US 20170252780A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2017/0252780 A1

Viola (43) Pub. Date: Sep. 7, 2017

(54) PET HAIR GATHERING TOOL

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(21) Appl. No.: **14/998,907**

(22) Filed: **Mar. 3, 2016**

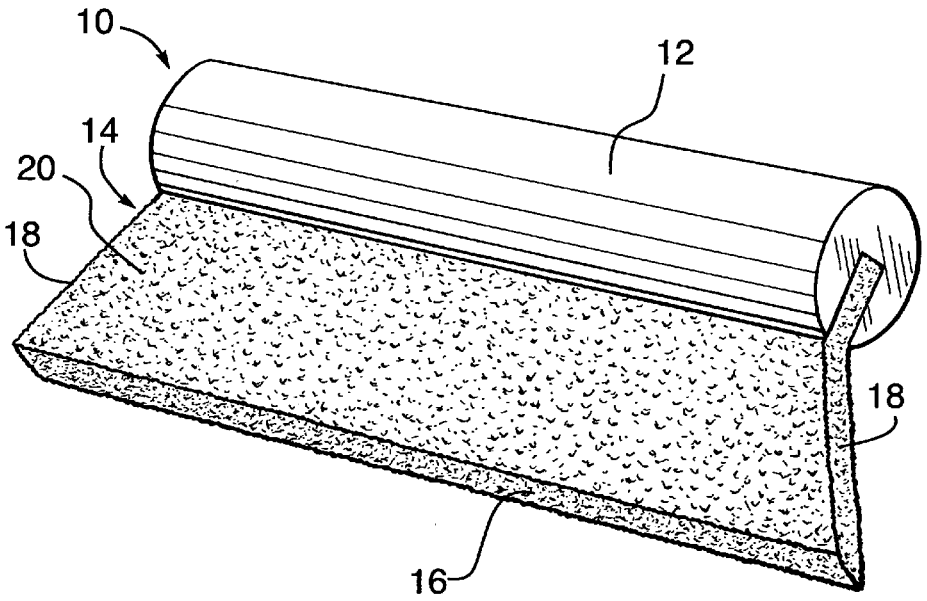
**Publication Classification**

(51) **Int. Cl.**
***B08B 1/00*** (2006.01)

(52) **U.S. Cl.**
CPC ..... ***B08B 1/001*** (2013.01)

(57) **ABSTRACT**

An improved device and method for gathering up loose pet hair, lint, and other fine debris from a variety of surfaces. In the preferred embodiment, the device includes a handle and a blade. The blade is made of an elastromeric material that is flexible. Exposed surfaces of the blade have a rough, crinkled, pebble-grain texture, such as crepe rubber. The blade is greater in height than in thickness; greater in width than in height; and wider at the bottom end than at the top end, where it is connected to the handle. The handle of the device is held by the user, while the bottom end, side ends, or front and back surfaces of the blade are placed on the surface to be cleaned and dragged with slight pressure across the cleaning surface. The blade dislodges, grips, and gathers up loose pet hair and other fine debris into a wad so that it may be removed by hand or by vacuum suction.



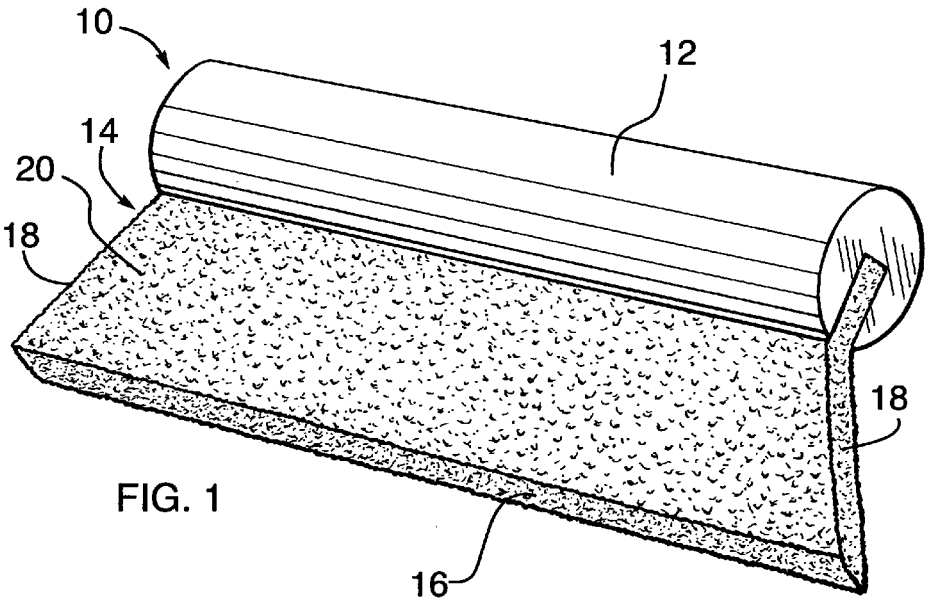



FIG. 1

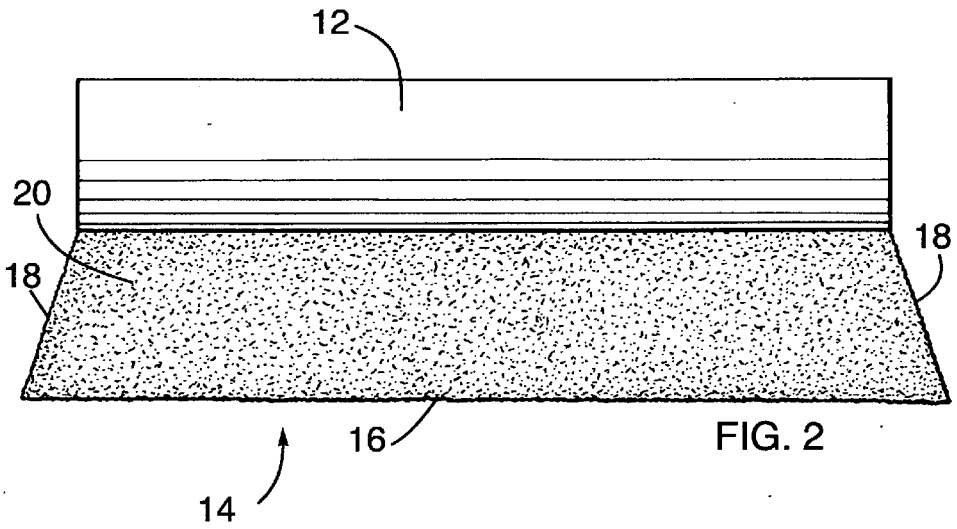



FIG. 2

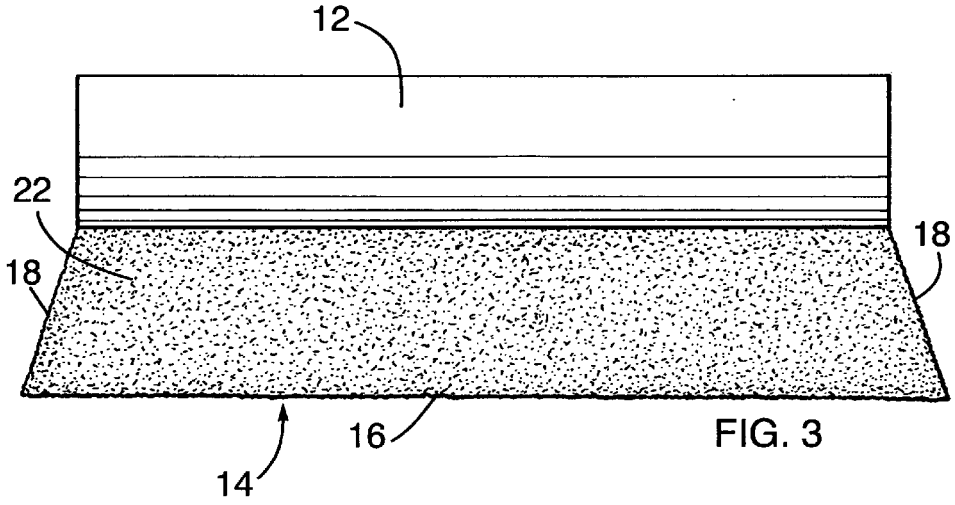



FIG. 3

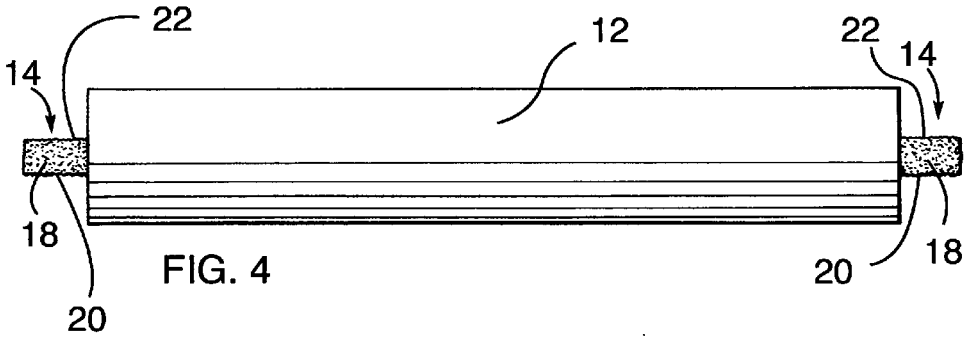



FIG. 4

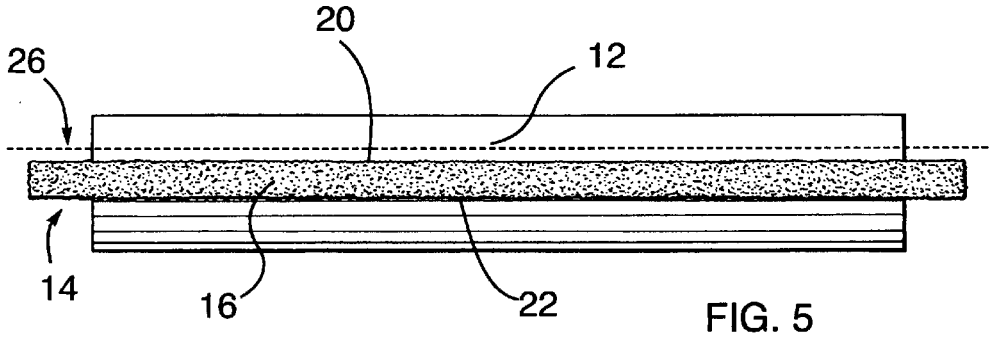



FIG. 5

FIG. 6

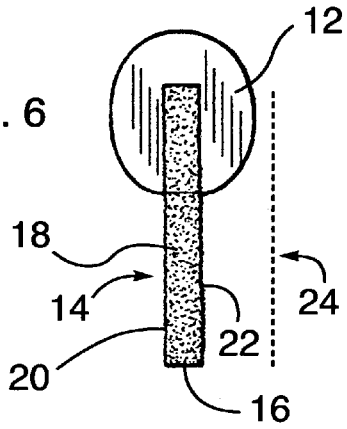
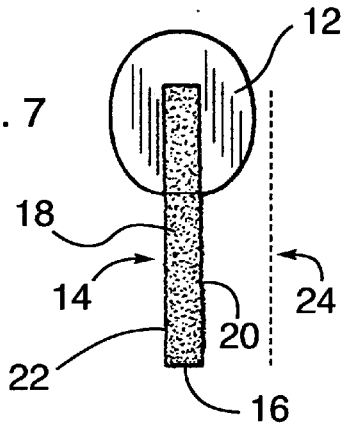



FIG. 7



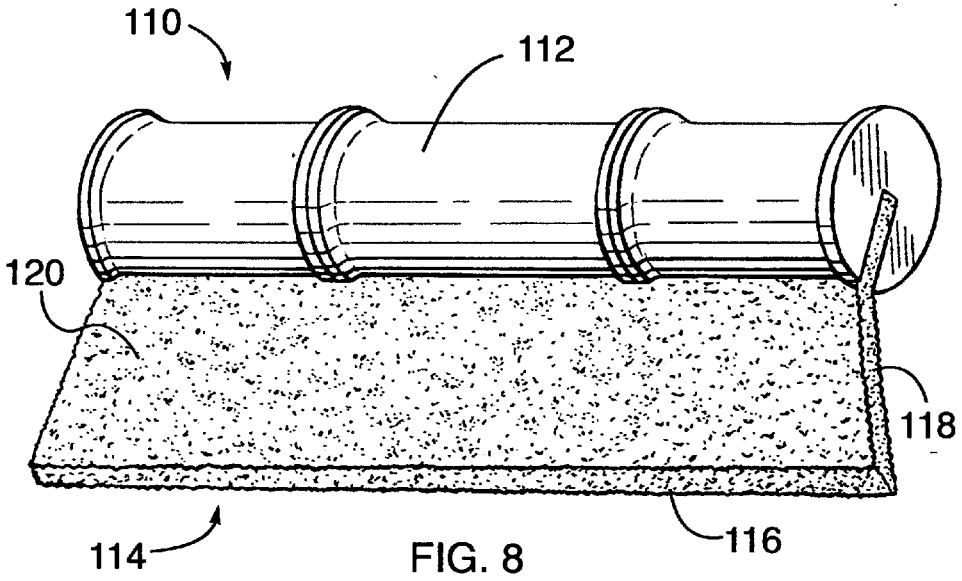




FIG. 8

# PET HAIR GATHERING TOOL

## BACKGROUND

**[0001]** Field

**[0002]** The present disclosure relates generally to devices and methods for cleaning loose pet hair, lint, and other fine debris from a variety of surfaces, including upholstery, carpets, drapes, automobile interiors, pet beds, and clothing.

**[0003]** Description of Related Art

**[0004]** Some prior devices created for performing the above tasks incorporate a tacky surface, such as a sticky pad or a sticky roller, that grabs and holds the loose pet hair or other fine debris, thereby removing it from the area that is being cleaned.

**[0005]** U.S. Pat. No. 3,158,887 to Kanbar et al. discloses a device that incorporates a roller with a sticky surface that collects loose debris from surfaces. U.S. Pat. No. 3,056,154 discloses a device that uses a glove with removable sticky pads. As the wearer of the glove wipes the sticky pads across the surface to be cleaned, the sticky pads pull loose debris from the surface. U.S. Pat. No. 3,373,457 to Rouch discloses a device that uses removable sticky sheets.

**[0006]** One limitation of such sticky-surfaced devices is that the sticky surface quickly becomes filled with debris, rendering it non-sticky and incapable of picking up any more debris. Therefore, such devices are not useful for cleaning up large amounts of debris, such as the amount of hair that a shaggy dog might leave on the family couch. Also, sticky-surfaced devices are not very effective at dislodging embedded debris, such as pet hair that has become interwoven into the fabric of upholstery or into the fibers of a carpet.

**[0007]** U.S. Pat. No. 8,763,190 to Ross shows a device that uses a rubber brush to dislodge the embedded pet hair and a sticky-surfaced roller to collect the pet hair that has been dislodged. While the rubber brush may be somewhat effective at dislodging pet hair, it may not be completely effective at gathering it, and the sticky roller is limited in how much hair it can retain before it becomes full of pet hair and therefore incapable of removing any more.

**[0008]** Some devices use a roller or a pad, covered with a directional fabric that, when brushed in the proper direction across the surface to be cleaned, is capable of picking up and holding small debris such as lint or pet hair. Such devices covered with directional fabric are limited in that they must be moved across the surface in the proper direction only. If they are moved in the wrong direction, they may not pick up the debris and may actually release some debris onto the surface that is being cleaned. Also, they are limited in how much debris they can collect before becoming ineffective. Further, they may not be able to reach debris that is deeply embedded, such as pet hair that has become interwoven into carpet. U.S. Pat. No. 7,039,982 and U.S. Pat. No. 7,020,926 to McKay disclose devices that incorporate a roller brush covered with such a directional fabric.

**[0009]** Another variety of device for removing unwanted loose pet hair, lint, etc. incorporates a blade made of rubber or other elastromeric material, such as the type found in a common squeegee. When such a blade is dragged with downward pressure, across the surface to be cleaned, it is partially effective at pulling out loose pet hair and other debris from the fibers of cloth or carpet. Such squeegee-like devices are used to gather the pet hair or other collected material into a wad, which can then be removed by hand or vacuum suction.

**[0010]** Squeegees are usually used to remove liquids, such as water, from smooth surfaces, such as glass or tile. The wiping surface of the blade of a squeegee is smooth so that it can make close contact with the smooth surface it is wiping across and thereby effectively remove liquid from the surface. While the smooth blade of a squeegee is optimized for removing liquids from smooth surfaces, it is not very well suited for removing solid matter, such as pet hair, from non-smooth surfaces, such as shag carpet, clothing, or upholstery fabric.

**[0011]** U.S. Pat. No. 1,907,370 to Scholler discloses a device, for removing pet hair from surfaces, that incorporates crepe rubber strips. Scholler's device is intended for use on flat surfaces such as floors and so the low-relief crepe rubber strips are attached to a rigid substrate to keep them flat. As such, they are not flexible enough to be effective on non-flat surfaces, such as the rounded arm of an upholstered chair.

## BRIEF SUMMARY

**[0012]** The present invention is a device for gathering up loose pet hair, lint, or other fine debris from a variety of surfaces. The device comprises a blade attached to a handle. The blade is greater in width than it is in height and is greater in height than it is in thickness.

**[0013]** The blade has a top and bottom end; the top end being attached to the handle. The bottom end is essentially straight and is greater in width than the top end. The width of the blade bottom end is greater in width than the top end, the side ends are flared out at angle from the increases uniformly between the handle and the bottom end of the blade. Because the handle, allowing them to access hard-to-reach areas.

## BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

**[0014]** FIG. **1** shows a perspective view of the invention.
**[0015]** FIG. **2** shows a front elevational view thereof.
**[0016]** FIG. **3** shows a back elevational view thereof.
**[0017]** FIG. **4** shows a top plan view thereof.
**[0018]** FIG. **5** shows a bottom plan view thereof.
**[0019]** FIG. **6** shows a right end view thereof.
**[0020]** FIG. **7** shows a left end view thereof.
**[0021]** FIG. **8** shows a perspective view of an alternative embodiment of the invention.

## REFERENCE NUMERALS IN THE DRAWINGS

**[0022]** **10** invention
**[0023]** **12** handle
**[0024]** **14** blade
**[0025]** **16** bottom end of blade
**[0026]** **18** side end of blade
**[0027]** **20** front surface of blade
**[0028]** **22** back surface of blade
**[0029]** **24** vertical axis of the blade
**[0030]** **26** horizontal axis of the blade
**[0031]** **110** alternative embodiment of the invention
**[0032]** **112** handle
**[0033]** **114** blade
**[0034]** **116** bottom end of blade

**[0035]** **118** side end of blade
**[0036]** **120** front surface of blade

## DETAILED DESCRIPTION OF THE INVENTION

**[0037]** An exemplary device **10** as disclosed herein is used to gather up loose pet hair, or other fine debris, such as lint, from a variety of surfaces, including upholstered furniture, carpets, auto-mobile interiors, pet beds, and clothing. The device **10** includes a handle **12** having a blade **14** attached thereto. The exemplary handle **12** shown in FIG. **1** is substantially cylindrical and includes a slot for receiving the top end portion of the blade **14**. The length of the handle **12** is substantially the same as the width of the top end portion of the blade **14**. The blade **14** as illustrated in the figures, includes a bottom end **16**, side ends **18**, a front surface **20**, and a back surface **22**. The portion of the blade **14** extending from the handle **12** has a trapezoidal configuration. The minimum width of the blade **14** , which is the distance between the side ends **18** near the handle in embodiments including trapezoidal blades, exceeds the height of the blade **14**, which is the distance between the handle **12** and the bottom end **16** of the blade **14**. The ratio of the minimum blade width to the blade height is at least 5:1 in some embodiments of the device **10**. The height of the blade **14** may be at least one inch (1") to facilitate effective use of the front **20** and/or back surfaces **22** of the blade for removing debris. The user of the device **10** holds the handle **12** and places the bottom end **16** of the blade **14** in contact with the surface to be cleaned. With slight downward pressure, the user drags the bottom end **16** of the blade **14** along the surface to be cleaned.

**[0038]** It will be appreciated that all exposed surfaces of the blade **14** can be employed for gathering materials such as hair and lint in embodiments wherein such surfaces have a rough, crepey texture, as described further below.

**[0039]** The side ends **18** of the blade **14** may also be dragged, with slight pressure, along the surface to be cleaned, for example when the user is cleaning between two cushions, or is cleaning a recessed area that cannot be reached by the bottom end **16** of the blade **14**, or is cleaning an area that is too small to accommodate the bottom end **16** of the blade **14**.

**[0040]** The front surface **20** and back surface **22** of the blade **14** may also be dragged, with slight pressure, across the surface to be cleaned. The front surface **20** and back surface **22** of the blade **14**, being larger in area, than the bottom end **16** or side ends **18** of the blade **14**, provide a broader and more flexible means for cleaning certain surfaces and greater contact areas with such surfaces. The flexibility of the blade **14** along the horizontal axis **26**, allows the blade **14** to conform to sharply curved surfaces such as a sleeve or trouser leg, or the curved arm of an upholstered chair.

**[0041]** During the dragging process, the roughly textured, slightly gummy material of the blade **14** contacts the embedded or loose pet hair or other fine debris, thereby gripping, pulling, and gathering the debris into a wad. The wad of pet hair and/or other debris may then be picked up by hand or by vacuum suction, in order to dispose of it.

**[0042]** The blade **14**, being greater in height and width than in thickness, tends to flex or deform slightly along its vertical axis **24**, and/or its horizontal axis **26**, when it is dragged with pressure along the surface to be cleaned. Such flexing of the blade **14** allows it to maintain contact with the cleaning surface, as the user drags the device along.

**[0043]** Because the blade **14** is greater in width than it is in height, it covers a significant surface area, as it is pulled along.

**[0044]** In the preferred embodiment of the device **10**, the bottom end **16** and side ends **18** of the blade **14** extend beyond the width of the handle **12**, so that they tend to flex freely, along both the vertical axis **24** and horizontal axis **26**, enabling the bottom end **16** and/or side ends **18** to maximize contact with the cleaning surface.

**[0045]** The surfaces of the side **18** and bottom **16** ends are essentially straight and are at a 90-degree angle from (perpendicular to) the front **20** and back **22** surfaces of the blade, allowing them to make maximum contact with the surface to be cleaned. When the device is in normal use, the essentially flat surfaces of the side **18** and bottom **16** ends of the blade provide more contact of the blade with the cleaning surface than if such surfaces were rounded or tapered. The maximized contact with the cleaning surface allows hair or debris to be collected effectively.

**[0046]** In the preferred embodiment, the thickness of the blade **14** is at least one-quarter of an inch (0.25") to provide enough surface contact so that it is effective in pulling up embedded debris, and the height of the blade **14**, between the bottom end **16** and the handle **12**, is at least one to one inch (1") to allow some flexibility, to allow the front **20** and back **22** surfaces of the blade **14** to contact the cleaning surface, and to allow the blade **14** to reach into surfaces where debris may be deeply embedded, such as carpet.

**[0047]** The blade **14** height is preferably in the range of one inch to one and one-half inches (1.0"-1.5") to facilitate user convenience and product versatility. Blade **14** thickness may be uniform and in the range of three-sixteenths of an inch to five-sixteenths of an inch (0.1875"-0.3125"). In some embodiments, one or more surfaces of the blade **14** may be wavy.

**[0048]** For cleaning a variety of surfaces, such as upholstery, car seats, pet beds, and clothes, the preferred width of the blade **14** is six to eight inches (6.0"-8.0"). For cleaning large areas, such as carpets, a blade **14** width of ten to twelve inches (10.0"-12.0") is preferred.

**[0049]** In the preferred embodiment, the blade **14** is cut from a sheet of crepe rubber. Crepe rubber is a material made of natural latex derived from trees. The latex is mixed with a form of coagulant, such as formic acid, to cause it to coagulate. The coagulum is run through creping machinery, which has rollers that crush and press the material into roughly textured sheets. The wet sheets are then hung in a heated environment to dry.

**[0050]** There are different forms and grades of crepe rubber, such as pale latex crepe (PLC), estate brown crepe (EBC), smoked blanket crepe, re-milled crepe, and flat bark crepe. Although any of the aforementioned varieties of crepe rubber may be used to form the blade, pale latex crepe (PLC) is the preferred grade.

**[0051]** The slightly gummy, grippy quality of natural crepe rubber makes it especially effective at grabbing and pulling the loose pet hair and other fine debris in order to dislodge and collect it, yet the debris does not remain stuck to the crepe rubber as it would to a sticky-surfaced cleaning device, therefore a crepe rubber blade does not become ineffective with use. Moreover, crepe rubber may be easily wiped or washed clean, if necessary.

**[0052]** Crepe rubber has a rough, crinkled, pebble-grain surface texture. The rough texture of crepe rubber makes it ideal for cleaning a variety of surfaces, as it allows the blade **14** to contact and grab the loose debris from multiple angles, as it is dragged over the cleaning surface.

**[0053]** Moreover, because a sheet of crepe rubber has a rough texture on all of its surfaces, every exposed part of the blade can be effective in cleaning debris, thereby giving the user more options for cleaning.

**[0054]** Alternative embodiments may be contemplated in which the blade **14** is molded of a non-slippery, flexible rubber or rubber-like elastromeric material that is poured or injected into a mold that will yield a molded piece with a crinkled, pebble-grain, rough texture, like that of crepe rubber. Suitable materials for making such a molded blade **14** may include, but are not limited to, latex, thermoplastic elastomer (TPE), thermoplastic rubber (TPR), and silicone. The blade **14** can be joined to the handle **12** with an adhesive, fasteners, and/or frictional engagement.

**[0055]** Although the blade **14** does not have to be wider than the handle **12** for the device **10** to be effective, in its preferred embodiment, the blade **14** of the present invention is wider at the bottom end **16** than it is at the top end where it is connected to the handle **12**. The greater width along the bottom end **16** allows the blade **14** to extend beyond the sides of the handle **12** and therefore offers improved access to some difficult-to-reach areas to be cleaned.

**[0056]** The front **20** and back **22** surfaces of the blade **14** can be dragged across a surface, to provide more width and flexiblity than can be provided by the ends **18** of the blade **14**.

**[0057]** The handle **12** and blade **14** could be molded from one unitary piece of material or the blade **14** may be inserted into a separate handle **12** and held in place by fasteners, friction, or adhesive, or a combination thereof. The handle **12** may be made of either rigid or flexible material. The surfaces of the blade **14** should all be essentially flat to maximize contact with most flat surfaces. The blade **14** should be higher than it is thick, in order to have the flexibility to properly adjust to the contours of non-flat surfaces and the blade **14** should be wider than it is high to allow it to clean a significant area at a time. This relationship of height, width, and thickness, allows the blade **14** to flex as necessary along both the vertical **24** and horizontal **26** axes to conform to irregular surfaces.

**[0058]** Alternative embodiments of the device **10** may be contemplated in which the handle takes various forms. FIG.**8** shows an alternative embodiment of the invention **110** in which the handle **112** has an ornamental design.

**[0059]** The corresponding structures, materials, acts, and equivalents of any means or step plus-function elements in the claims below are intended to include any structure, material, or act for performing the function in combination with other claimed elements as specifically claimed. The description of the various embodiments has been presented for purposes of illustration and description, but is not intended to be exhaustive or limited to the form disclosed. Many modifications and variations will be apparent to those of ordinary skill in the art without departing from the scope and spirit thereof The embodiments were chosen and described in order to best explain principles and practical applications, and to enable others of ordinary skill in the art to understand the various embodiments with various modifications as are suited to the particular use contemplated.

What is claimed is:

**1**. A device for gathering up loose pet hair, lint, or other fine debris from a variety of surfaces, comprising:
- a handle;
- a blade attached to the handle, the blade being greater in width than in height and greater in height than in thickness, the blade further including a top end and a bottom end, the top end of the blade being attached to the handle, the bottom end of the blade being comprised of an elastromeric material having a rough, pebble-grain surface texture.

**2**. The device of claim **1**, wherein the blade has a thickness of at least **3**/**16** of an inch.

**3**. The device of claim **2**, wherein the bottom end of the blade includes an edge adjoining and forming a right angle with a bottom surface of the blade.

**4**. The device of claim **3**, wherein the width of the blade increases uniformly between the handle and the bottom end of the blade.

**5**. The device of claim **1**, wherein the blade consists essentially of crepe rubber.

**6**. The device of claim **1**, wherein the blade is ¾ inch to 2 inches in height.

**7**. The device of claim **6**, wherein the ratio of minimum width of the blade to height of the blade is 4:1 to 8:1.

**8**. The device of claim **7**, wherein all exposed surfaces of the bottom end of the blade have the rough, pebble-grain surface texture.

**9**. The device of claim **8**, wherein the blade consists essentially of crepe rubber.

**10**. The device of claim **1**, wherein the height of the blade is ¾ inch to 2 inches.

**11**. The device of claim **6**, wherein the ratio of minimum blade width to height is 4:1 to 8:1.

**12**. A method for gathering up loose pet hair, lint, or other fine debris from a surface comprising:
- obtaining a device including:
  - a handle, and
  - a blade attached to the handle, the blade being greater in width than in height and greater in height than in thickness, the blade further including a bottom end and a top end, the top end of the blade being attached to the handle, the bottom end of the blade being essentially straight and greater in width than the top end of the blade, the blade being comprised of an elastromeric material having a rough, pebble-grain surface texture;
- contacting the surface containing debris with a portion of the blade having the rough, pebble-grain surface texture;
- pulling the blade along the surface, while applying sufficient pressure to cause flexing of the blade between the handle and the bottom end;
- causing debris to form a debris wad on the surface while pulling the blade along the surface, and
- removing the debris wad.

**13**. The method of claim **12**, wherein the blade has a thickness of at least 3/16 of an inch.

**14**. The method of claim **13**, wherein the bottom end of the blade includes a top edge adjoining and forming a right angle with the top surface of the blade and a bottom edge adjoining and forming a right angle with a bottom surface of the blade, further including contacting the surface with the bottom end of the blade.

**15**. The method of claim **13**, wherein the width of the blade increases uniformly between the handle and the bottom end of the blade.

**16**. The method of claim **12**, wherein the blade consists of essentially crepe rubber.

**17**. The method of claim **12**, wherein all exposed surfaces of the bottom end of the blade have the rough, pebble-grain surface texture.

* * * * *