June 3, 1941. L. GARCIN 2,244,615

TOOTHBRUSH

Filed Jan. 2, 1940

Fig. 2.

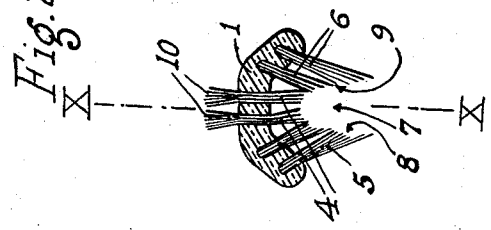


Fig. 1

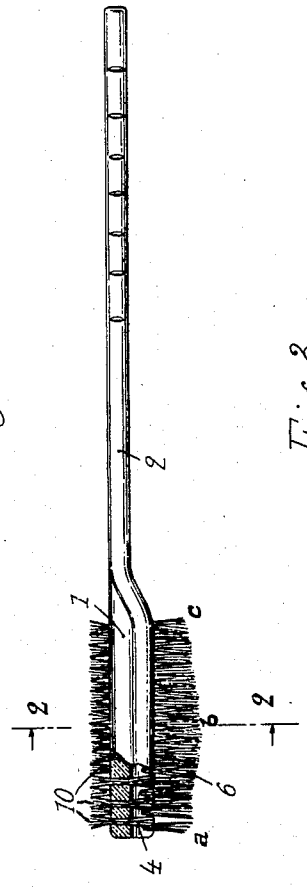


Fig. 3

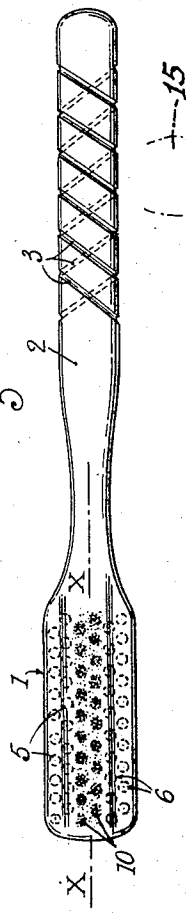
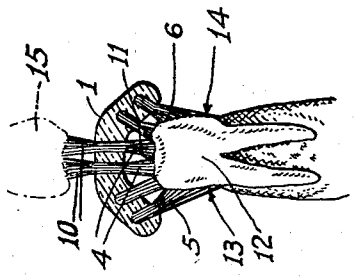


Fig. 4.



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TOOTHBRUSH

Louis Garcin, Paris, France

Application January 2, 1940, Serial No. 312,112
In France January 3, 1939

1 Claim. (Cl. 15—167)

The present invention has for its object a toothbrush which is chiefly characterized by the fact that the lateral rows of bristles are longer than the middle row or rows, and thus the ends of these bristles will form a longitudinal channel by which the brush, when in use, will be guided by the teeth whose inner and outer sides are brushed at the same time by the lateral rows of long bristles, while the cusps or grooves are brushed by the short middle bristles.

According to another characteristic, the lateral bristles have preferably the oblique position in the transverse direction, and their ends converge towards the middle longitudinal plane, in such way that the ends of these bristles will act at a better angle upon the lateral faces or sides of the teeth.

In order to further this action, the lateral bunches of bristles have preferably a bevelled shape, and the bristles will decrease in length according as they come near the short middle row or rows.

According to another characteristic, the back of the brush is provided with one or more middle rows of relatively short bristles, and these will permit, when the mouth is properly closed, of brushing the cusps of the teeth of the jaw opposite the one upon whose teeth the brush is displaced along its longitudinal channel.

The said middle bristles may consist, to great advantage, of simple extensions of the short middle bristles of the principal face.

In the accompanying drawing, which is given solely by way of example:

Fig. 1 is an elevational view, with a partial lengthwise section, of a tooth-brush in conformity to the invention.

Fig. 2 is a corresponding cross-section on the line 2—2 of Fig. 1.

Fig. 3 is a corresponding plan view.

Fig. 4 is a sectional view showing the method of utilization of the brush.

In the embodiment herein represented, the support of the brush, which consists of moulded material or the like, comprises a body 1 having preferably a curved form in cross-section, which is extended by a handle 2 having preferably a straight form, one or both faces of the handle being preferably provided with grooves or other small rough parts 3 in order that it will not slip in the hand.

The said body 1 carries on the concave side two rows of middle bunches 4, in which the bristles have a short length and are, preferably, relatively soft.

On the respective sides of the middle bunches 4 are disposed bunches of greater length, 5 and 6, which are oblique with reference to the middle longitudinal plane XX (owing to the form of the support), and thus the bristles of these bunches will extend towards this middle plane at their outer ends. The said lateral bunches 5 and 6, which form below the middle bunches 4 a longitudinal channel 7 (Fig. 2) are preferably bevelled at 8 and 9, and thus the bristles adjacent the plane XX will be shorter. The bunches 5 and 6 preferably consist of bristles which are harder than the ones used for the bunches 4, and moreover, they are preferably of a different colour. For instance, the bristles 4 may be white while the bristles 5 and 6 may consist of black boar hairs.

The lateral bunches 5 and 6 have different lengths according to their positions along the support 1. These lengths are preferably such that the visible longitudinal outline of their ends (Fig. 1) will form a convex curve *a b c* which projects at the middle part, on the contrary to the known brushes in which the longest bunches are usually situated near the end of the brush.

The said brush is completed by two rows of bunches 10 which extend upon the back of the support, at its middle part. These bunches 10 may consist, to advantage, as herein represented, of extended parts of the bunches 4, and the parts extending from the two faces of the support may have the same or different lengths.

The relative positions in plan view (Fig. 3) of the various bunches may be as desired, and they may be disposed in quincunx, as herein represented, or in cross rows, etc.

In order to make use of the brush, it is placed upon the teeth of the jaw to be cleaned, such as the lower jaw, in such way that a certain number of teeth of this jaw will be engaged in the channel 7 provided below the middle bunches 4 and between the lateral bunches 5 and 6. The bristles 4 will make contact with the cusps or the grooves 11 (Fig. 4) of the teeth 12, and the lateral bunches 5, 6 will make contact with the outer sides 13 and the inner sides 14 of the teeth, and then it is simply necessary to move the brush along the jaw in order to clean the whole of the teeth. The movement of the brush is facilitated by the fact that it is automatically guided by the teeth engaged in the channel 7.

If the mouth should be closed upon the brush, the teeth 15 of the upper jaw will make contact, by their cusps, with the bunches 10, and

will thus be cleaned in these cusps at the same time.

The brush will then be overturned, for the cleaning of the outer and inner sides of the teeth of the upper jaw.

As will be readily understood, the said brush provides for the perfect and entire cleaning of the teeth, and chiefly of the cusps, which the known brushes, having nothing to guide them, cannot reach to an effective degree.

Obviously, the said invention is not limited to the embodiment herein described and represented, which is given solely by way of example. The number of rows of the middle bunches 4 and 10 and/or of the lateral bunches 5 and 6 may be reduced to one, or may exceed two. The support may have a different shape from the one herein represented, and in particular, in cross-section. The obliquity of the lateral bunches 5 and 6 may differ from what is herein represented, and it may vary from a position perpendicular to the middle plane XX, to a position which is almost parallel, or is even parallel, to this plane.

The size of the brush may obviously vary to a great degree (brushes for children and adults).

Having now described my invention what I claim as new and desire to secure by Letters Patent is:

A tooth brush comprising a support and bristles mounted on one face of said support, the bristles mounted along the sides of said face being longer and stiffer than the bristles mounted in the middle of said face, the longer bristles being inclined inwardly, whereby a longitudinal channel is formed by said bristles, said tooth brush being guided by the teeth while brushing the cusps and the inner and outer sides of the teeth at the same time.

LOUIS GARCIN.