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(54) **SINK SPRAY SCRUBBER**

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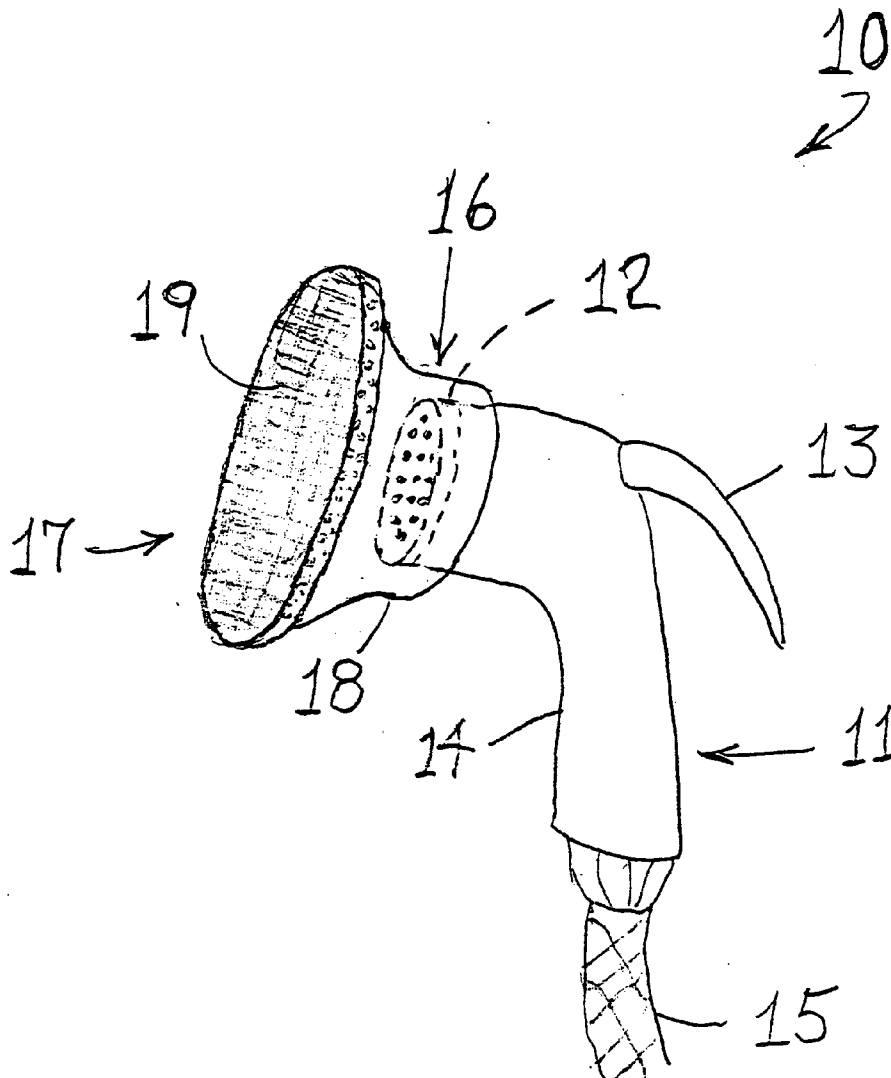
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ABSTRACT

A scrubber readily attachable to and detachable from the nozzle of a sink sprayer is capable of utilizing a variety of scrubbing implements. Scrubbing implements may be attached directly to the sprayer nozzle by an elastic sleeve or collar and disposed of after a number of uses. Alternatively, different scrubbing implements may be interchanged by connecting them to an attachment element which remains affixed to the sprayer nozzle.

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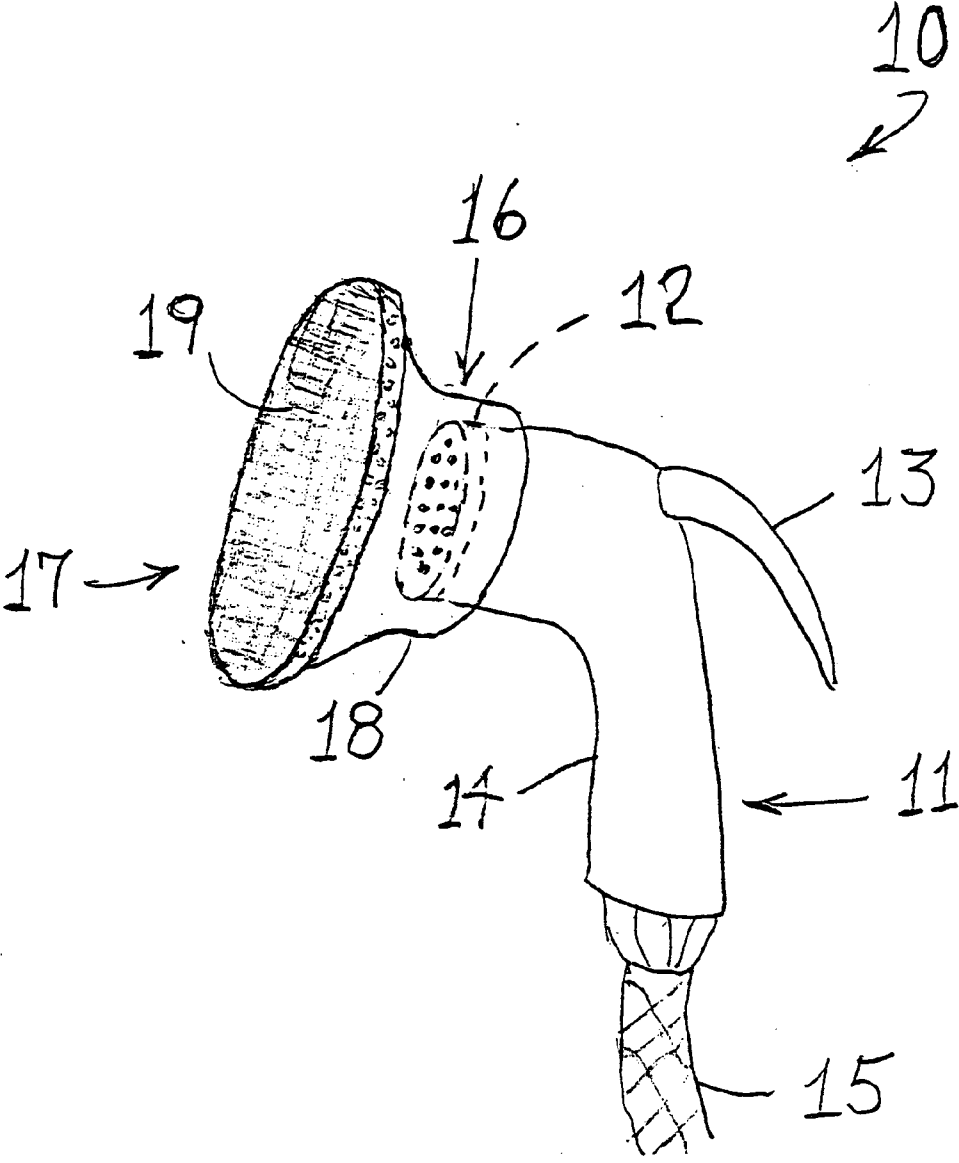


Fig. 1

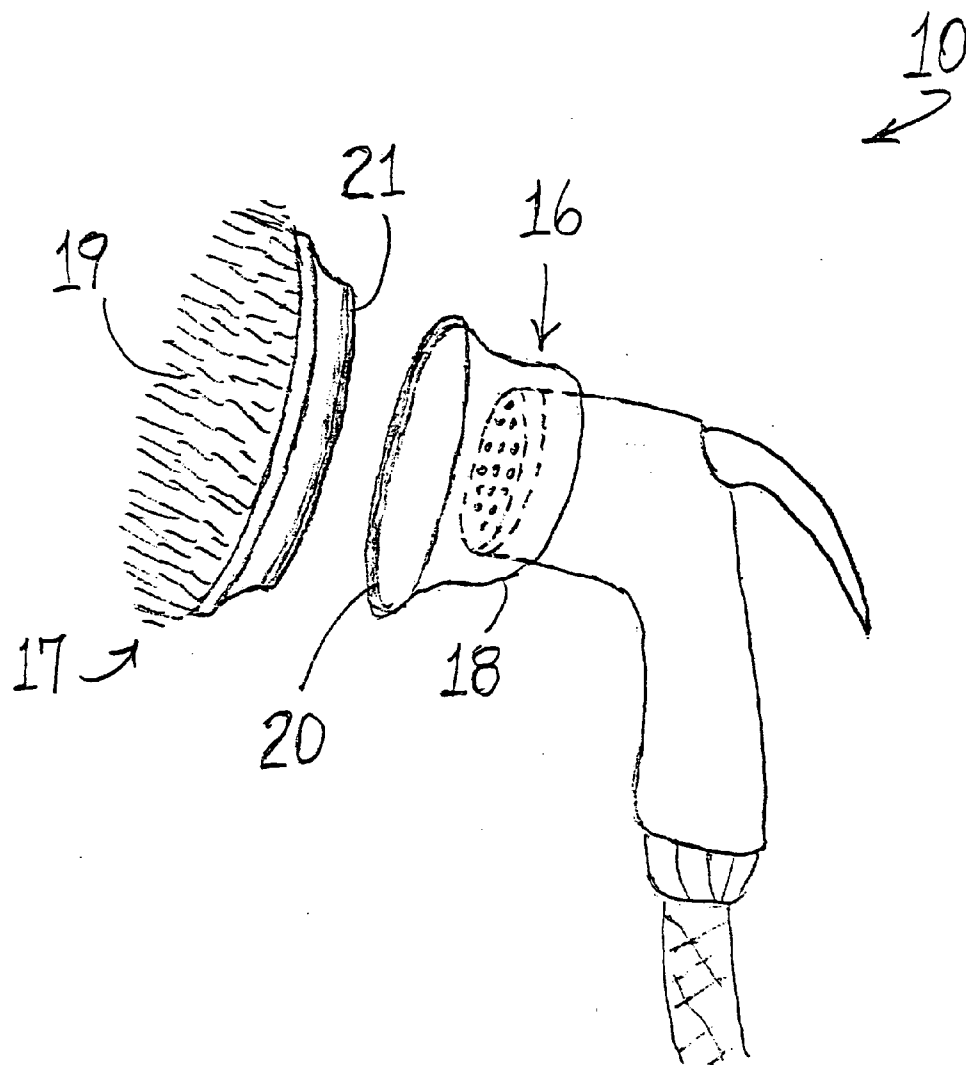


Fig. 2

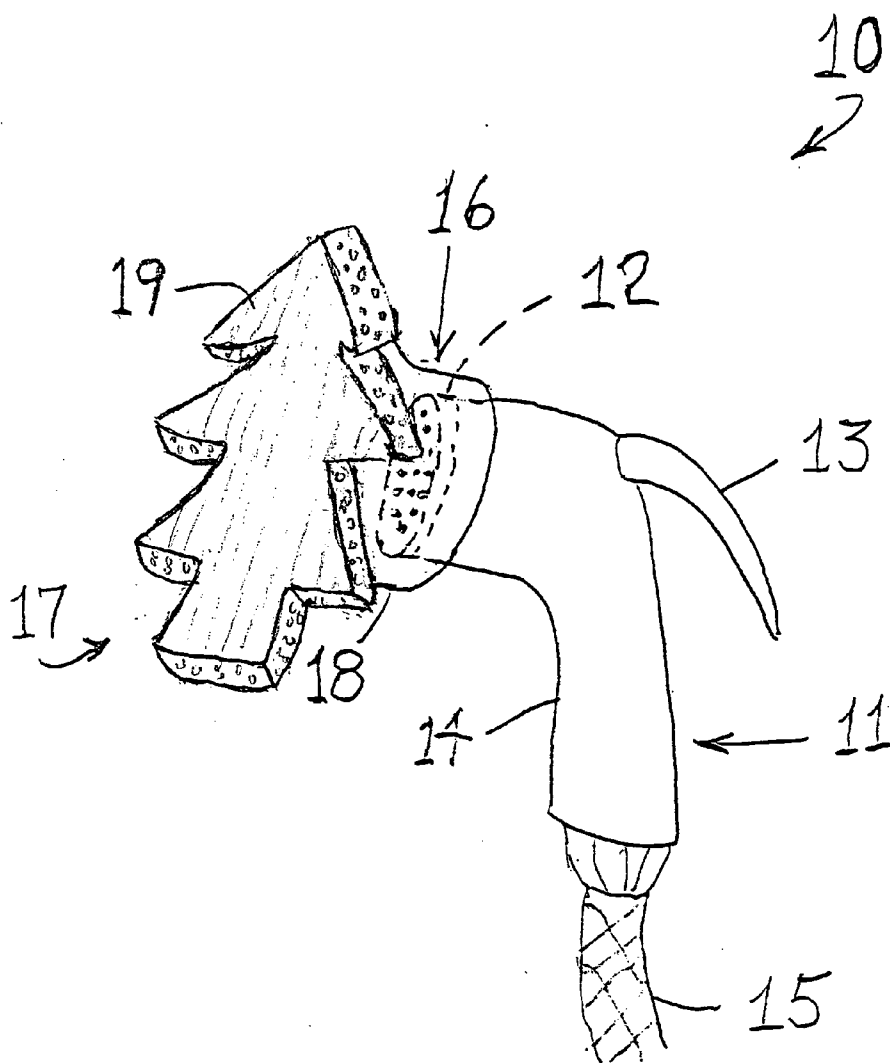


Fig. 3

SINK SPRAY SCRUBBER

BACKGROUND OF THE INVENTION

[0001] Many modern kitchen sinks are equipped with sprayers, which are typically used for washing and/or rinsing food items, cookware, dishware, cutlery and assorted eating/cooking utensils. Such sink sprayers have the advantage of producing a more concentrated and pressurized stream of water, which is useful in dislodging waste matter from the object being washed/rinsed. Since the typical sink sprayer features an extendable flexible hose, the concentrated spray can also be directed toward the object, and the spray nozzle can be brought close to the surface of the object, thereby enhancing the cleansing effect.

[0002] A major disadvantage of the standard sink sprayer, however, is its lack of scrubbing capability. Consequently, the user is often compelled to utilize a separate scrubbing implement, such as a brush, a sponge, a washcloth, a scraper or steel wool, in conjunction with the sink sprayer to achieve satisfactory hygienic cleansing of an object. Moreover, since the sink sprayer occupies one of the user's hands, it is often awkward or impracticable for the user to simultaneously hold the object and scrub it with his/her other hand. As a result, the user is often forced to set aside the sink sprayer while scrubbing an object and to follow a time-consuming and inefficient procedure of alternating between the scrubbing and spraying operations.

[0003] The prior art has attempted to deal with this shortcoming by creating various types of attachments to fit on or over the standard sink sprayer. One of the most sophisticated examples of such attachments is described in Robert, U.S. Pat. No. 6,035,477, in which the scrubber element is attached to a hollow scrubber body which fits over and substantially surrounds the sink sprayer. While the Robert design has the advantage of being adaptable to a number of special features, such as a rotating scrubber element and an internal soap dispenser, it also has several disadvantages.

[0004] Adding a scrubber body over the sink sprayer makes it bulkier and less readily manipulatable, thereby diminishing one of the practical features of the standard sink sprayer. A scrubber body design of the type taught by the Robert patent also does not provide a means for quickly replacing one type of scrubber element with another. This can be a serious drawback, since the typical user can be expected to proceed during the preparation of a meal from rinsing off a potato using a brush scrubber, to washing a dish using a sponge scrubber, to scouring a pot using a steel wool scrubber.

[0005] Another disadvantage of the scrubber body design disclosed by the Robert patent is its attendant constraint of the size and shape of the scrubber element that can be utilized. Since the scrubber element must fit into a pre-configured receptacle in the scrubber body, it must conform to a limited range of shapes and sizes. This can be quite inconvenient to the user who needs both a small, angular scrubbing implement to reach into the corners of a cooking pan, as well as a larger, rounded scrubbing implement to clean the inside of a glass or bottle.

[0006] Another deficiency in the prior art relates to the dispensing of soap during the scrubbing operation. While the Robert patent describes two alternate embodiments of the

scrubber body having internal soap dispensers, in both cases the release of soap requires the operator to depress a button. Since the standard sink sprayer requires constant hand pressure on an actuating arm/handle to maintain the flow of water, the simultaneous operation of a button-activated soap dispenser is problematic and can be expected to frequently result in an interruption of the water spray during the release of soap.

[0007] The prior art in the field of sink sprayer attachments, therefore, does not adequately address the need for attachments which: (a) do not significantly add to the bulk of the sprayer, (b) are easily attachable and detachable, enabling the user to switch quickly from one type of scrubbing implement to another, (c) can accommodate a wide variety of scrubber shapes and sizes, and (d) can deploy soap or detergent to the cleansing surface without manual actuation.

SUMMARY OF THE INVENTION

[0008] The current invention distinguishes itself from the prior art by providing a wide and varied assortment of inexpensive, compact, lightweight, disposable scrubbers which are designed to slip easily onto and off the nozzle of a sink sprayer. Each scrubber consists of an attachment element and a scrubbing element.

[0009] The attachment element comprises an attaching means for fastening the scrubber to the nozzle of the sink sprayer in a secure and water-tight manner. The attaching means comprises an expandable sleeve or collar, fabricated of an elastic plastic or rubber material, which is sized to slip over the nozzle of a sink sprayer and to form a water-tight seal between the sprayer and the scrubbing element. The elasticity of the attaching means enables the scrubber to be readily attached and removed from the sprayer, thus allowing the user to quickly switch between different types of scrubbers best suited for various objects being washed. The attachment element may be integrated as a single unit with the scrubbing element, or it may be a separate unit into which the scrubbing element is designed to insert, snap or screw. In the latter embodiment, the attachment element comprises, in addition to the attaching means, a first connecting means for fastening it to the scrubbing element.

[0010] The scrubbing element comprises a scrubbing implement, which may be a sponge, a bristle brush, a steel wool pad, or a plastic scraper consisting of one or more scraping blades. The scrubbing element may be integrated as a single unit with the attachment element, or it may be a separate unit which inserts, snaps or screws into the attachment element. In the latter embodiment, the scrubbing element comprises, in addition to the scrubbing implement, a second connecting means for fastening it to the attachment element.

[0011] The scrubbing element can incorporate a virtually unlimited assortment of scrubbing implements having a wide variety of shapes and sizes. Some of the shapes may be functional, i.e., designed for specific washing chores such as bottles, cooking stones, pans, etc. Other scrubbing implements may incorporate ornamental designs, such as a star or a face. Such ornamental designs can be related to seasonal themes, such as a snowman or a pumpkin.

[0012] In one alternate embodiment, the scrubbing implement is pre-impregnated with soap or dish detergent, thereby

enabling the user to apply a cleansing agent to the object being washed without having to interrupt the water spray. In another alternate embodiment, the scrubbing implement contains one or more perforations enabling one or more high pressure concentrated streams of water to pass from the sprayer nozzle directly through to the surface being washed. The latter embodiment provides more effective cleaning where greater water pressure is needed, such as, for example, in dislodging baked-on grease.

[0013] The present invention, therefore, fulfills the need for a simple, inexpensive, compact, lightweight scrubber attachment which is readily attachable and detachable from the sink sprayer and can accommodate a wide variety of scrubbing implements. The option of pre-impregnating the scrubbing implements with soap or detergent affords the added advantage of enabling the user to wash, scrub and apply cleanser in a single manual operation.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] FIG. 1 is a side perspective view of a single-component scrubber attached to a sink sprayer, the nozzle of which is shown in ghost view.

[0015] FIG. 2 is a side perspective view of a dual-component scrubber attached to a sink sprayer, the nozzle of which is shown in ghost view.

[0016] FIG. 3 is a side perspective view of a single-component scrubber with an ornamental scrubbing implement.

DESCRIPTION OF THE INVENTION

[0017] FIG. 1 and FIG. 2 depict a single-component embodiment and a dual-component embodiment of the present invention 10, respectively. Referring to FIG. 1, a sink spray scrubber having the features of the present invention 10 attaches to a standard sink sprayer 11, which comprises a nozzle 12, an actuating arm 13, a handle 14, and a hose 15.

[0018] The sink spray scrubber 10 consists of an attachment element 16 and a scrubbing element 17. The attachment element 16 comprises an attaching means 18 for fastening the scrubber 10 to the nozzle 12 in a secure and water-tight manner. The attaching means 18 comprises an expandable sleeve or collar, fabricated of an elastic plastic or rubber material, which is sized to slip over the nozzle 12 and form a water-tight seal between the nozzle 12 and the scrubbing element 17.

[0019] In the single-component embodiment of the present invention 10, as depicted in FIG. 1, the attachment element 16 is integrated as a single unit with the scrubbing element 17. In this embodiment, the entire scrubber 10 is slipped onto and off the sink sprayer 11 as one unit.

[0020] The scrubbing element 17 comprises a scrubbing implement 19, which may be a sponge, as depicted in FIG. 1, or a bristle brush, as depicted in FIG. 2, or any other such implement, such as a steel wool pad or a scraper (not shown). The scrubbing element 17 can incorporate a broad assortment of scrubbing implements 19 having a great variety of shapes and sizes, some of which may be strictly functional, others strictly ornamental, and still others combining ornamental and functional features, as depicted in FIG. 3.

[0021] In the single-component embodiment 10 depicted in FIG. 1, the scrubbing element 17 is integrated as a single unit with the attachment element 16. In this embodiment, the user must detach the entire scrubber 10 from the nozzle 12 in order to use a different type of scrubbing implement 19.

[0022] In the dual-component embodiment 10 depicted in FIG. 2, the scrubbing element 17 is detachable from the attachment element 16. In this embodiment, the attachment element 16 comprises, in addition to the attaching means 18, a first connecting means 20, by which it may be fastened to the scrubbing element 17. Similarly, the scrubbing element 17 comprises, in addition to the scrubbing implement 19, a second connecting means 21, which functions with the first connecting means 20 to seal the scrubbing element 17 and the attachment element 16 together in a water-tight fashion. The first and second connecting means, 20 and 21, may consist of screw-type threading, as depicted in FIG. 2, or any other type of connecting junction capable of forming a water-tight seal.

[0023] The dual-component embodiment has the advantage of allowing the user to switch scrubbing implements 19 without detaching the entire scrubber 10 from the nozzle 12. The user may leave the attachment element 16 on the nozzle 12 and simply detach the scrubber element 17 from the attachment element 16 and insert a different scrubber element 17 in its place. Thus the dual-component embodiment facilitates the switching of scrubbing implements 19 to accommodate different cleaning needs.

[0024] In either of the foregoing embodiments, the scrubbing implement 19 may be pre-impregnated with soap or dish detergent, thereby enabling the user to apply a cleansing agent to the object being washed without having to interrupt the water spray. In another option applicable to either embodiment, the scrubbing implement 19 may contain one or more perforations enabling one or more high pressure concentrated streams of water to pass from the nozzle 12 directly through to the surface being washed. The latter feature provides more effective cleaning where greater water pressure is needed, such as, for example, in dislodging baked-on grease.

[0025] While the present invention has been described in some detail with reference to certain currently preferred embodiments, other embodiments are feasible and will readily suggest themselves to those skilled in the art. Therefore, the spirit and scope of the appended claims are not limited to the description of the preferred embodiments contained herein.

1. A scrubber attachable to a nozzle of a sink sprayer, said scrubber comprising:

- (a) an attachment element comprising an attachment means for fastening the scrubber to the sink sprayer nozzle, which attachment means comprises an expandable elastic sleeve sized to slip over the sink sprayer nozzle in a secure and water-tight manner; and
- (b) a scrubbing element integrally joined to the front of the attachment element, said scrubbing element comprising a scrubbing implement, through which water spray from the sink sprayer nozzle passes, and whereby an object is washed by the combined actions of the scrubbing implement and the water spray on the surface of the object.

2. The scrubber according to claim 1, wherein the scrubbing implement is pre-impregnated with a cleansing agent, such as soap or dish detergent.

3. The scrubber according to claim 1, wherein the scrubbing implement contains one or more perforations enabling one or more high pressure streams of water to pass from the sink sprayer nozzle directly to the surface of the object being washed.

4. The scrubber according to claim 2, wherein the scrubbing implement contains one or more perforations enabling one or more high pressure streams of water to pass from the sink sprayer nozzle directly to the surface of the object being washed.

5. The scrubber according to any of claims 1 through 4, wherein the scrubbing implement incorporates an ornamental design.

6. The scrubber according to any of claims 1 through 4, wherein the scrubbing implement is designed for a specific cleaning application, insofar as it is sized and/or configured to clean optimally a particular type of object.

7. The scrubber according to claim 5, wherein the scrubber is disposable, thereby enabling the user to switch readily between assorted scrubbing implements designed for different cleaning applications.

8. A scrubber attachable to a nozzle of a sink sprayer, said scrubber comprising:

(a) an attachment element comprising, (i) an attachment means for fastening the scrubber to the sink sprayer nozzle, which attachment means comprises an expandable elastic sleeve sized to slip over the sink sprayer nozzle in a secure and water-tight manner, and (ii) an open end opposite the attachment means, said open end containing a first connecting means;

(b) a scrubbing element connectible to the attachment element through a second connecting means which fits

into or over the first connecting means so as to form a water-tight seal, said scrubbing element comprising a scrubbing implement, through which water spray from the sink sprayer nozzle passes, and whereby an object is washed by the combined actions of the scrubbing implement and the water spray on the surface of the object.

9. The scrubber according to claim 8, wherein the scrubbing implement is pre-impregnated with a cleansing agent, soap or dish detergent.

10. The scrubber according to claim 8, wherein the scrubbing implement contains one or more perforations enabling one or more high pressure sprays of water to pass from the sink sprayer nozzle directly to the surface of the object being washed.

11. The scrubber according to claim 9, wherein the scrubbing implement contains one or more perforations enabling one or more high pressure sprays of water to pass from the sink sprayer nozzle directly to the surface of the object being washed.

12. The scrubber according to any of claims 8 through 11, wherein the scrubbing implement incorporates an ornamental design.

13. The scrubber according to any of claims 8 through 11, wherein the scrubbing implement is designed for a specific cleaning application, insofar as it is sized and/or configured to clean optimally a particular type of object.

14. The scrubber according to claim 13, wherein the scrubber is disposable, thereby enabling the user to switch readily between assorted scrubbing implements designed for different cleaning applications.

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