

FIG. 1.

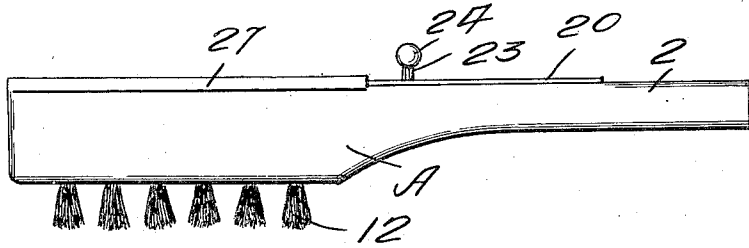


FIG. 2.

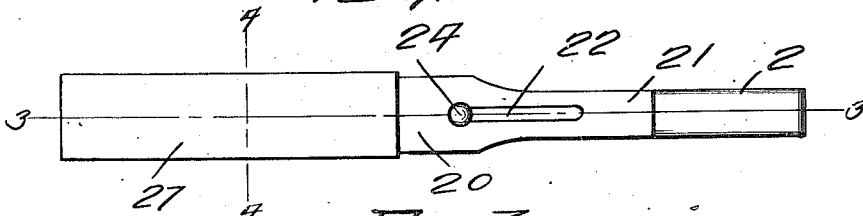


FIG. 3.

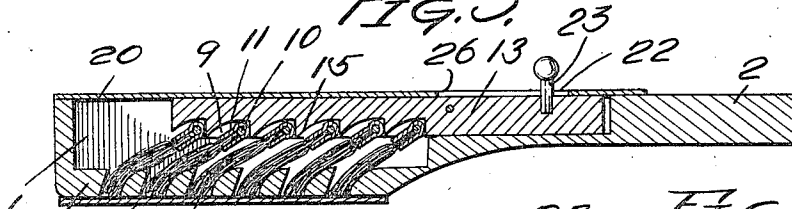


FIG. 5.

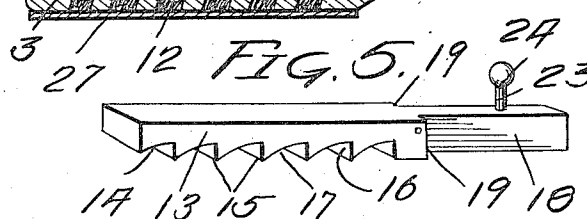


FIG. 4.

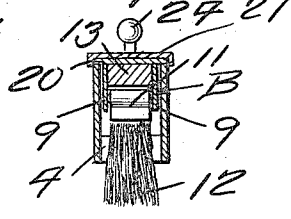
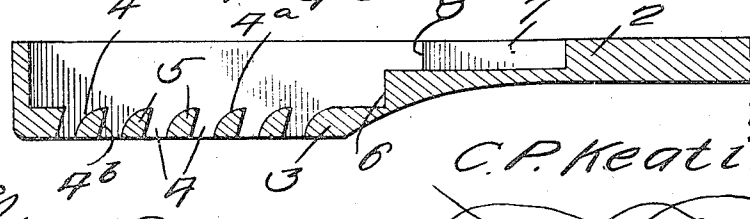


FIG. 6.



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# UNITED STATES PATENT OFFICE.

CLARENCE P. KEATING, OF MARSHFIELD, OREGON.

## BRUSH.

1,189,698.

Specification of Letters Patent.

Patented July 4, 1916.

Application filed February 2, 1915. Serial No. 5,747.

*To all whom it may concern:*

Be it known that I, CLARENCE P. KEATING, a citizen of the United States, residing at Marshfield, in the county of Coos, State of Oregon, have invented certain new and useful Improvements in Brushes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain novel and useful improvements in brushes.

In the present instance, merely by way of illustration, I have shown my invention as embodied in one special form of brush, but it is, of course, to be understood that it is not limited to this particular type of brush, as the invention may be used in connection with brushes of any character, such as tooth brushes, clothes brushes and any other kind of brush.

In carrying out my invention it is my purpose to provide a brush wherein when the brush is not in use the bristles may be withdrawn into and concealed within the body of the brush, while when it is desired to use the brush the bristles may be projected therefrom or exposed in position to operate upon the surface of the brush.

Another object of the invention is the provision of a brush provided with disappearing bristles so that when the brush is not in use it may be carried about without having the bristles contact with other objects, and I thus obviate the possibility of the bristles collecting dirt and germs or being bent and broken.

Still a further object of my invention is to provide a brush of this character, which in addition to being sanitary, will embody the desired features of simplicity, efficiency, reliability and convenience, which may be easily manipulated, and may be manufactured and marketed at a relatively low cost.

With the above recited objects and others of a similar nature in view, my invention consists in the construction, combination and arrangement of parts set forth in and falling within the scope of the appended claim.

In the accompanying drawings: Figure 1 is a view in side elevation of a brush embodying my invention and showing the bristles in their projected position. Fig. 2 is a top plan view thereof. Fig. 3 is a longitudinal

sectional view taken on the line 4—4 of Fig. 2. Fig. 4 is a cross sectional view, taken on the line 4—4 of Fig. 2. Fig. 5 is a detail view of the serrated pusher bar. Fig. 6 is a detail longitudinal sectional view taken through the body or casing of the brush with the bristles, the pusher bar and the back of the brush removed.

Referring now to the accompanying drawings in detail, the letter A indicates the body of the brush, the latter in the present instance including a casing section 1 and a handle section 2. The hollow casing section 1 has the bottom wall 3 thereof provided with a series of transversely extending inclined slots 4, these slots being formed by the spaced, inclined transverse webs 5 which are approximately V-shaped in cross section. At the rear of the casing, that is to say approximately the point where the casing merges into the handle 2, such casing is stepped or shouldered as at 6 and slotted as at 7, the slot 7 extending along the handle, and this slot 7 is of less width in cross diameter than the casing, thus producing the shoulder 8—8 at the front of the slot 7. As will also be seen by reference to the drawings, this slot 7 is also of less width than the casing 1 due to the step or shoulder 6 heretofore mentioned. Adapted to slidably fit within the casing section of the body of the brush is a metallic frame B, preferably made of metal and comprising two side plates 9—9, connected by the transversely extending spaced pivot studs 10. Loosely mounted upon each of these studs, and confined thereon against lateral movement by the side plates 9, is a metallic clamp 11, each clamp carrying a tuft of bristles 12, these bristles being adapted to lie within and extend through the inclined slots 4 in the bottom wall of the casing, as hereinafter described. The tufts of bristles are held in spaced relation relative to each other by the webs 5.

The numeral 13 indicates a pusher bar made of metal, wood, or other suitable material, the bottom face 14 of this bar having transversely extending teeth 15 formed thereon, the teeth being slightly curved, with the free ends 16 thereof projected forward. These teeth are adapted to extend between the clamps carrying the tufts of bristles, with the backs of the clamps lying in the valleys or grooves 17 between the teeth. The bar 13 is provided at its rear end with a reduced extension 18, so that shoulders 19—19

are formed at the junction of the extension 18 with the bar 14, and these shoulders are adapted when the brush is assembled to bear at certain times against the shoulders 8—8 5 of the body A of the brush and limit the rearward movement of the pusher bar.

In assembling the brush, the bristle carrying frame is fastened to the pusher bar with the side plates attached to the sides of the 10 pusher bar, the rear ends of these side plates terminating at the shoulders 19—19. The pusher bar with the bristle carrying frame is now inserted in the casing section of the 15 bristle body so that the tufts project into the slots 4 formed by the inclined webs 5. The top plate 20 of aluminum, metal, celluloid or other material is now applied to the brush body so as to cover the top of the casing and the top of the handle section of the brush. 20 The reduced section 21 of the top 20, which overlies the handle section of the brush has an elongated slot 22 formed therein and through this slot extends a pin 23 which is connected to the extension 18 of the pusher 25 bar. The outer free end of this pin is provided with an ornamental knob or head 24 adapted to be grasped by the operator for the purpose of sliding the pusher bar.

When the brush is assembled, as above described, it may be manipulated as follows: 30 If it is desired to withdraw the bristles into the casing so as to conceal the bristles, as when the brush is not in use, a person grasps the knob 24 and pulls it rearward until it 35 moves up against the end 25 of the slot 22. This causes the pusher bar with the bristle carrying frame to be also pulled rearward or toward the handle of the brush with the result that the tufts of bristles, being loosely 40 or pivotally mounted in the frame, will ride against the faces 4<sup>a</sup> of the webs and be pushed inward of the casing. If it is de-

sired to project or expose the bristles of the brush, the knob or head 24 is grasped and pushed forward of the brush body to the end 45 26 of the slot 22, thus moving the pusher bar and causing the bristles to bear against the steep face 4<sup>b</sup> of the webs, thereby projecting the bristles through the ends of the slots so that the brush is ready for use. 50

In order to protect the ends of the bristles from dust and dirt, a cover 27 is provided, which is in the nature of a slide, and when the bristles are withdrawn into the body of the brush, this cover may be slipped over the 55 bottom of the brush body, as shown in Fig. 3, to protect the bristles, while when the brush is in use, the cover may be slipped into the top of the body of the brush, as shown in Figs. 1 and 2. 60

What I claim is:

A brush comprising a hollow body including top, bottom, side and end walls, said bottom wall having a series of slots separated from each other by spacing webs, a frame 65 slidably housed within the body, a series of tufts of bristles connected with the frame and extending within the slots of the bottom wall, an operating handle carried by the frame and extending through a slot in the 70 top wall of the body, said handle being movable to shift the frame in one direction and project the bristle through the slots and in the opposite direction for withdrawing the bristles entirely within the body, and a cover 75 removably engaged with the body to close said slots.

In testimony whereof, I affix my signature, in the presence of two witnesses.

CLARENCE P. KEATING.

Witnesses:

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FRED. W. PAYNE.