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AN IMPROVED STRUCTURE OF A BRUSH

FIELD OF THE INVENTION

The present invention relates to an improved structure of a brush, and especially to a structure of a brush meeting the requirement of ergonomics so as to provide a comfort and tight holding. Thus, the brush can easily brush and swing upwards and downwards and be pulled and pushed.

BACKGROUND OF THE INVENTION

Brushes, for example, toothbrushes, clothes brushes, shoe brushes, etc. are used in daily life. In general, a toothbrush has a handle. The commercial toothbrush often emphasizes the brush hairs or the texture or pattern on the handle, while the sense of holding is neglected. Thus, holding sense is bad. The activity is controlled by a wrist instead of fingers. The orientations of movement of the brush is confined. Often, the fingers collide with brush head, or the brush drops down, or the hand may feel uncomfortable. All these is induced by the long handle held by hands. Further, in general, show brush has no handle, the user not only feel uncomfortable, but also the show oil will contact with the hand.

A special brush is a toothbrush for cleaning artificial teeth. Since in cleaning, the artificial teeth is taken out form mouth, then a commercial toothbrush serves to brush the artificial teeth. Other than the aforesaid defects, since the long handle of the prior art toothbrush

can not be stored in an artificial teeth box for storing artificial teeth, thus the brush is unsuitable to be carried out. Therefore, from the aforementioned description, it is known that an improved brush structure with a short handle and suitable to be held is eagerly demand.

SUMMARY OF THE INVENTION

Accordingly, the primary object of the present invention is to provide an improved structure of a brush, especially, a structure of a brush meeting the requirement of ergonomics. A handle is extended from one side of the brush head of the brush. Protrusions are formed on the two ends of the upper surface of the handle and a concave portion is formed between the two protrusions. Spacers are installed on the proper position at the lower surface of the handle. In use, the thumb meets the concave portion. The index finger and middle finger hold the two sides of the spacers so as to provide a comfort and tight holding. Thus, the brush can easily brush and swing upwards and downwards or be pulled or pushed.

Another object of the present invention is to provide an improved structure of a brush, wherein a spacer is extended downwards from the protrusion on the distal end of the handle. The surface thereof is formed with a proper cambered surface. When it is held, it will meet the arc of third finger so as to provide a preferred holding sense.

A further object of the present invention is to provide an improved structure of a brush, wherein a groove is installed in the concave

portion. When a thumb is near the concave portion, the skin of the thumb will be trapped into the groove, so as to be fixed therewithin.

A still object of the present invention is to provide an improved structure of a brush, wherein a hole is formed on the distal end of the handle for being implanted with a tip bar for cleaning dirt in the gaps.

A yet object of the present invention is to provide an improved structure of a brush, wherein the handle can be made with different orientations. The size of the brush head, the area of the brush hairs, and the density of the brush hairs are designed with the use of the brush.

The various objects and advantages of the present invention will be more readily understood from the following detailed description when read in conjunction with the appended drawing.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of the present invention.

Fig. 2 shows an application of the present invention.

Fig. 3 shows another embodiment of the present invention.

Fig. 4 shows an application of Fig. 3.

Fig. 5 shows another embodiment according to the present invention, showing that the present invention serves as a shoe brush.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to Fig. 1, the perspective view of the present invention is illustrated. The brush 10 according to the present

invention is designed according to requirement of ergonomics. Especially, the design of handle 30 is according to the arc of fingers. The brush 10 of the present invention includes a brush head 20 and a handle 30.

The brush head 20 has a flat shape. One side of the handle 20 is implanted with brush hairs 21. The brush hairs 21 may have a flat head portion or wave shape with long and short hairs depending on the use of the brush. A handle 30 is extended from one side of the brush head 20. The brush head 20 may be a flat type. The brush hairs 20 may stands straightly on the upper (or lower) side of the brush head 20. Or the brush head 20 has an upright type, wherein the brush hairs 20 are located on the left or right sides of the brush head 20 so that they has different orientations. Moreover, the size of the brush head 20, the area of the brush hairs 20 and the density of the brush hair 20 are varied according to the use of the brush (as shown in Figs. 3 and 5).

Two protrusions 31 are formed on the two ends of the upper side of the handle 30. A concave portion 32 have an arc meeting that of the first section of the thumb. A groove 321 is installed on the concave portion 32. When the thumb 32 is located in the concave portion 32, the skin of the thumb will be compressed into the groove 321 due to pressure so that the position of thumb is fixed.

The protruded first spacer 3 is formed on the lower lateral surface of the handle 30, and a second spacer 34 is extended downwards from the concave portion 31 on the distal end of the handle 30. The middle finger can be located between the first spacer 33 and the second spacer

34. The middle finger and index finger will hold the first spacer 33.

A concave cambered surface is formed on the surface of the second spacer 34 and meets the arc of third finger so to provide a preferred holding sense. The lower end of the second spacer 34 is installed with a hole 341 for being implanted by a tip bar 35 for cleaning dirt in small gaps.

As shown in Fig. 2, in present embodiment, the brush 10 is assumed for cleaning an artificial teeth 40. The brush hairs 21 are implanted under the brush head 20. In using, the thumb is located near the concave portion 32. The third finger and the middle finger are located on the two sides of the first spacer 33 under the handle 30 so as to clamp the first spacer 33. The third finger adheres to the surface of the second spacer 34. Since the arc of the present invention is designed according to the arc of fingers, thus, the finger may hold the brush comfortably. Thus, it can brush and swing upwards and downwards and be pulled and pushed. Since the handle 30 is short, it can clean each portion of the artificial teeth 40 easily. The gap in each artificial teeth can be completely cleaned by the top bar 35 of the second spacer 34.

Besides, since the handle is short so as to be contained within the case of an artificial teeth (not shown), it is portable for cleaning artificial teeth.

As shown in Figs. 3 and 4, the brush head 20 stands uprights, the brush hairs 21 is installed on the left side of the brush head 20. In this embodiment, it is assumed to be used as a brush, thus, the

conventional brush with a long handle is improved. The dirt inside and outside the teeth 50 can be removed by the action of the fingers. Moreover, by the handle of the present invention designed according to the design of ergonomics, the handle can be held easily by fingers. Since brush of the present invention has a short handle, thus it has a light weight, a short travelling length, may save force, and can be held tightly. This is beneficial to old peoples, children and patients.

Moreover, referring to Fig. 5, in present embodiment, the brush according to the present invention serves to brush shoes, wherein the area of the brush head 20 is enlarged, and more brush hairs 21 are implanted thereon. The holding mechanism of the handle 30 is identical to that described above. In cleaning the shoe 60, the brush head 20 will not be held for preventing to touch the shoe oil.

Although the present invention has been described with reference to the preferred embodiments, it will be understood that the invention is not limited to the details described thereof. Various substitutions and modifications have been suggested in the foregoing description, and others will occur to those of ordinary skill in the art. Therefore, all such substitutions and modifications are intended to be embraced within the scope of the invention as defined in the appended claims.

What is claimed is:

1. An improved structure of a brush, especially to a brush with a short handle meeting the requirement of ergonomics, comprising:
a brush head having a flat shape, one side of the brush head being implanted with brush hairs;
a handle attached to one side of the brush head, two protrusions being formed on the two ends of the upper surface of the brush head, and a concave portion being formed between the two protrusions, a protruded first spacer being installed on a proper position of the lower lateral surface of the handle, and a second spacer being extended downwards from the protrusion on the distal end of the handle.
2. The improved structure of a brush as claimed in claim 1, wherein the brush hairs have a flat shape or a wave shape with long and short brush hairs according to the applications of the brush.
3. The improved structure of a brush as claimed in claim 1, wherein the arc of concave portion meets the arc of the first section of the thumb.
4. The improved structure of a brush as claimed in claim 1, wherein a groove is formed on the concave portion for trapping the skin of thumb so that the thumb is fixed therewithin.
5. The improved structure of a brush as claimed in claim 1, wherein the middle finger is located between the first spacer and the second spacer, the middle finger and the index finger hold the first spacer.
6. The improved structure of a brush as claimed in claim 1, wherein a concave cambered surface is formed on the surface of the second spacer, when being held, it meet the arc of the third finger.



7. The improved structure of a brush as claimed in claim 1, wherein a hole is installed on the lower end of the second spacer for being implanted by a tip bar for cleaning the dirt on smaller gaps.

