

(12) UK Patent Application (19) GB (11) 2 097 245 A

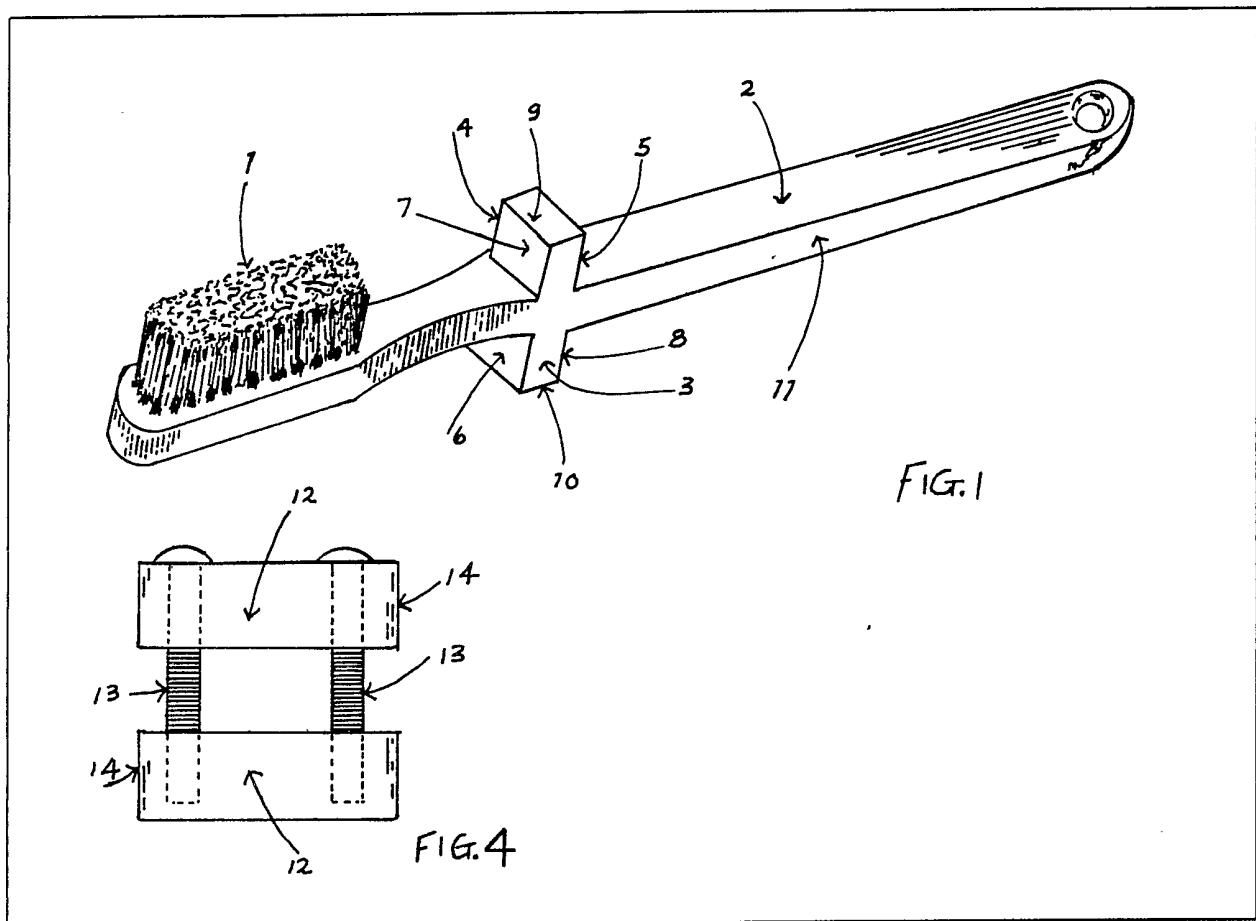
(21) Application No 8103940  
 (22) Date of filing  
 23 Jan 1981  
 (43) Application published  
 3 Nov 1982  
 (51) INT CL<sup>3</sup> A46B 5/02  
 (52) Domestic classification  
 A4K FX  
 B4K 3B 7B1C  
 (56) Documents cited  
 GB 0806558  
 GB 0417606  
 US 3968950  
 US 2835912  
 US 2722703  
 US 2360745  
 US 2267670  
 US 2179266  
 (58) Field of search  
 A4K  
 B4K  
 (71) Applicant  
 Redmond Barry Earle  
 2575 West 16th Ave  
 Vancouver  
 B C V6K 3B9

Canada  
 (72) Inventor  
 Redmond Barry Earle  
 (74) Agents  
 Page White and Farrer  
 27 Chancery Lane  
 London WC2A 1NT

the forefinger and thumb of the user, to enable superior manipulation of the brush for better cleaning of the teeth. The flanges may be comprised in a member, Fig. 4, movable along the handle.

(54) **Toothbrush**

(57) Toothbrush handles are known to be shaped in various ways to enable the hand to grip them better. In this invention two directly opposed flanges 9 & 10, Fig. 1, lying flatly on the top and bottom surfaces of the handle and extending transverse to the axis of the handle, said flanges being fixed to said handle at about one third distance from the bristle head end of the toothbrush, provide unique broad gripping surfaces on the sides and ends of said flanges for



GB 2 097 245 A

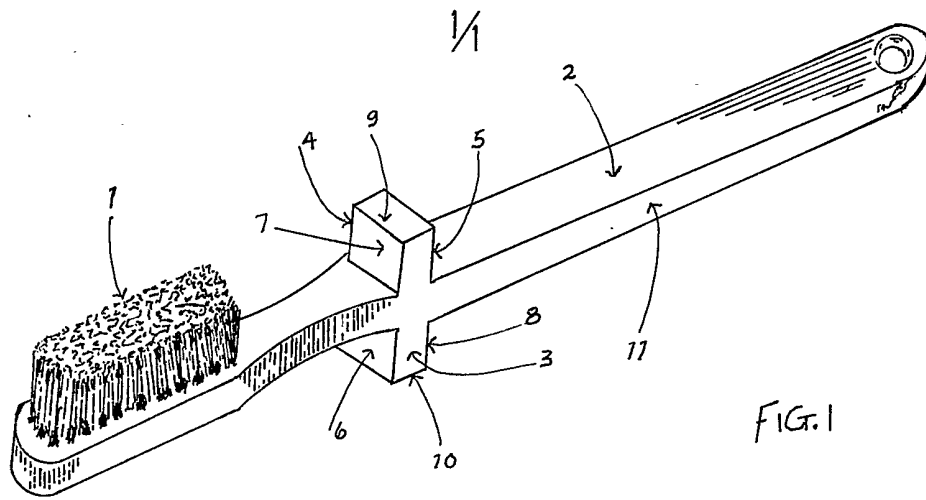


FIG. 1

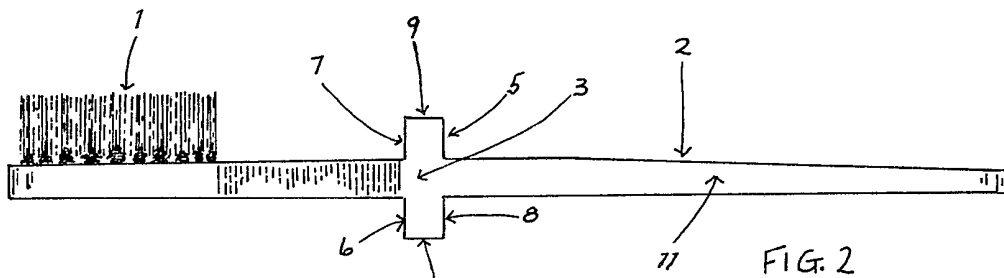


FIG. 2

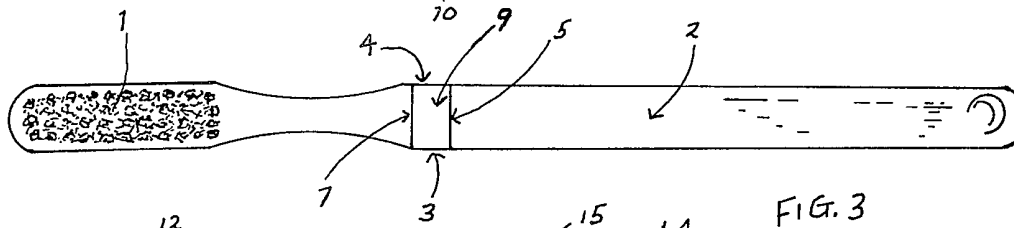


FIG. 3

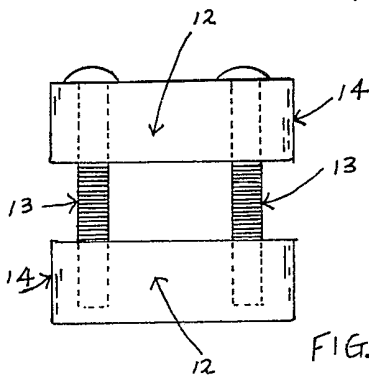


FIG. 4

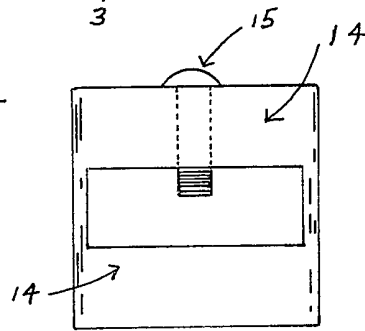


FIG. 8

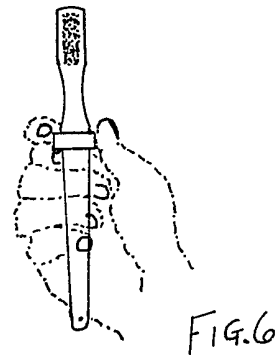


FIG. 6

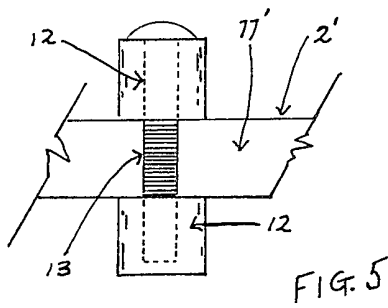


FIG. 5

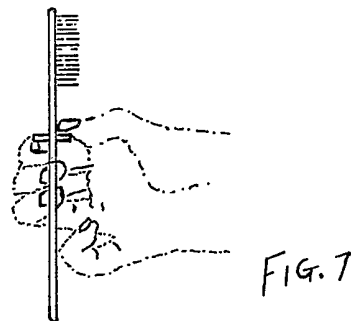


FIG. 7

## SPECIFICATION

## Toothbrush

5 This invention relates to improvement in toothbrushes and more particularly to an improvement in the handle of a toothbrush to enable better hand control of the brush to accomplish more proper and thorough cleaning of the teeth. My invention consists of rectangular-block shaped flanges of approximate dimensions as of the dimensions of the handle of the toothbrush in cross section either mounted on the handle or formed integrally therewith and positioned on the top and bottom surfaces of the handle about one third distance from the brush head end of the toothbrush and extending transverse to the axis of the handle. The forefinger and thumb are easily placed on the various substantially flat and optionally smooth or serrated edges and surfaces of the flanges to bring about more managed application of pressure and more positively-controlled direction to a toothbrush for all of the tooth cleaning process. Proper vertical and circular brushing of all outside tooth surfaces is enhanced and particularly the back inside surfaces of the teeth are more easily brushed better, accomplished by the flanges making possible more firmly-controlled forward and withdrawal stroking of this difficult to clean area.

It is common for toothbrush handles to be shaped in various ways to enhance gripping control. My flanges improve all known toothbrush handle constructions in this respect because the flanges form a unique cross-arm extension of the toothbrush handle enabling the brush bristles to be presented easier and properly, vertically to the outside tooth surfaces, and also proper circular movement of the brush head on a vertical axis is accomplished easier. The toe of the brush and the bristles are also presented properly to the inside backs of teeth and vertical brushing of these surfaces is enhanced by the flanges making possible a firm clamp-like gripping of the toothbrush handle. My flanges make possible the more sensitive and dextrous forefinger and thumb to be paramount with brush control, and my flanges uniquely make possible gripping of the tooth brush handle with the forefinger and thumb ends placed on the sides of the handle for easier and proper presentation of the bristles to the outside tooth surfaces, rather than the usual gripping using the handle top and bottom surfaces, and my flanges supply unique surfaces vertical to the toothbrush handle against which the forefinger and thumb ends can be pressed opposingly to make possible a very firm and precise gripping.

For further comprehension of my invention description will now be given with reference to the drawings where like reference charac-

ters designate like parts throughout and wherein:

*Figure 1* is a perspective view showing integrally-moulded flanges on the handle of a toothbrush.

*Figure 2* is a side elevation view of Fig. 1.

*Figure 3* is a top view of Fig. 1.

*Figure 4* is a front elevation view of an alternate embodiment showing removeable flanges that can be bolted to a toothbrush handle.

*Figure 5* is a side elevation view of Fig. 4 with the handle fragmentarily shown.

*Figure 6* is an illustration of the preferred method of holding the brush for cleaning the outside fronts of teeth.

*Figure 7* is an illustration of the preferred method of holding the brush for cleaning the inside backs of teeth.

Referring now to the drawings, which form a material part of this disclosure, and particularly to Figs. 1, 2 and 3, it can be seen that the flanges 6, 7 are vertical to and transverse at one hundred and eighty degrees the top and bottom surfaces 2, 2 of the handle. The flange edges 3, 4 and the edges of the handle 11 thus form a cross-arm right-angled to the surfaces of the handle. The ends of the forefinger and thumb placed on the side-edge planes 3, 4 positions the brush for cleaning the outside fronts of teeth and the side edges 3, 4 offer a central fulcrum between the flange extensions 11 giving leverage for controlled vertical, sweeping and circular brush motion necessary for proper tooth cleaning procedure. The substantially flat and sufficiently long and wide edges of the flange-formed cross-arm 3, 4 furnish focal areas against which the forefinger and thumb can press opposingly to accomplish a very firm gripping of the handle with the additional gripping of the long extension of the handle 2, 11 in the palm of the hand gripped by the remaining fingers as illustrated in Fig. 6. The bristles 1 are presented easily and properly to the fronts of the outside surfaces of the teeth because gripping is done primarily by the ends of the forefinger and thumb from the sides of the brush 3, 4, 11 rather than from the top and bottom surfaces of it. Brushing the fronts of teeth of the right and lefts sides of the jaw is accomplished by rotating the brush one half turn and reversing the the positions of the forefinger and thumb on the right and left side edges 3, 4 of the cross-arm Fig. 6.

The backs of teeth are necessarily cleaned by the toe of the brush 1. For cleaning the backs of teeth of the lower jaw the outside of the forefinger end is pressed against the back surface 8 of the top flange and the end of the thumb is pressed opposingly against the front surface 7 of the bottom flange while the long extension of the handle 2, 11 lies approximately across the mid-section of the palm side

of the first three fingers and the outside of the little finger Fig. 7. One half rotation of the brush changes the surfaces against which the forefinger and thumb press 5, 6 and positions the brush for cleaning the backs of teeth of the upper jaw.

While I have described the preferred hand positions for gripping my improved toothbrush handle, suitable for either hand, other combinations using edges 9, 10 and surfaces of the flanges can be used for optional gripping positions.

Referring now to Figs. 4 & 5 there are shown two equally dimensioned removeable flanges 12, 12 that can be bolted or strapped to the handle 2', 11' of a toothbrush. The toothbrush handle 2', 11' Fig. 5 rests inside the fastening bolts 13 so that the ends 14 of the flanges as shown in Fig. 4 form planes parallel to and raised from the side edge planes of the toothbrush handle so that a collar-like attachment results. These flanges are rectangular in cross section throughout their length and extend transverse to the longitudinal axis of the handle. Integrally moulded flanges illustrated in Figs. 1, 2, 3 have flanges with side-edges 3, 4 that are on the same plane as the side-edges of the toothbrush handle and it is understood that these moulded flanges could be fashioned to have side-edge planes 3, 4 raised optionally from the side-edge planes of the toothbrush handle within the operational concept of my invention.

It should be understood that the present disclosure is for the purpose of illustration only and includes all modifications and improvements that fall within the scope of the appended claims.

#### CLAIMS

1. A toothbrush comprising an elongated handle and a bristle head, said handle having a longitudinal axis, said handle having a top surface, a bottom surface, and two edge surfaces and being substantially rectangular in cross-section, said handle having a gripping section comprising two opposed flanges, each flange lying flatly on said top and bottom surfaces, respectively, each flange being equally dimensional and being rectangular in cross-section throughout and extending transverse to the axis of the handle, said flanges being formed as one with the handle and being the same length as the width of the top and bottom surfaces of the handle, said flanges being positioned on said handle at about one third distance from the bristle head end of the toothbrush, whereby broad gripping surfaces are provided on the sides and ends of said flanges for the forefinger and thumb of the user.

2. A toothbrush comprising an elongated handle and a bristle head, said handle having a longitudinal axis, said handle having a top

surface, a bottom surface, and two edge surfaces and being substantially rectangular in cross-section, said handle having a removeable gripping section comprising two directly opposed flanges, each flange lying flatly on said top and bottom surfaces, respectively, each flange being equally dimensioned and being rectangular in cross-section throughout and extending transverse to the axis of the handle, bolt or strap means on each end of said flanges for fixing said flanges to each other and to said handle, said flanges being fixed to said handle at about one third distance from the bristle head end of the toothbrush, whereby broad gripping surfaces are provided on the sides and ends of said flanges for the forefinger and thumb of the user.

#### CLAIMS (12 Oct 1981)

The claims defining the invention are as follows—

1. A toothbrush comprising an elongated handle and a bristle head, said handle having a longitudinal axis, said handle having a top surface, a bottom surface, and two edge surfaces and being substantially rectangular in cross-section, said handle having a gripping section comprising two opposed flanges, each flange lying flatly on said top and bottom surfaces, respectively, each flange being equally dimensional and being rectangular in cross-section throughout and extending transverse to the axis of the handle, said flanges being formed as one with the handle and being the same length as the width of the top and bottom surfaces of the handle, said flanges being positioned on said handle at about one third distance from the bristle head end of the toothbrush, whereby broad gripping surfaces are provided on the sides and ends of said flanges for the forefinger and thumb of the user.

2. A toothbrush as described in Claim 1 with handle having a removeable gripping section comprising two directly opposed flanges, each flange lying flatly on the top and bottom surfaces of the handle, respectively, each flange being equally dimensioned and being rectangular in cross-section throughout and extending transverse to the axis of the handle, bolt or strap means on each end of said flanges for fixing said flanges to each other and to said handle, said flanges being fixed to said handle at about one third distance from the bristle head end of the toothbrush, whereby broad gripping surfaces are provided on the sides and ends of said flanges for the forefinger and thumb of the user.

3. A toothbrush as described in Claim 1 having a removeable gripping section having flanges as described in claim 2, said flanges being incorporated in a unitary collar, said collar being fixed to the handle by setscrew means, said collar being positioned on the

handle as in Claim 2.

---

Printed for Her Majesty's Stationery Office  
by Burgess & Son (Abingdon) Ltd.—1982.  
Published at The Patent Office, 25 Southampton Buildings,  
London, WC2A 1AY, from which copies may be obtained.