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A. GRÜRING
COMBINATION BRUSH AND COMB

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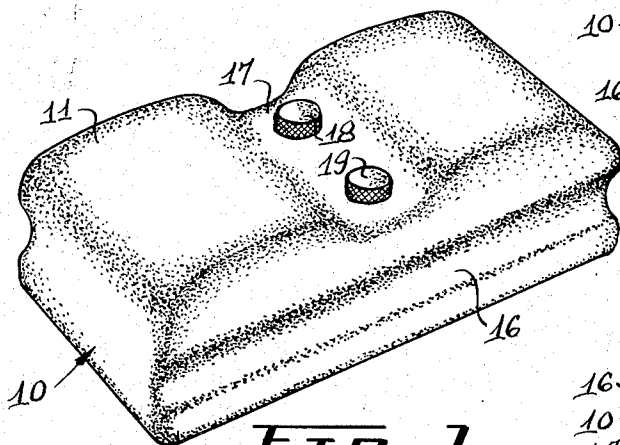


Fig. 1

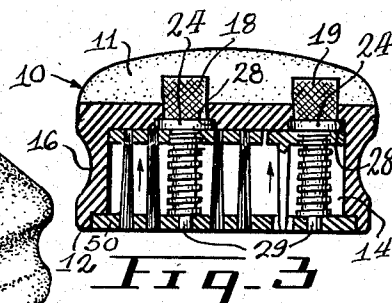


Fig. 3

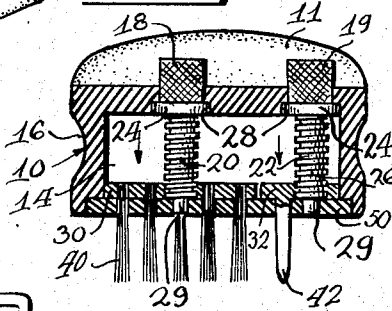


Fig. 4

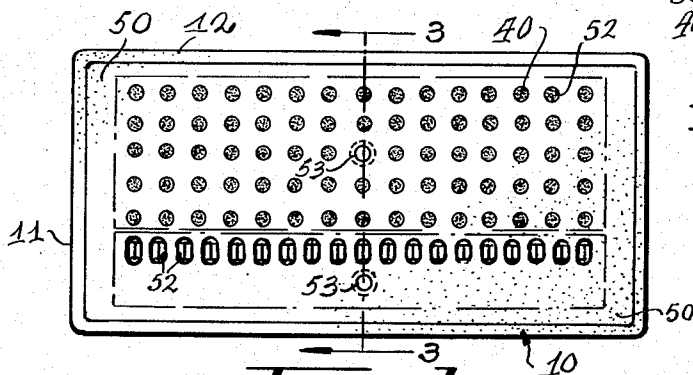


Fig. 2

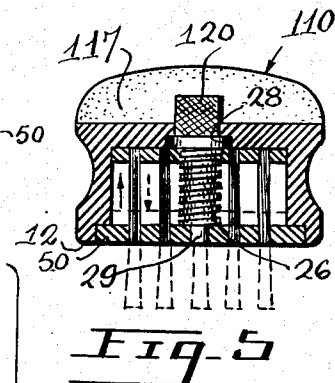
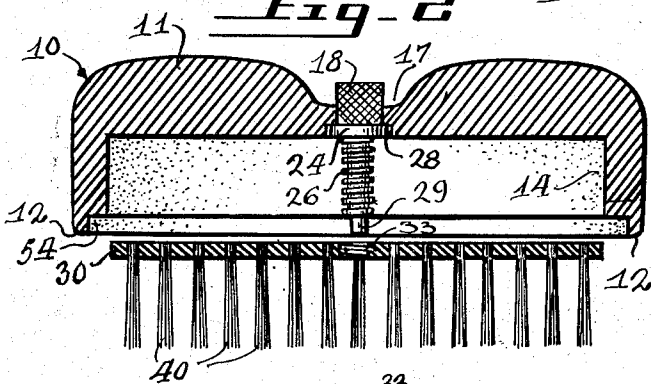
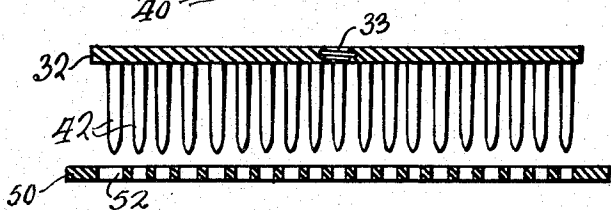


Fig. 6



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COMBINATION BRUSH AND COMB

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6 Claims. (Cl. 132—15)

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The present invention relates to toilet articles and more particularly to brush and combined brush and comb constructions having retractable cleaning elements.

Articles of this nature in general consist of a case which also forms the handle of the device and some arrangement of bristles and/or comb teeth which are normally housed within the handle and can be extended for use as desired. In most prior art constructions of this nature no provision has been made for varying the effective lengths of the bristles and/or comb teeth, cleaning the bristles and/or comb teeth and providing an effective brush or combing area equal to that afforded by non-retractable articles of this nature.

The present invention aims to provide an article of the character described wherein the bristles and/or comb teeth are normally housed completely within the handle body and can be extended or retracted as desired to present any desired effective length. Means are also provided whereby the bristles and/or comb teeth are cleaned as they are retracted and the design of the article is such that it can be made in sizes corresponding to the non-retractable type.

Accordingly, the invention in its broadest aspects is a toilet article such as a brush or combination brush and comb having retractable cleaning elements. A preferred construction in accordance with the invention includes a main handle body having a top portion and a base portion with an internal recess extending inwardly from the base portion. A cover plate having a plurality of spaced apart openings is mounted on the base portion so as to cover the recess. A supporting plate is slidably mounted within the body recess and a plurality of cleaning elements, which may be groups of bristles or individual comb teeth or both, are mounted on the supporting plate so as to extend outwardly therefrom with their outer ends slidably fitting in the openings provided in the cover. An actuating means, preferably a threaded control screw member, is provided between the top portion of the handle body and the supporting plate so that the bristles and/or comb teeth can be slidably extended and retracted through the cover plate openings. The openings in the cover plate are of a size relative to the groups of bristles and/or comb teeth so that when they are retracted any foreign matter picked up by these elements is automatically wiped off.

Having thus generally described the nature

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of the invention particular reference will be made to the accompanying drawings, and in which:

Figure 1 is a view in perspective elevation of a preferred construction of a combined brush and comb in accordance with the invention.

Figure 2 is a bottom plan view of the construction shown in Figure 1.

Figure 3 is a cross-sectional view of the construction shown in Figure 2 along the line 3—3.

Figure 4 is a cross-sectional view corresponding to Figure 3 showing the bristles and comb teeth in extended position.

Figure 5 is a view in vertical cross-section of an alternative brush construction embodying retractable bristles only.

Figure 6 is an exploded view partially in longitudinal cross-section of the combined brush and comb construction shown in Figure 1 to show the construction of the various members in more detail.

With particular reference to Figures 1, 2, and 6 of the accompanying drawings, a preferred construction of a combined brush and comb in accordance with the invention is shown as having a handle body or casing 10 having a top portion 11, a base portion 12 and an internal recess 14 extending inwardly from the base portion. The handle body 10 is formed in the usual manner to facilitate holding or gripping by grooves 16 provided at each side and also includes a central indentation 17 adapted to accommodate the heads 18, 19 of a pair of control screw members 20, 22.

Each of the control screw members 20, 22 is formed so as to have an outstanding flange 24 beneath the outstanding heads 18—19. The main portions or shanks of the screw members 20, 22 are threaded as indicated at 26. An unthreaded portion 29 of reduced diameter is provided on the end of the screw members 20, 22. The screw members 20, 22 are fitted into suitable openings provided in the handle body top portion 11 substantially centrally of the indentation 17 so that the flanges 24 are disposed in the recesses 28 with the heads 18, 19 protruding so that the screw members 20, 22 may be rotated while being retained against longitudinal axial displacement.

A pair of relatively thin supporting plates 30, 32 having an outside shape corresponding to the contours of the body recess 14 are mounted within the body recess 14 in spaced apart relationship so as to be capable of independent sliding movement relative thereto. Each of the

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plates 30, 32 includes a central top opening 33 which is tapped to accommodate and is threadably engaged by the lower threaded ends of the control screw members respectively. A plurality of groups of bristles 40 are mounted in regularly spaced apart relationship on the supporting plate 30, while a plurality of elongated teeth 42 are mounted in regular spaced apart relationship in the manner of a comb on the supporting plate 32.

A cover plate 50 having therein a plurality of spaced apart openings 52 is mounted on the base portion 12 of the handle 10. Preferably, the cover plate 50 is seated in a recess 54 surrounding the body recess 14 and is adhesively secured thereto so as to completely cover the recess 14 (as shown in Figure 2). The reduced lower ends 29 of the screw members 20, 22 are engaged in suitable openings 53 also provided in the cover plate 50 so as to maintain the members 20, 22 in parallel spaced apart alignment.

The outer end of each of the groups of bristles 40 and the comb teeth 42 are slidably engaged in one of the openings 52 of the cover plate. The openings 52 are shaped and spaced apart in register with the arrangement of the bristles 40 and the teeth 42 so that these elements will slide freely therethrough on upward or downward movement of the supporting plates 30, 32. With this arrangement, rotation of either of the controlled screw members 20, 22 in one direction, when the device is in the closed condition shown in Figure 3, will cause the supporting plates 30 or 32, to descend within the recess 14 forcing the bristles 40 and/or the comb teeth 42 through the cover plate 50 as is shown in Figure 4. Counter rotation of the threaded screw members 20, 22 will act on the supporting plates 30, 32 to cause a retraction of the bristles 40 and/or teeth 42 to cause their original positions within the handle body 10. Due to the sliding fit between the bristles 40 and/or the comb teeth 42 and the openings 52 of the cover plate 50 any foreign matter picked up by these elements in use is wiped off by the cover plate 50 during the retracting movement.

As an alternative construction, as shown in Figure 5, the control screw member 22, supporting plate 32, comb teeth 42 and corresponding openings 52 in the cover plate 50 may be omitted. In this construction the width of the handle body 10 is correspondingly reduced and the sole control screw member 120 is disposed centrally of the depression 117. This form of construction is particularly suited to a pocket clothes brush.

As will be understood by reference to the preceding description and accompanying drawing, the effective length of the bristles and/or comb teeth can be varied as desired. For example, if a short bristle and consequently stiffer brush is required, the bristles may be extended for only part of their overall length. If a longer bristle and consequently softer brush is required, the bristles may be extended to their full length and so on. This of course also applies to the comb teeth 42 which may be extended in a like manner.

While the preferred construction illustrated is shown as having the handle body 10, supporting plates 30, 32 and cover plates 50 made from a plastic material it will be understood that many other suitable materials could be employed for this purpose, for example, wood, or light metal, or a combination of both.

I claim:

1. A toilet article having retractable cleaning

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elements comprising, a handle body having a top portion, a base portion, and an internal recess extending inwardly from said base portion, a cover plate mounted on said handle base portion so as to cover said internal recess and having therein a plurality of spaced apart openings, a supporting plate slidably mounted within said handle body recess, a plurality of cleaning elements mounted on said supporting plate in spaced apart relationship so as to extend outwardly therefrom with the outer ends of each of said elements slidably fitting in one of said cover plate openings, a control screw member rotatably mounted in said handle top portion and having a portion extending exteriorly of said handle top portion and a threaded portion extending within said handle recess threadably engaged with said supporting plate, whereby said cleaning elements may be extended through said cover plate openings to beyond said handle base portion and retracted within said handle body internal recess.

2. A toilet article as claimed in claim 1 wherein said cleaning elements comprise groups of bristles.

3. A toilet article as claimed in claim 1 wherein said cleaning elements comprise individual comb teeth.

4. A brush construction comprising, a handle body having a top portion, a base portion, and a recess extending inwardly from said base portion, a cover plate having therein a plurality of spaced apart openings and being mounted on said handle base portion so as to cover said internal recess, a supporting plate slidably mounted within said handle recess, a plurality of groups of bristles mounted in spaced apart relationship on said supporting plate so as to extend outwardly therefrom with the outer end of each group of bristles slidably engaged in one of said cover plate openings, a control member rotatably mounted in said handle top portion with an extended threaded portion within said handle recess and threadably engaged with said supporting plate, whereby rotation of said control member in one direction is adapted to act on said supporting plate and extend said bristles through said cover plate beyond said handle base portion and counter rotation of said control member is adapted to retract said bristles within said handle recess.

5. A combination brush and comb construction comprising, a handle body having a top portion, a base portion, and an internal recess extending inwardly from said base portion, a cover plate having therein a plurality of spaced apart openings and being mounted on said handle base portion so as to cover said handle internal recess, a pair of supporting plates mounted within said handle recess in juxtaposed relationship, for sliding movement relative thereto, a plurality of groups of bristles mounted in spaced apart relationship on one of said supporting plates so as to extend outwardly therefrom with the outer ends of each of said groups of bristles slidably engaged in one of said cover plate openings, a plurality of elongated teeth mounted in spaced apart relationship on the other of said supporting plates so as to extend outwardly therefrom with the outer end of each of said teeth slidably engaged in one of said cover plate openings, a pair of control screw members rotatably mounted in spaced apart relationship in said handle body top portion, each of said control members including a threaded portion extending within said handle recess and threadably engaged with one of said supporting plates, whereby independent

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rotation of either of said control members is adapted to act on the respective supporting plate connected thereto and extend said bristles and/or comb teeth through said cover plate beyond said handle base portion and counter rotation of said control member is adapted to retract said bristles and/or comb teeth within said handle recess.

6. A toilet article as claimed in claim 1, wherein there is a second supporting plate slidably mounted within said body recess in juxtaposed relationship with said first supporting plate, and said cleaning elements comprise, a plurality of spaced apart bristles mounted on one of said plates and a plurality of spaced apart comb teeth

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mounted on the other of said plates, and there is a second control screw member rotatably mounted in said handle top portion and having a threaded portion extending within said handle recess threadably engaged with said second supporting plate.

ALFONS GRÜRING.

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