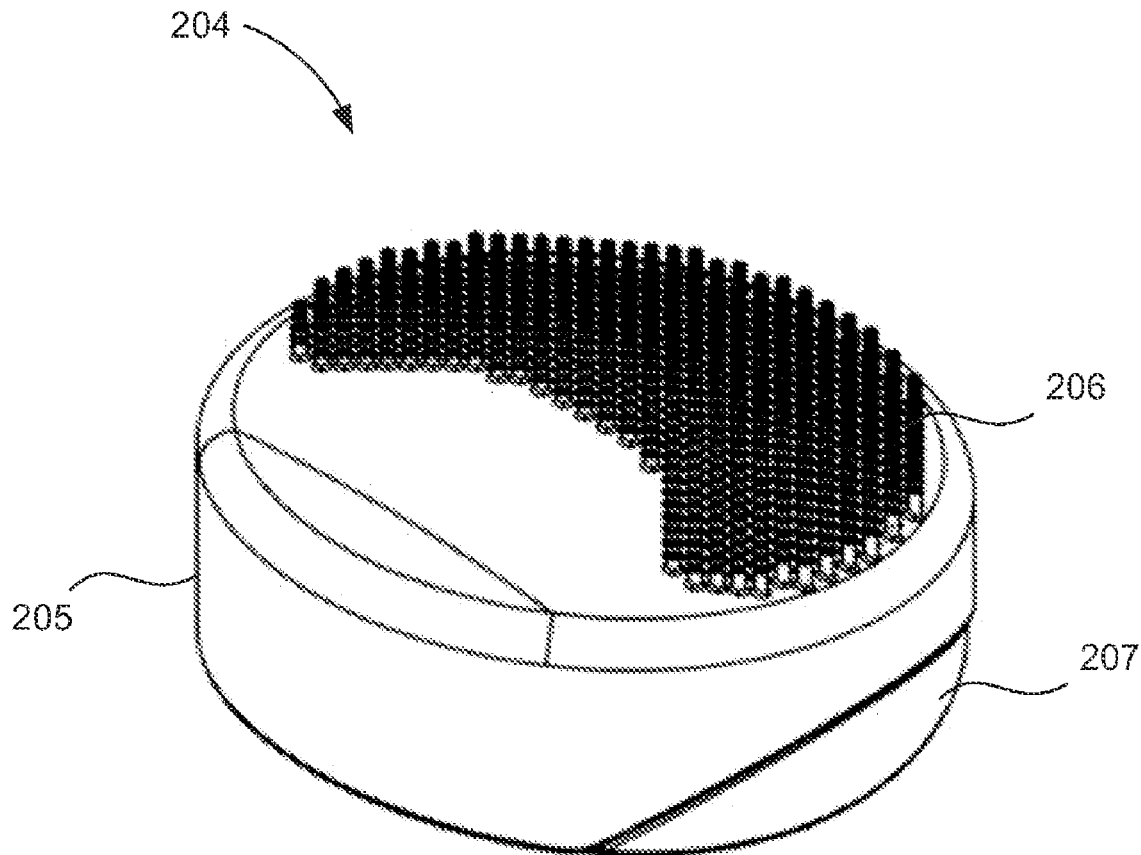




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Cardinal et al.(10) **Pub. No.: US 2016/0010256 A1**(43) **Pub. Date: Jan. 14, 2016**(54) **DEVICE FOR INCORPORATING AN ACTIVE
LAUNDRY INGREDIENT INTO A FABRIC****Publication Classification**(71) Applicant: **Henkel AG & Co. KGaA**, Dusseldorf
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A47L 25/08 (2006.01)(72) Inventors: **Keith Anthony Cardinal**, Gilbert, AZ
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(DE)(52) **U.S. Cl.**
CPC .. **D06F 3/04** (2013.01); **A47L 25/08** (2013.01)(21) Appl. No.: **14/330,475**(57) **ABSTRACT**(22) Filed: **Jul. 14, 2014**

Devices and systems are provided for incorporating an active laundry ingredient into a fabric. The device includes a sleeve that is removably attached to a container closure. The sleeve includes an exterior surface, a number of irregularities extending outward from the exterior surface to incorporate the active laundry ingredient into the fabric, and an opening to removably attach the device to a container closure.



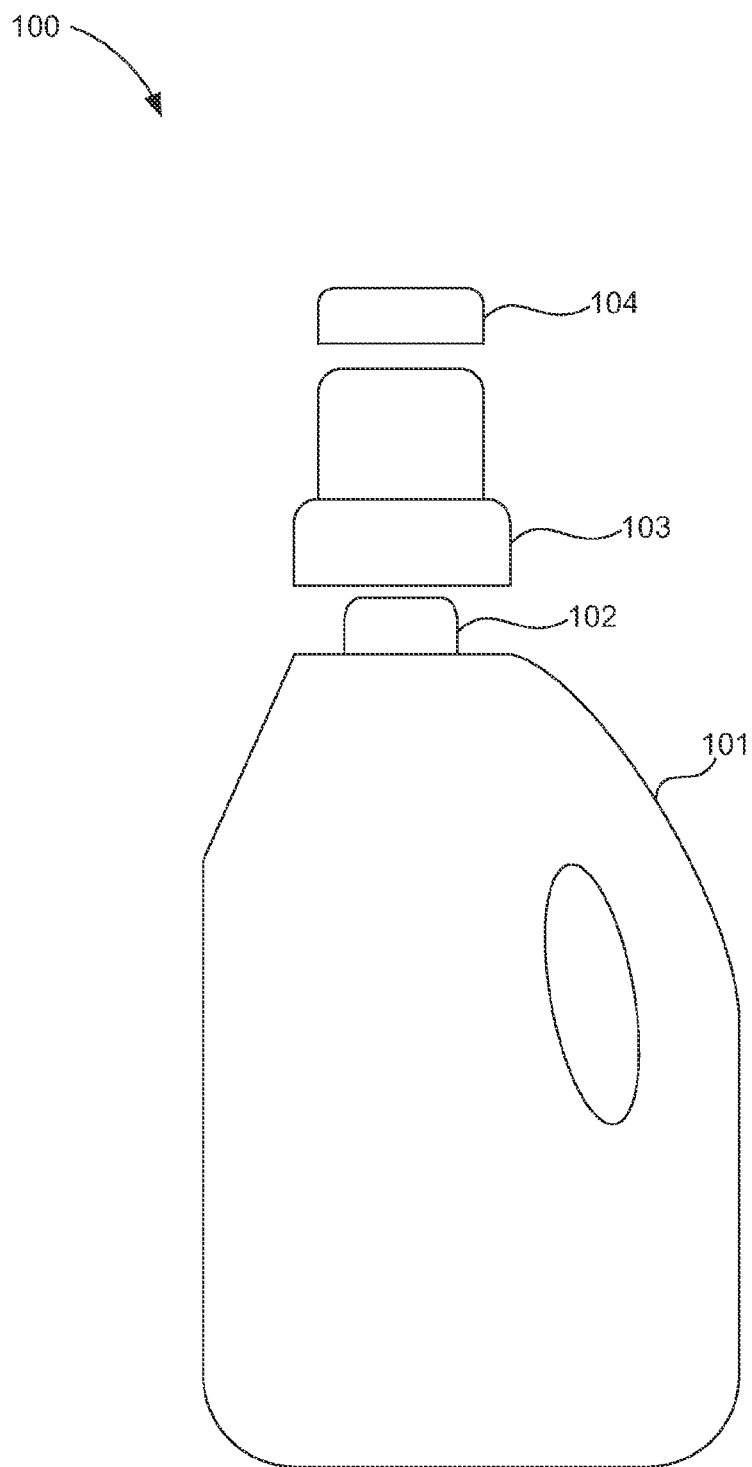


Fig. 1

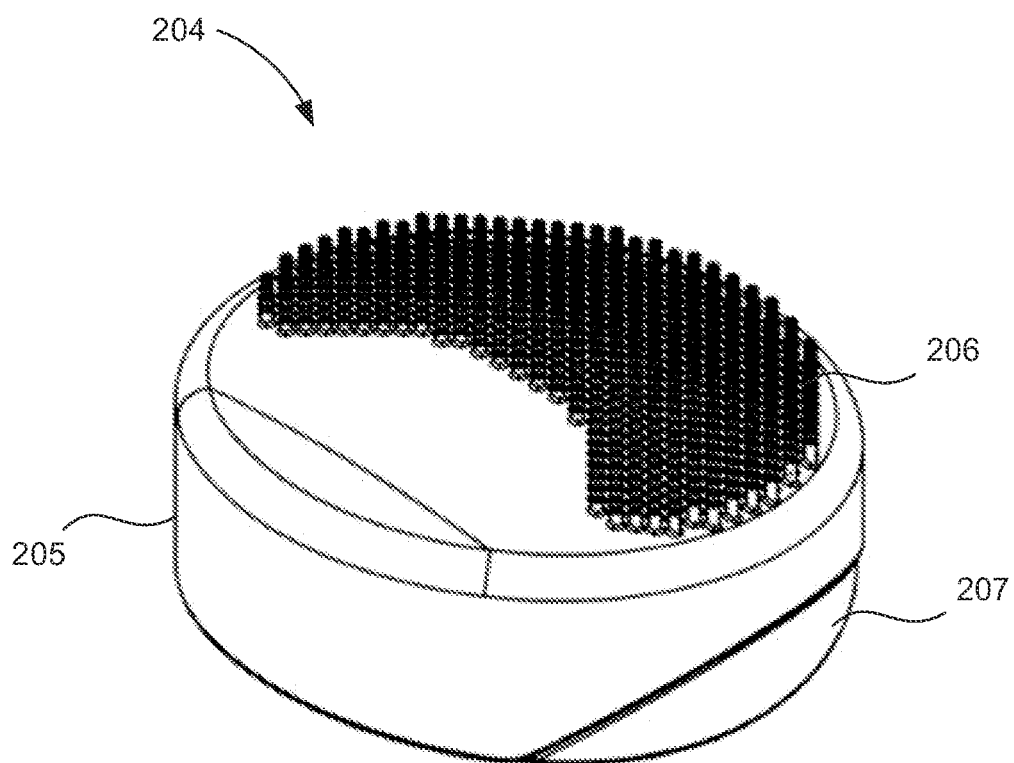


Fig. 2

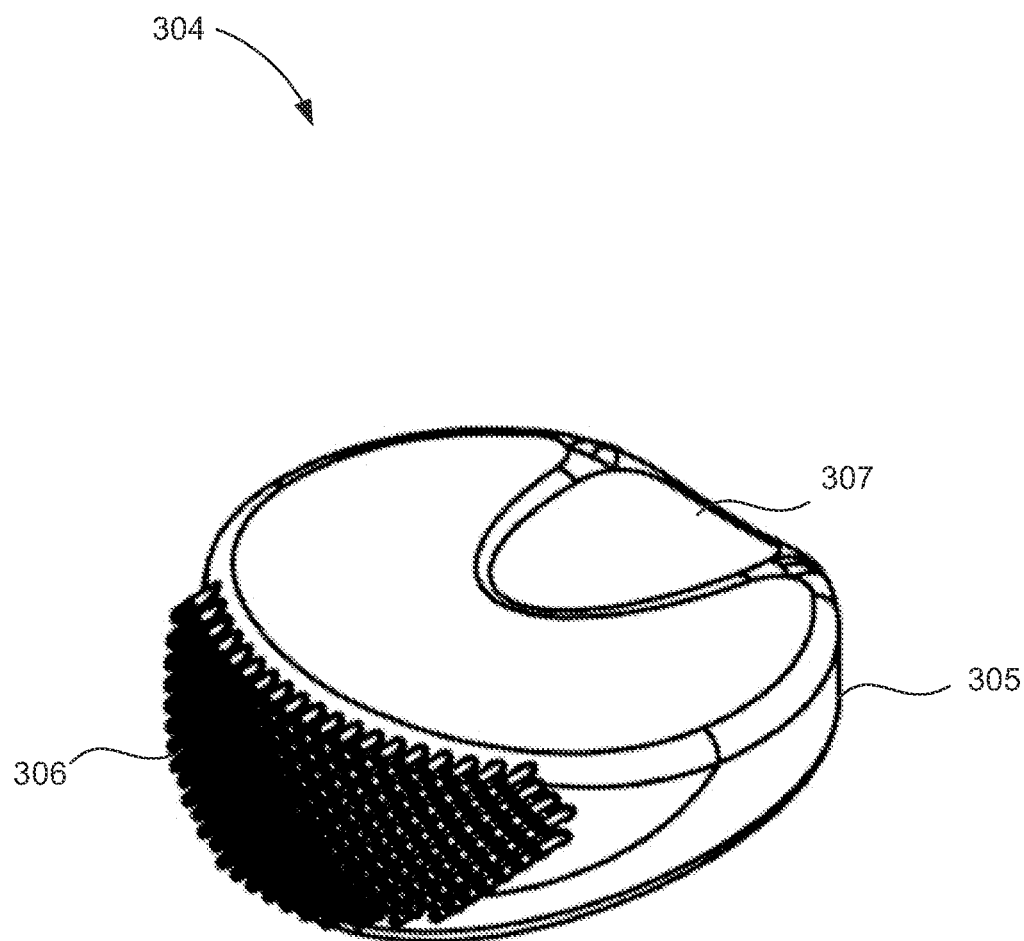


Fig. 3

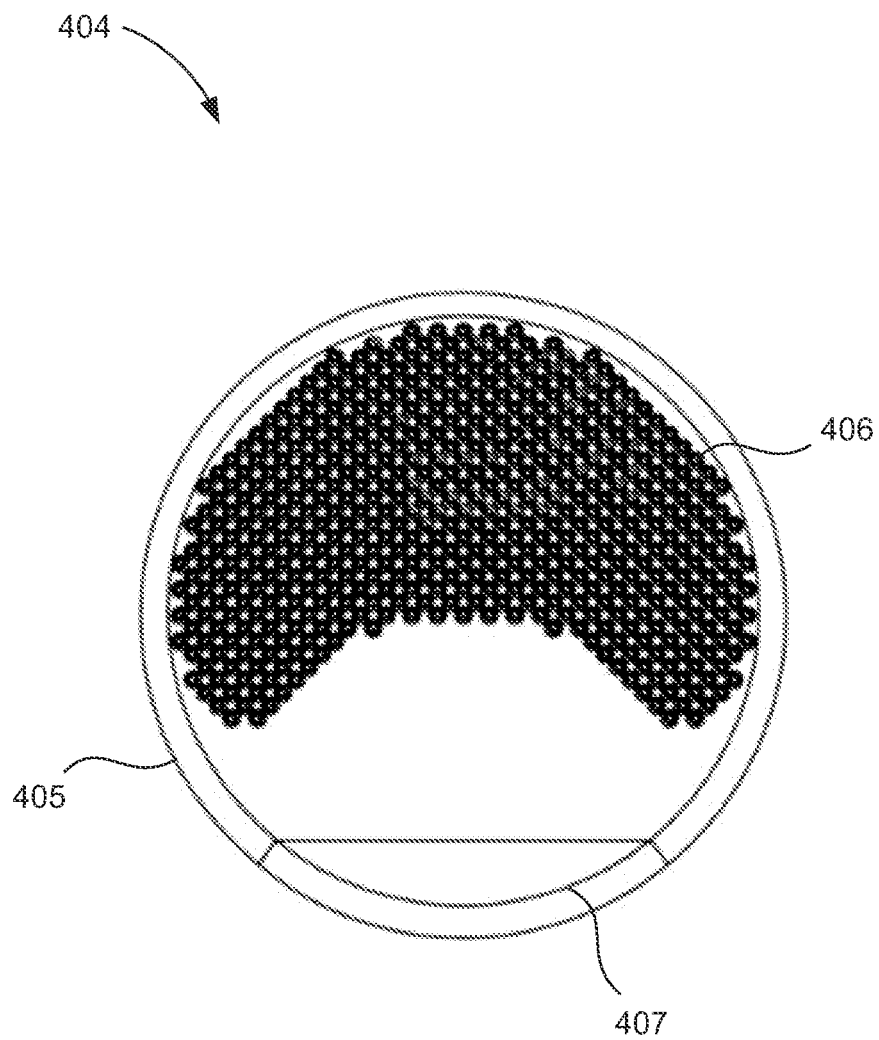


Fig. 4

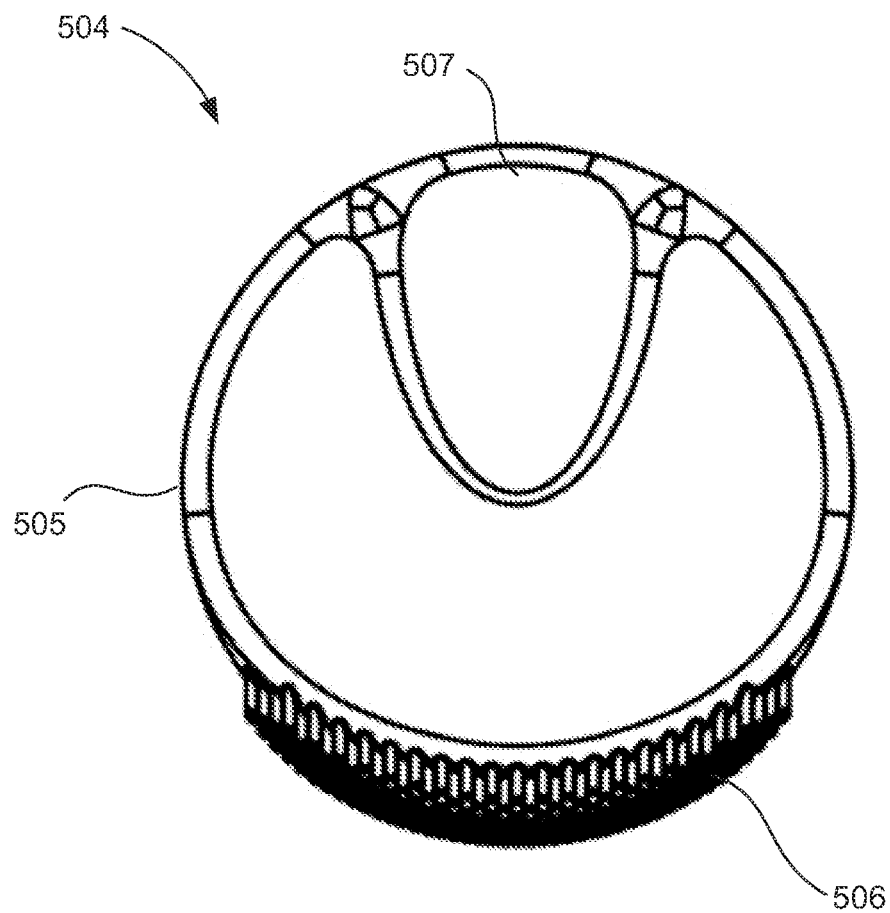
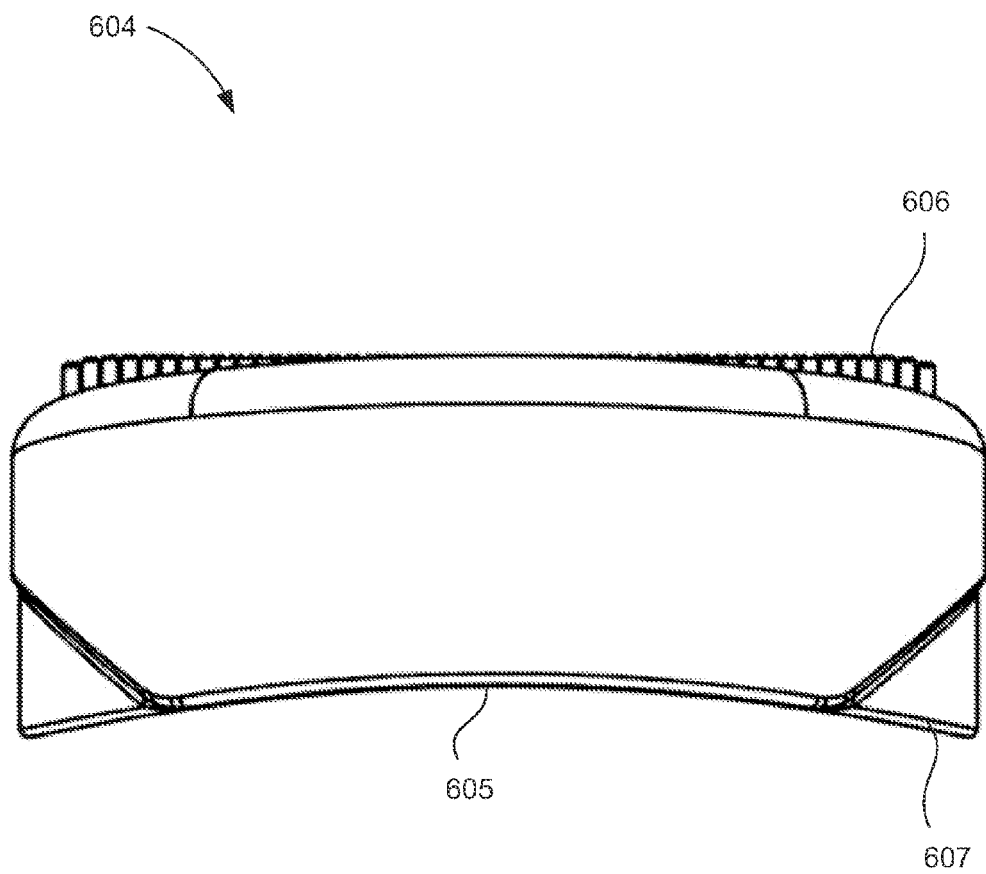


Fig. 5

***Fig. 6***

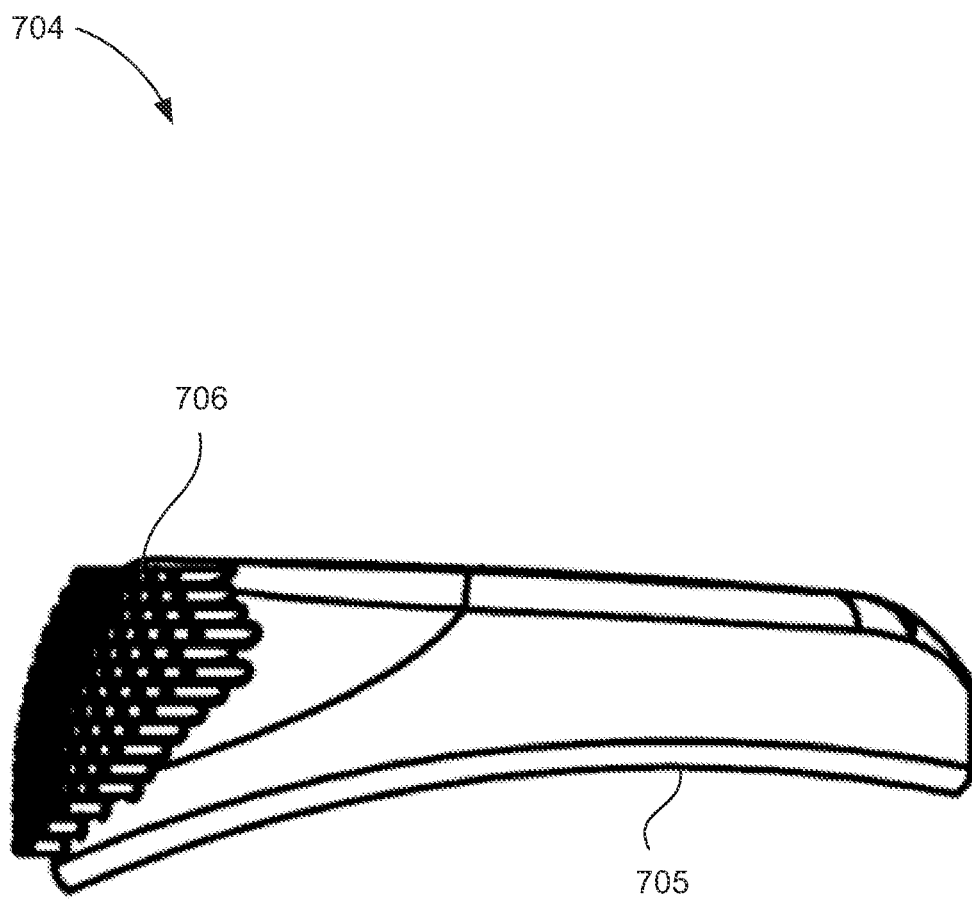


Fig. 7

DEVICE FOR INCORPORATING AN ACTIVE LAUNDRY INGREDIENT INTO A FABRIC

FIELD OF THE INVENTION

[0001] The present invention generally relates to a device for incorporating an active laundry ingredient into a fabric, and more particularly relates to a device having a number of irregularities that incorporate an active laundry ingredient to a fabric, the device being removably attached to a container closure.

BACKGROUND OF THE INVENTION

[0002] During usage, fabrics, such as clothing, become soiled from environmental agents, human secretions, or other elements. To cleanse the fabrics, an active laundry ingredient is used to remove, or assist in removing, the soil or other impurity from a fabric surface. For example, an active laundry ingredient is mixed with water and applied to a fabric surface in a washing machine. In some cases, a portion of a fabric surface may be more soiled and may necessitate more active laundry ingredient than is applied using a washing machine. In another example, an entire fabric surface may be more soiled and may necessitate more active laundry ingredient than is applied using a washing machine.

[0003] Accordingly, it is desirable to have a device to assist in providing an additional amount of active laundry ingredient to a portion of a fabric surface such as a portion that is more soiled than the rest of the fabric, or to provide an additional amount of active laundry ingredient to an entire fabric surface that is particularly soiled. Furthermore, other desirable features and characteristics of the present invention will become apparent from the subsequent detailed description of the invention and the appended claims, taken in conjunction with the accompanying drawings and this background of the invention.

BRIEF SUMMARY OF THE INVENTION

[0004] A device for incorporating an active laundry ingredient into a fabric includes a sleeve that is removably attached to a container closure. The sleeve includes an exterior surface, a number of irregularities extending outward from the exterior surface to incorporate the active laundry ingredient into the fabric, and an opening to removably attach the device to a container closure.

[0005] A system for incorporating an active laundry ingredient into a fabric includes a container to hold an amount of the active laundry ingredient, a closure to removably seal the container, and a device to incorporate the active laundry ingredient into the fabric. The device includes a number of irregularities extending outward from an exterior surface of the device and an opening to removably attach the device to the closure.

[0006] A device for incorporating an active laundry ingredient into a fabric includes a cylindrical sleeve that is removably attached to a container closure. The sleeve includes an exterior surface, a number of uniform irregularities extending outward from the exterior surface to incorporate the active laundry ingredient into the fabric, and an opening to removably attach the device to a container closure.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] The present invention will hereinafter be described in conjunction with the following drawing figures, wherein like numerals denote like elements, and

[0008] FIG. 1 is a front view of a system for incorporating an active laundry ingredient into a fabric, according to one example of the principles described herein.

[0009] FIG. 2 is an isometric view of a device for incorporating an active laundry ingredient into a fabric, according to one example of the principles described herein.

[0010] FIG. 3 is an isometric view of a device for incorporating an active laundry ingredient into a fabric, according to another example of the principles described herein.

[0011] FIG. 4 is a top view of a device for incorporating an active laundry ingredient into a fabric, according to one example of the principles described herein.

[0012] FIG. 5 is a top view of a device for incorporating an active laundry ingredient into a fabric, according to another example of the principles described herein.

[0013] FIG. 6 is a front view of a device for incorporating an active laundry ingredient into a fabric, according to one example of the principles described herein.

[0014] FIG. 7 is a side view of a device for incorporating an active laundry ingredient into a fabric, according to another example of the principles described herein.

DETAILED DESCRIPTION OF THE INVENTION

[0015] The following detailed description of the invention is merely exemplary in nature and is not intended to limit the invention or the application and uses of the invention. Furthermore, there is no intention to be bound by any theory presented in the preceding background of the invention or the following detailed description of the invention.

[0016] As described above, in some instances, a user may desire to “spot treat” a particularly soiled portion of a fabric surface, or “pre-treat” a fabric surface that is particularly soiled. In “spot treating” or “pre-treating,” a number of devices may be used to further incorporate an additional amount of active laundry ingredient into the fabric. These devices may include a mechanical assist, such as bristles, to work the active laundry ingredient into the fabric. However, such devices prove inconvenient for practical use. For example, in some examples, the mechanical assists may be integrally formed with the container. However, given the size of laundry containers, such an integrally-formed mechanical assist would be impractical due to the weight and size of laundry containers.

[0017] Moreover, other mechanical assist devices may be formed integrally with a container closure. A container closure referring to a device that closes the laundry container. Examples of such container closures include a cap that is screwed onto the laundry container. Mechanical assists that are integrally formed with a container closure are also impractical as their use indicates that the laundry container be left open during spot treatment or pre-treatment creating a possibility of spillage, or inadvertent contact with humans, such as children, or animals.

[0018] Still further, a mechanical assist device that is integrally formed with a container closure exhibits environmental complications. For example, the bristles of a mechanical assist device may be softer than the closure and therefore may be made out of a different material relative to the material for the closure. The mechanical assist device is then permanently

attached to the closure. As the closure and the mechanical assist are made from different materials, there are different recycling procedures for each material. However, as both are integral as a single component and cannot be separated, the entire closure/assist component may not be recyclable due to the different nature of the materials. Given the amount of laundry containers that are used each year, (totaling in the billions); this may result in millions of pounds of additional non-recyclable componentry being deposited in landfills.

[0019] Accordingly, the present specification describes a device that alleviates these and other complications. More specifically, the present specification describes a device that includes a sleeve that is separate from and removably attached to the container closure. The sleeve includes an exterior surface and a number of irregularities that extend from the exterior surface and are used to mechanically aggravate the fabric fibers to allow the active laundry ingredient to further penetrate and cleanse the fabric. The sleeve also contains an opening that allows the device to be removably attached to the container closure.

[0020] The device as described herein may be beneficial by providing irregularities that allow the active laundry ingredient to be mechanically worked into the fibers of the fabric to improve efficacy of the active laundry ingredient. This may result in a satisfactory consumer experience as more efficient results are obtained.

[0021] Moreover, as the device is separate from the container closure, the device may be used while the container remains sealed via the container closure. This allows a consumer to close the container following use, thus alleviating any complications such as spillage and human or animal interaction, during the pre-treatment process.

[0022] In some examples, the device of the present specification may be formed out of a single material. As it is made out of a single material, it can be easily recycled in a recycling operation for that material, thus contributing to the reuse of millions of pounds of plastic product.

[0023] As used in the present specification and in the appended claims, the term “irregularities” refers broadly to any mechanism used to incorporate, or mechanically work, an active laundry ingredient, into a fabric surface. Examples of such irregularities include bristles, blades, bumps, or other protrusions from the device.

[0024] Further, as used in the present specification and in the appended claims, the term “closure,” “container closure,” or similar terminology refers broadly to any mechanism used to temporarily close a container such as a laundry bottle. Examples of container closures include caps that affix via a twisting motion such as a screw-on cap, caps that attach via a friction fit, a snap fit, or any other closure that temporarily seals or closes the laundry container.

[0025] Still further, as used in the present specification and in the appended claims, the term “a number of” or similar language may include any positive number, including one to infinity; zero not being a number, but the absence of a number.

[0026] Turning now to the figures, FIG. 1 is a front view of a system (100) for incorporating an active laundry ingredient into a fabric, according to one example of the principles described herein. The system (100) may include a container (101) that holds an amount of an active laundry ingredient. The active laundry ingredient may include a number of components that remove dirt and other soiling or impure compounds from a fabric surface or that assists in removing dirt and other soiling or impure compounds from a fabric surface.

In some examples, the active laundry ingredient may be included with other components in a carrier. The container (101) may be formed of plastic or another suitable material that retains an amount of the active laundry ingredient. Accordingly, the plastic container (101) may be formed using any number of methods including blow molding, injection molding, and injection blow molding in addition to other forming operations. The container (101) may include a dispensing mechanism (102) to dispense the active laundry ingredient from the container (101). In one example the dispensing mechanism (102) may be a spout out of which the active laundry ingredient flows. In another example, the dispensing mechanism (102) may be a valve, the actuation of which allows the active laundry ingredient to flow out of the container (101).

[0027] The system (100) also includes a closure (103) that removably attaches to the container (101). In this fashion, the closure (103) removably seals the container (101), such that the active laundry ingredient isn't unnecessarily exposed or spilled. The closure (103) may removably attach to the container (101) using any number of mechanisms. For example, the closure (103) may have threads on a bottom surface that interact with corresponding threads on the container (101) such that the closure may be attached to the container (101) via a threading operation. In another example, the closure (103) may have a bead around an inside diameter of the closure (103) that fits into a corresponding groove in the container (101) such that a user may press the closure (103) onto the container (101). While reference is made to specific mechanisms for attaching the closure (103) to the container (101) any number of mechanisms may be used to removably attach the closure (103) to the container (101). In some examples, the closure (103) includes a dosing mechanism. For example, the closure (103) may be a hollow enclosure that allows an amount of the active laundry ingredient to be poured into the closure (103).

[0028] The system (100) also include a device (104) to incorporate the active laundry ingredient into the fabric. As will be described in more detail below, the device (104) may include a number of irregularities that extend outward from an exterior surface of the device (104). A user positions these irregularities against a fabric surface and via hand movement, agitates the fabric fibers such that the active laundry ingredient is further incorporated into the soiled fabric to remove or dislodge soil particles.

[0029] The device (104) includes an opening to removably attach the device (104) to the closure (103). For example, the opening of the device (104) may be of such a diameter or dimension as to snugly affix, via friction, to the top of the closure (103), which as described above may be removably attached to the container (101). The placement of the device (104) on the closure (103) may be beneficial in that it allows the closure (103) to be in place on the container (101) and preventing spillage or unintended contact with the active laundry ingredient in the container (101), while a portion of the active laundry ingredient is being worked into a fabric surface via the device (104). Moreover, the attachment mechanism of the device (104) to the closure (103) may be such that the device (104) is securely retained on the closure (103) when not in use. Examples of such attachment mechanisms include corresponding threads on the device (104) and the closure (103), a friction-type fit, a bead and race on the device (104) and closure (103) respectively, among other type of attachment mechanisms. In all its forms, the attachment

mechanism may facilitate easy removal of the device (104) by the consumer and easy attachment of the device (104) to the closure (103).

[0030] In some examples, the device (104), when attached to the closure (103) is oriented so as to protect the device (103) during deployment through the distribution chain or to provide visual cues relative to consumer education.

[0031] In some examples, the device (104) is made of a different material than the closure (103). For example, the closure (103) may be made of a first material that has a first durometer, or softness, value. In this example, the device (104) is made of a second material that has a second, and softer, durometer value. As described above, mechanical assist devices may be integrally formed with the closure (103). Doing so may indicate that the irregularities and the closure (103) have the same durometer, or other, properties. This may be inefficient as the properties of the closure (103) may be such that the material is not effective as an irregularity to cleanse a fabric surface. Accordingly, a device (104) that is separate from the closure (103) and made of a softer material, may allow the closure (103) to be designed to act as a seal and dosing mechanism and a material selected appropriately, while the device (104) may be made of a softer material that is more conducive to aggravation of fabric fibers. In other words, the separate device (104) and closure (103) allows for a more customizable system (100) with a closure (103) material selected based on certain selection criteria and the device (104) material selected based on separate and distinct selection criteria.

[0032] A device (104) that is separate and removably attached to the closure (103) is beneficial in that it allows for mechanical aggravation of the fiber fabrics while simultaneously allowing the closure (103) to seal the container (101), thus preventing spillage or undesirable contact with the active laundry ingredient.

[0033] The system (100) may also include a temporary attachment mechanism to secure the device (104) to the system (100) throughout the distribution cycle, such as an adhesive strip and an adhesive compound among other temporary attachment mechanisms.

[0034] FIG. 2 is an isometric view of a device (204) for incorporating an active laundry ingredient into a fabric, according to one example of the principles described herein. The device (204) includes a sleeve (205) that is removably attached to a closure (FIG. 1, 103). As depicted in FIG. 2, the sleeve (205) may be cylindrical in shape. However, in some examples, the sleeve (205) is another shape that would match the closure (FIG. 1, 103) and would therefore allow for affixation of the device (204) to the closure (FIG. 1, 103) surface.

[0035] The sleeve (205) includes an exterior surface and a number of irregularities (206) extending outward from the exterior surface. The irregularities (206) are used to incorporate the active laundry ingredient into the fabric. For simplicity, a single reference number is used to identify an irregularity (206). The irregularities (206) are any device that mechanically aggravates the fabric fibers. For example, an irregularity (206) may be a bristle, a bump, a blade or any other texture or protrusion to mechanically aggravate the fabric fibers.

[0036] As indicated in FIG. 2, the number of irregularities (206) may extend outward from a top portion of the exterior surface of the sleeve (205). However, the number of irregularities (206) may extend outward from another surface, such as the side surface as depicted in FIG. 3. Similarly, as depicted

in FIG. 2, the number of irregularities (206) may extend perpendicular to the top surface of the sleeve (205). For example, an axis of the irregularities (206) may be parallel with a radial axis of the sleeve (205). In some examples, the irregularities (206) may extend at an angle relative to the top portion of the exterior surface of the sleeve (205).

[0037] The irregularities (206) may cover any portion of the top surface of the sleeve (205). For example, as depicted in FIG. 2, the irregularities (206) may cover a portion that is less than the entire top surface of the sleeve (205). In another example, the irregularities (206) may cover the entirety of the top surface of the sleeve (205). The number of irregularities (206) may include any number or pattern of individual irregularities (206) disposed on the sleeve (205).

[0038] In some examples, the properties of the irregularities (206) may be selected based on a number of criteria including a fabric type and a treatment level among other criteria. Examples of such properties include a durometer, or softness of the irregularities (206). The durometer of the irregularities (206) defines how an irregularity (206) bends in response to a force. Another example of a property includes a coefficient of friction of the irregularity (206). The coefficient of friction of an irregularity (206) may indicate a frictional force applied on a fabric fiber by the irregularity (206). In yet another example, a profile of the irregularity (206) may be selected based on one of the criteria. A profile of an irregularity (206) may refer to the cross-sectional shape, size, and overall dimension of an irregularity (206). In yet another example, the quantity of irregularities (206) disposed on a sleeve (205) may be selected based on the fabric type or treatment level.

[0039] An example of different irregularity (206) properties selected based on a number of criteria is described below. In this example, a more delicate fabric may prescribe a gentler agitation. Accordingly, a system (FIG. 1, 100) could include a device (204) that is designed to facilitate the gentler agitation. This device (204) may include fewer irregularities (206) that have a smaller cross-sectional area and that are formed out of a softer material so as to not damage the delicate fabric. By comparison, a durable fabric that is likely to be substantially soiled may justify a more intense agitation. In this example, the system (FIG. 1, 100) could include a device (204) that is designed to facilitate the intense agitation. In this example, the device (204) may include more irregularities (206) that are more tightly-packed and that are made out of a harder material to facilitate a more thorough and harsh agitation cycle. In some examples, the device (204) may include markings indicating the type, or properties of the irregularities (206) and the corresponding agitation properties of the irregularities (206).

[0040] In some examples, the irregularities (206) may be uniform, meaning the irregularities (206) have similar properties such as shape, cross-sectional area, durometer value, and coefficient of friction values, among other properties. Including irregularities (206) that are uniform may be beneficial in that it simplifies the manufacturing process.

[0041] Returning to the sleeve (205), in some examples, the sleeve (205) and the irregularities (206) may be made of a single material. For example, the sleeve (205) and irregularities (206) may be made of the same plastic material. As described above, in other mechanical assist devices, the irregularities are formed of a different material than the closure to which they are integrally-formed. Doing so reduces the ability of simple recycling of the closure and also lends to

a complicated manufacturing process as the two different materials (i.e., of the closure and the irregularities) are formed distinctly, and then joined together. Accordingly, a sleeve (205) and irregularity (206) that are formed of the same material allow the sleeve (205) to be recycled and also simplify the manufacturing process by alleviating multiple operations to form parts of different materials.

[0042] The sleeve (205) may also include an ergonomic feature (207) to allow proper alignment of the number of irregularities (206) with the fabric. For example, an ergonomic feature (207) may include an indentation for a thumb or other digit in such a way as to facilitate proper alignment of the irregularities (206) in relation to the fabric being treated. Other examples of ergonomic features (207) include bumps or other protrusions.

[0043] An example of the use of the device (204) is provided below. In this example, a user may pre-measure a dose of the active laundry ingredient using the closure (FIG. 1, 103) as a dosing mechanism. From that dosage amount, or from a separately obtained amount, a portion of the active laundry ingredient may be poured onto a particular area of the fabric that is to be “spot treated.” The remainder of the dosage may then be introduced into the wash liquor. The container (FIG. 1, 101) may then be closed via the closure (FIG. 1, 103). A user may then grip the device (204) using the ergonomic feature (207) to properly position the irregularities (206) against the fabric to be treated. The user may then move the device (204) to mechanically aggravate via the irregularities (206), the fabric fibers without damaging the fabric. The aggravation of the fibers may allow the active laundry ingredient to further penetrate into the fabric fibers to remove or dislodge soil particles or other impurities. The device (204) may then be hygienically cleaned by rinsing the device (204) under the fill water of a washing machine or by depositing the device (204) in with the wash load.

[0044] As described above, a separate and removably attachable device (204) may be beneficial by allowing for “spot treating” or “pre-treating” of fabric while a container (FIG. 1, 101) of the active laundry ingredient is maintained closed.

[0045] FIG. 3 is an isometric view of a device (304) for incorporating an active laundry ingredient into a fabric, according to another example of the principles described herein. As described above in connection with FIG. 2, the device (304) includes a sleeve (305) that is removably attached to a closure (FIG. 1, 103). The sleeve (305) may be any shape that would match the closure (FIG. 1, 103) and would therefore allow for affixation of the device (304) to the closure (FIG. 1, 103) surface.

[0046] The sleeve (305) includes an exterior surface and a number of irregularities (306) extending outward from the exterior surface. The irregularities (206) are used to incorporate the active laundry ingredient into the fabric. For simplicity, a single reference number is used to identify an irregularity (306). As described above, the irregularities (306) may be any device that mechanically aggravates the fabric fibers. For example, an irregularity (306) may be a bristle, a bump, a blade or any other texture or protrusion to mechanically aggravate the fabric fibers. As indicated in FIG. 3, the number of irregularities (306) may extend outward from a side portion of the exterior surface of the sleeve (305). In other words, the irregularities (306) may extend about a circumference of the sleeve (305). Similarly, as depicted in FIG. 3, the number of irregularities (206) may extend perpendicular to the side sur-

face of the sleeve (305). For example, an axis of the irregularities (306) may be perpendicular to a radial axis of the sleeve (305). In some examples, the irregularities (306) may extend at an angle relative to the circumference of the exterior surface of the sleeve (305).

[0047] The irregularities (306) may cover any portion of the side surface of the sleeve (305). For example, as depicted in FIG. 3, the irregularities (306) may cover a portion that is less than the entire side surface of the sleeve (305). In another example, the irregularities (306) may cover the entirety of the circumference of the sleeve (305). The number of irregularities (306) may include any number or pattern of individual irregularities (306) disposed on the sleeve (305).

[0048] As described above, the properties of the irregularities (306) may be selected based on a number of criteria including a fabric type and a treatment level among other criteria. In some examples, the irregularities (306) may be uniform, meaning the irregularities (306) have similar properties such as shape, cross-sectional area, durometer value, and coefficient of friction values, among other properties. Including irregularities (306) that are uniform may be beneficial in that it simplifies the manufacturing process.

[0049] Returning to the sleeve (305), in some examples, the sleeve (305) and the irregularities (306) may be made of a single material. A sleeve (305) and irregularity (306) that are formed of the same material allow the sleeve (305) to be recycled and also simplify the manufacturing process by alleviating multiple operations to form parts of different materials.

[0050] The sleeve (305) may also include an ergonomic feature (307) to allow proper alignment of the number of irregularities (306) with the fabric. For example, an ergonomic feature (307) may include an indentation for a thumb or other digit in such a way as to facilitate proper alignment of the irregularities (307) in relation to the fabric being treated. Other examples of ergonomic features (307) include bumps or other protrusions.

[0051] As described above, a separate and removably attachable device (304) may be beneficial by allowing for “spot treating” or “pre-treating” of fabric while a container (FIG. 1, 101) of the active laundry ingredient is maintained closed.

[0052] FIG. 4 is a top view of a device (404) for incorporating an active laundry ingredient into a fabric, according to one example of the principles described herein. More specifically, FIG. 4 depicts a device (404) having irregularities (406) that extend from a top surface of the sleeve (405). As described above, in some examples, the number of irregularities (406) may be positioned on a top surface of the sleeve (405). More specifically, the irregularities (406) may extend from a portion of the top surface of the sleeve (405). While FIG. 4 depicts the irregularities (406) in a particular pattern that covers a portion of the top surface of the sleeve (405) the irregularities (406) may cover any portion of the top surface, for example, the entire top surface, in any pattern or arrangement. FIG. 4 also depicts the ergonomic feature (407) used to properly align the irregularities (406) with a surface of the fabric to be treated.

[0053] FIG. 5 is a top view of a device (504) for incorporating an active laundry ingredient into a fabric, according to another example of the principles described herein. More specifically, FIG. 5 depicts a device (504) having irregularities (506) that extend from a side surface, or circumference of the sleeve (505). As described above, in some examples, the

number of irregularities (506) may extend from a side surface of the sleeve (505). More specifically, the irregularities (506) may extend from a portion of the side surface of the sleeve (505). While FIG. 5 depicts the irregularities (506) in a particular pattern that covers a portion of the side surface of the sleeve (505) the irregularities (506) may cover any portion of the side surface, for example, the entire side surface, in any pattern or arrangement. FIG. 5 also depicts the ergonomic feature (507) used to properly align the irregularities (506) with a surface of the fabric to be treated.

[0054] FIG. 6 is a front view of a device (604) for incorporating an active laundry ingredient into a fabric, according to one example of the principles described herein. More specifically, FIG. 6 depicts a device (604) having irregularities (606) that extend from a top surface of the sleeve (605). As described above, in some examples, the number of irregularities (606) may be positioned on a top surface of the sleeve (605). More specifically, the irregularities (606) may extend from a portion of the top surface of the sleeve (605). While FIG. 6 depicts the irregularities (606) in a particular pattern that covers a portion of the top surface of the sleeve (605) the irregularities (606) may cover any portion of the top surface, for example, the entire top surface, in any pattern or arrangement. FIG. 6 also depicts the ergonomic feature (607) used to properly align the irregularities (606) with a surface of the fabric to be treated.

[0055] FIG. 7 is a side view of a device (704) for incorporating an active laundry ingredient into a fabric, according to one example of the principles described herein. More specifically, FIG. 7 depicts a device (704) having irregularities (706) that extend from a side surface, or circumference of the sleeve (705). As described above, in some examples, the number of irregularities (706) may be positioned on a side surface of the sleeve (705). More specifically, the irregularities (706) may extend from a portion of the side surface of the sleeve (705). While FIG. 7 depicts the irregularities (706) in a particular pattern that covers a portion of the top surface of the sleeve (705) the irregularities (706) may cover any portion of the top surface, for example, the entire top surface, in any pattern or arrangement.

[0056] While at least one exemplary embodiment has been presented in the foregoing detailed description of the invention, it should be appreciated that a vast number of variations exist. It should also be appreciated that the exemplary embodiment or exemplary embodiments are only examples, and are not intended to limit the scope, applicability, or configuration of the invention in any way. Rather, the foregoing detailed description will provide those skilled in the art with a convenient road map for implementing an exemplary embodiment of the invention, it being understood that various changes may be made in the function and arrangement of elements described in an exemplary embodiment without departing from the scope of the invention as set forth in the appended claims and their legal equivalents.

What is claimed is:

1. A device for incorporating an active laundry ingredient into a fabric, the device comprising:

- a sleeve that is removably attached to a container closure, the sleeve comprising:
 - an exterior surface;
 - a number of irregularities extending outward from the exterior surface to incorporate the active laundry ingredient into the fabric; and

an opening to removably attach the device to a container closure.

2. The device of claim 1, in which the number of irregularities extend outward from a top portion of the exterior surface of the sleeve.

3. The device of claim 1, in which the number of irregularities extend outward from a side portion of the exterior surface of the sleeve.

4. The device of claim 1, in which the sleeve is cylindrical in shape.

5. The device of claim 1, further comprising an ergonomic feature to allow proper alignment of the number of irregularities with the fabric.

6. The device of claim 1, in which the sleeve is made from a single material.

7. The device of claim 1, in which a durometer of the number of irregularities are selected based on a fabric type, a treatment level, or combinations thereof.

8. The device of claim 1, in which a profile of the number of irregularities is selected based on a fabric type, a treatment level, or combinations thereof.

9. The device of claim 1, in which a quantity of the number of irregularities is selected based on a fabric type, a treatment level, or combinations thereof.

10. A system for incorporating an active laundry ingredient into a fabric, the system comprising:

- a container to hold an amount of the active laundry ingredient;
- a closure to removably seal the container; and
- a device to incorporate the active laundry ingredient into the fabric, the device comprising:
 - a number of irregularities extending outward from an exterior surface of the device; and
 - an opening to removably attach the device to the closure.

11. The system of claim 10, in which the number of irregularities extend outward from a top portion of the exterior surface of the sleeve.

12. The system of claim 10, in which the number of irregularities extend outward from a side portion of the exterior surface of the sleeve.

13. The system of claim 10, in which the sleeve is made from a different material than the closure.

14. The system of claim 13, in which the sleeve is made from a material having a lower durometer than a material used to make the closure.

15. The system of claim 10, in which the sleeve further comprises an attachment mechanism to removably attach the device to the closure.

16. A device for incorporating an active laundry ingredient into a fabric, the device comprising:

- a cylindrical sleeve that is removably attached to a container closure, the sleeve comprising:
 - an exterior surface;
 - a number of uniform irregularities extending outward from the exterior surface to incorporate the active laundry ingredient into the fabric; and
 - an opening to removably attach the device to a container closure.

17. The device of claim 16, in which the number of uniform irregularities extend outward at an angle relative to the exterior surface of the sleeve.

18. The device of claim 16, in which the number of uniform irregularities extend perpendicular to the exterior surface of the sleeve.

19. The device of claim **16**, in which the number of irregularities extend outward from a top portion of the exterior surface of the sleeve.

20. The device of claim **16**, in which the number of irregularities extend outward from a side portion of the exterior surface of the sleeve.

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