

D. McEACHERN.

TOOTH BRUSH.

APPLICATION FILED APR. 6, 1908.

914,501.

Patented Mar. 9, 1909.

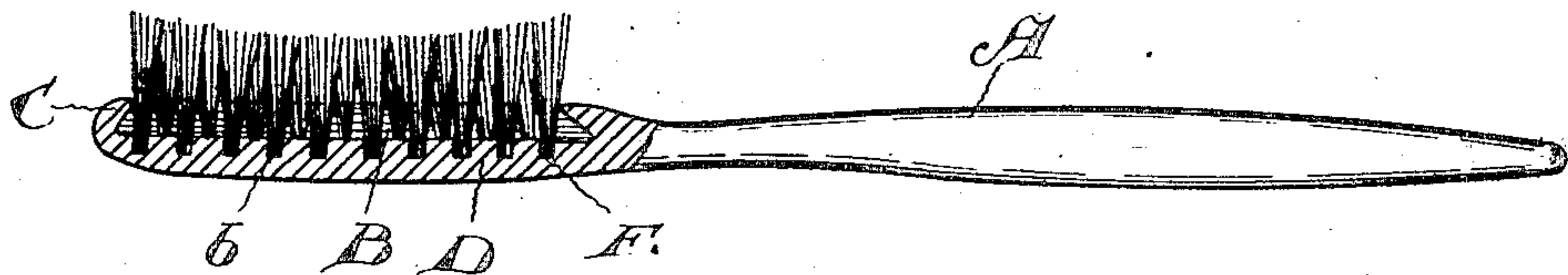


Fig. 1.

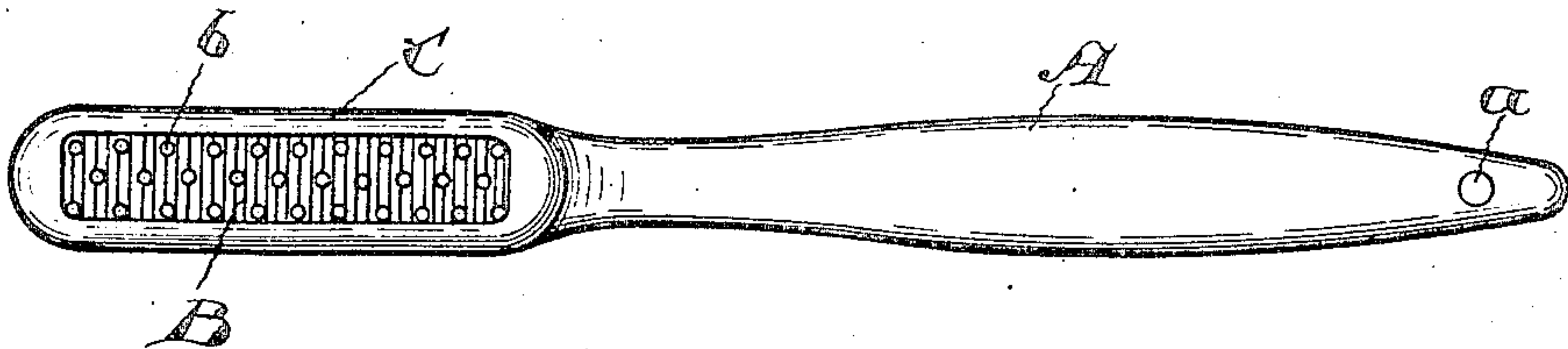


Fig. 3.

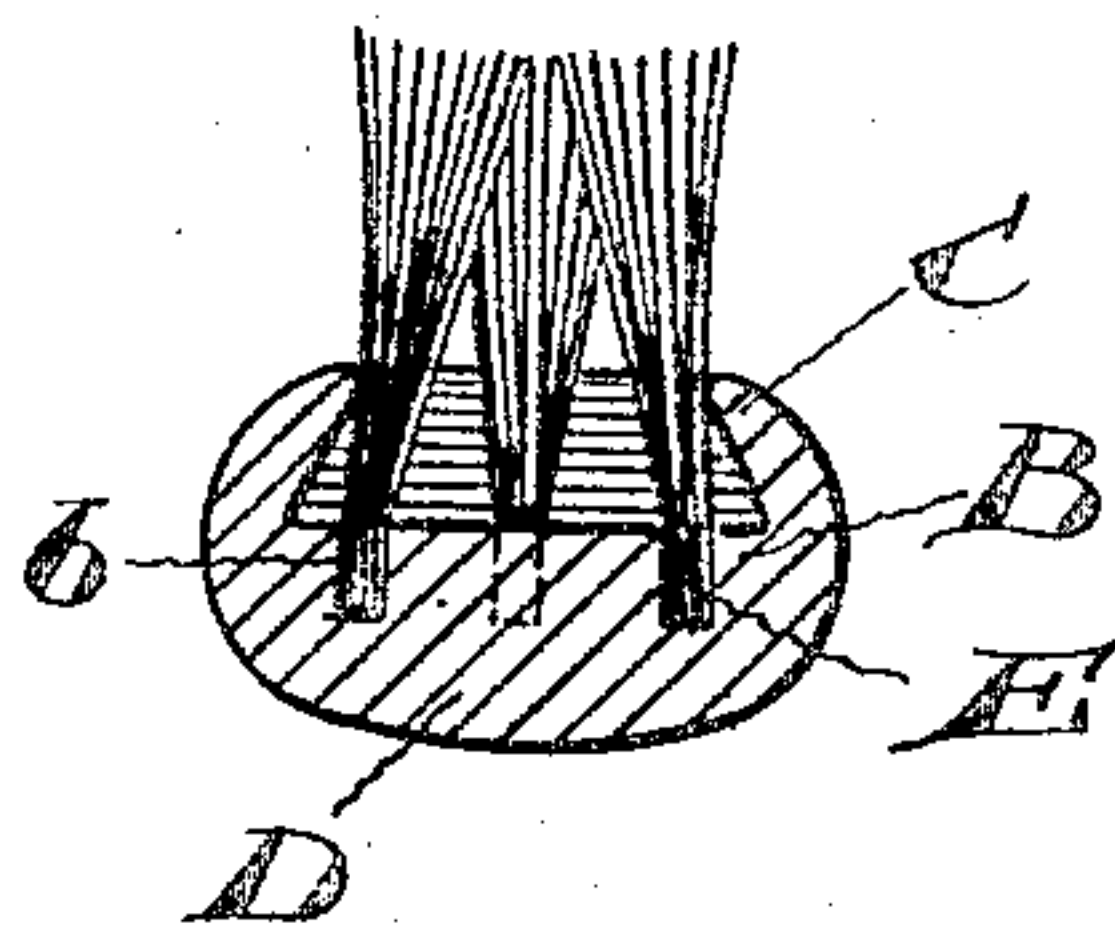


Fig. 2.

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UNITED STATES PATENT OFFICE.

DONALD McEACHERN, OF ARGYLE, ONTARIO, CANADA.

TOOTH-BRUSH.

No. 914,501.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed April 6, 1908. Serial No. 425,485.

To all whom it may concern:

Be it known that I, DONALD McEACHERN, of Argyle, in the Province of Ontario, Canada, have invented certain new and useful
5 Improvements in Tooth-Brushes, of which the following is a specification.

My object is to devise a tooth brush in which is provided a suitable retainer for a liquid dentifrice and water, and means for
10 holding the bristles in shape and which is nevertheless as simple and cheap to construct as a brush of ordinary construction.

A brush constructed in accordance with my invention comprises a back in which
15 tufts of bristles are set in the ordinary way, and an inwardly inclined wall surrounding the tufts or bristles but only in contact with the bristles at its upper inner edges, thus leaving a reservoir surrounding the bases of
20 the tufts of bristles.

Figure 1 is a side elevation of a brush constructed in accordance with my invention, the head of the brush being in section. Fig. 2 is a cross section through the head of
25 the brush on an enlarged scale. Fig. 3 is a plan view of the brush with the bristles removed.

In the drawings like letters of reference indicate corresponding parts in the different
30 figures.

A is the brush handle, of any desired shape, and provided with the hole *a* by means of which it may be hung to a suitable
35 peg.

The head B of the brush has an oblong recess cut therein to form walls C integral with the back D. The sides of the recess are undercut so that the walls C incline inwardly from opposite sides. The ends of
40 the recess are also undercut, particularly the rear end, the undercutting of the forward end of the recess not being of so much importance.

In the back at the bottom of the recess are
45 formed a plurality of rows of holes *b* in which are inserted the tufts of bristles E. The holes, it will be seen, are set inwardly from the bases of the side walls so that an unperforated portion of the back is left between the outer rows of holes and the side
50 walls. The walls are of such a height and so inwardly inclined that they contact with the sides of the outer rows of tufts of bristles at a point intermediate their fixed and
55 free ends.

It will be seen, particularly on reference to the sectional views, that a reservoir is thus formed at each side of the bristles of the brush, each of which reservoirs is substantially triangular in cross section, and
60 which is substantially closed at its outer side by the contact of the side wall with the bristles. This construction of the brush enables a liquid dentifrice to be used to the greatest advantage as any such liquid applied to the brush accumulates in the reservoirs, and when the brush is tilted to the position in which it is used the liquid flows from the reservoir to the bristles, flowing
65 along them partly by gravity and partly by capillary attraction till the points of the bristles are reached.

The importance of the inner upper edges of the side walls touching the bristles will readily be understood, as otherwise when
75 the brush was tilted the liquid instead of being conducted to the bristles would simply flow out of the lower reservoir over the side wall. The contact of the inner upper edges of the side walls with the bristles also
80 serves the function of holding the bristles in shape without interfering in any way with their free elastic action.

The comparatively deep undercutting of the rear end of the recess is of importance as
85 the brush is usually held with the handle lower than the head of the brush and the liquid used therefore naturally tends to flow toward the handle. The comparatively large reservoir formed at this point
90 serves to retain the dentifrice, and from it the dentifrice will flow when the brush is inserted in the mouth and turned to the horizontal position.

My brush not only possesses important
95 advantages in use, but will cost no more to construct than the ordinary brush, and will be just as durable.

The head of the brush is all in one piece, and the bristles are connected to the back
100 in the ordinary manner, the extra material in the side walls and the extra labor of shaping being practically negligible quantities.

What I claim as my invention is:— 105

1. A brush head having an oblong recess with undercut side walls formed therein and a plurality of rows of holes at the bottom of the recess, an unperforated portion being left between the outer rows of holes
110

and the side walls of the recess, in combination with tufts of bristles set in said holes and projecting from the recess.

2. A brush head having an oblong recess with undercut side and rear end walls formed therein and a plurality of rows of holes at the bottom of the recess, an unperforated portion being left between the outer rows of holes and the side walls of the re-

cess, in combination with tufts of bristles 10 set in said holes and projecting from the recess.

Argyle, Ont., 2nd April, 1908.

DONALD McEACHERN.

Signed in the presence of—

JOHN G. RIDOUT,
BELLE LOGÈE.