheet in the stack only by the adhesive face of said underlying adhesive sheet.

3. The apparatus of claim 1 further comprising a base arranged for attachment to the rotatable drum within the interior thereof, the plurality of adhesive sheets being stacked atop the base member with an adhesive face of each of said adhesive sheets facing away from said base member.

4. The apparatus of claim 3 wherein the base is planar.

5. The apparatus of claim 3 wherein the adhesive sheets are stacked flat atop the base.

6. The apparatus of claim 3 wherein the base is a flexible member having a greater strength than the adhesive sheets.

7. The apparatus of claim 3 wherein a lowermost adhesive sheet in the stack is adhesively attached to the base, and each other sheet in the stack is secured to an underlying adhesive sheet in the stack by the adhesive face of said underlying adhesive sheet.

8. The apparatus of claim 1 further comprising a release liner overlying the adhesive face of an uppermost adhesive
sheet in the stack to maintain a clean state thereof until installation and use of the apparatus.

9. The apparatus of claim 1 further comprising a fastener for securing the stack of adhesive sheets to the rotatable drum.

10. The apparatus of claim 9 wherein the fastener comprises a hook and loop fastener.

11. The apparatus of claim 10 further comprising a base atop which the adhesive sheets are stacked, wherein the hook and loop fastener comprises two rotatable components, one of which is attached to the base on a side thereof opposite the adhesive sheets, and the other of which is attachable to the rotatable drum.

12. The apparatus of any one of claim 1 further comprising at least one magnet for securing the stack of adhesive sheets to the rotatable drum.

13. The apparatus of claim 12 further comprising a base atop which the adhesive sheets are stacked, wherein at least one magnet is attached to the base for magnetic retention of the base on the rotatable drum.

14. The apparatus according to claim 3 in combination with a re-fill pack of stacked adhesive sheets for replenishing said apparatus by mounting the stacked adhesive sheet of said re-fill pack atop the base after depletion of the original plurality of adhesive sheets.

15. The apparatus of claim 1 wherein each adhesive sheet in the stack comprises a peripheral tab projecting outward from a perimeter edge of said adhesive sheet for to define a manual grip for peeling of said sheet from the stack after use of said sheet to collect hair or other debris at a top end of the stack.

16. A method of preparing a rotatable drum for use in removal of pet hair or other debris from an article, the method comprising securing the apparatus of claim 1 to an interior surface of the rotatable drum with an innermost adhesive sheet in the stack situated nearest to a center of said rotatable drum in an exposed position.

17. A method of preparing the apparatus of claim 1 for a subsequent use after a prior use thereof, the method comprising removing an innermost adhesive sheet of the stack that is closest to a center of the rotatable drum and to which pet or other debris adhered during said prior use, and thereby revealing an underlying adhesive sheet of said stack from beneath the innermost adhesive sheet for collection of additional pet hair or other debris on said underlying adhesive sheet during the subsequent use of the apparatus.

18. A method of removing pet hair or other debris from an article, the method comprising, with the article in a dry state, placing the article in a rotatable drum of a laundry dryer that features one or more adhesively coated surfaces on an interior of the drum, and operating the laundry dryer to drive rotation of the drum, during which movement of the article within the rotating drum brings in the article into repeated contact with the one or more adhesively coated surfaces, to which the pet hair or other debris from the article becomes adhered.

19. A drum for rotational use in a pet hair removal or other debris removal process, the drum comprising a stack of adhesive sheets positioned with an innermost adhesive sheet in the stack situated nearest to a center of said drum in an exposed position within an interior of said drum, and each adhesive sheet having an adhesively coated surface facing toward said center of said drum.

20. A method of replenishing the apparatus of claim 1 after depletion of the plurality of adhesive sheets from the stack, the method comprising mounting a re-fill pack of stacked adhesive sheets atop the base after depletion in place of the original plurality of adhesive sheets.