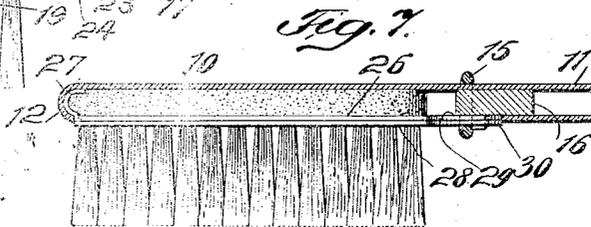
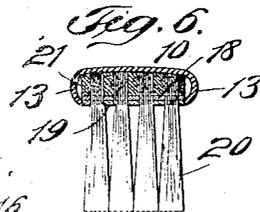
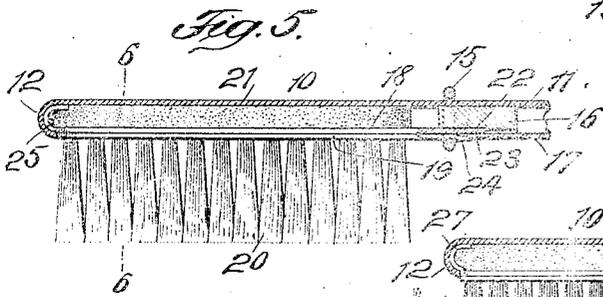
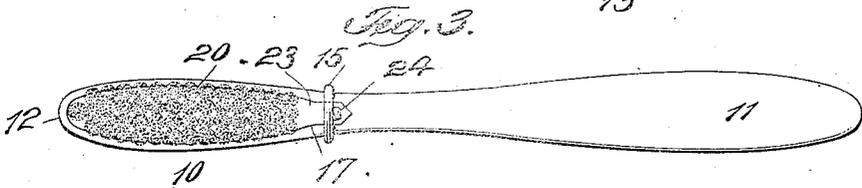
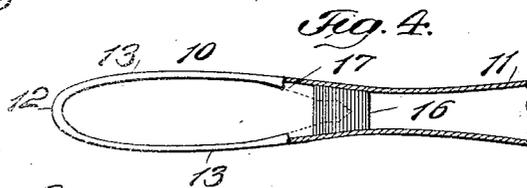
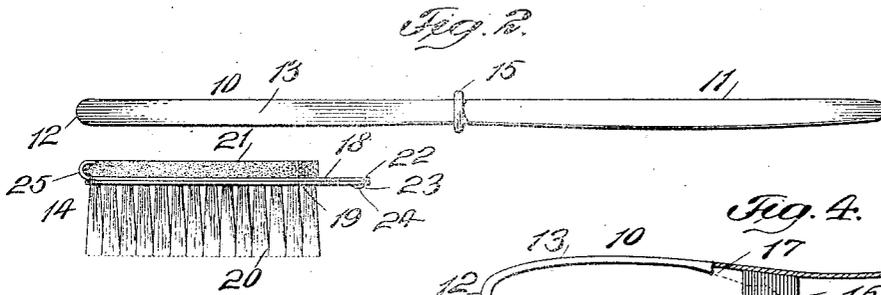
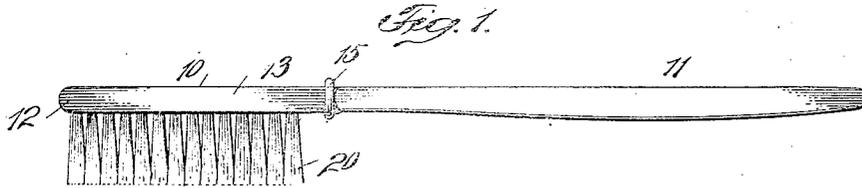


T. F. BARRY.
BRUSH.
APPLICATION FILED FEB. 18, 1913.

1,148,565.

Patented Aug. 3, 1915.



Witnesses:
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UNITED STATES PATENT OFFICE.

THOMAS F. BARRY, OF NEWARK, NEW JERSEY, ASSIGNOR TO RUBBER & CELLULOID HARNESS TRIMMING CO., OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

BRUSH.

1,148,565.

Specification of Letters Patent.

Patented Aug. 3, 1915.

Application filed February 18, 1913. Serial No. 749,072.

To all whom it may concern:

Be it known that I, THOMAS F. BARRY, a citizen of the United States and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Brushes, of which the following is a specification.

The invention relates more particularly to the class of brushes in which the head or bristle-carrying part of the brush is detachably secured to the back connected with the handle, and my invention resides in the novel construction hereinafter described and claimed having for its object the provision of a brush in which the head may be conveniently and very rigidly connected with the back and replaced by another head whenever desired.

I contemplate making the handle and back of metal, such as gold or silver, and the head of a metal inner plate and an outer plate which may be of material not likely to tarnish, as celluloid or other plastic material, through which plates the tufts of bristles are threaded and which tufts at their knot ends are secured in a bed of rubber vulcanized thereon and on said metal plate. The brush-back has a cavity or recess to receive the head, and the metal plate of said head has a specially formed outer end adapted to the outer end of the cavity and to engage the inner wall of the back of the brush. At their inner ends the metal plate and outer celluloid plate are formed with corresponding tongues to seat within a recess formed in the adjoining portions of the handle and back and against a concealed filler block, within which recess and against which filler block said tongues may be secured by a slidable ring on the handle.

Referring to the drawings: Figure 1 is an edge view of a tooth brush constructed in accordance with my invention; Fig. 2 an edge view of the back and handle and of the brush-head separated from each other and ready to be brought together or assembled, Fig. 3 a bottom view of the completed brush, Fig. 4 a bottom view, partly broken away and partly in longitudinal transverse section, of the back and handle, the outline of the inner end of the metal plate of the brush-head being represented by dotted lines so as to indicate the relation thereof with the filler block concealed in the handle,

Fig. 5 a vertical longitudinal section, on a larger scale, through the back portion of the brush, a portion of the handle being broken away, Fig. 6 a vertical transverse section through the same on the dotted line 6-6 of Fig. 5, and Fig. 7 a section corresponding with Fig. 5 but showing a slightly modified construction.

In the drawings 10 designates the back and 11 the handle of the brush, said parts preferably being in one rigid body of suitable material, preferably sheet metal, and said back having a convexly curved outer end wall 12 and convexly curved side walls 13, the lower edges of said walls being turned inwardly, as shown in Figs. 5 and 6, and defining an oblong opening leading into a recess or cavity within and conforming to the outline of the back 10 and adapted to receive the brush-head 14. Upon the adjacent portions of the back and handle is a slidable locking-ring 15 of known character, and within the said portions is a filler-block 16, said portions being recessed at the lower side thereof, as at 17, to expose a portion of said block to receive certain portions of the brush head hereinafter described.

The brush-head 14 comprises, in the preferred embodiment thereof, an inner metal plate 18, an outer plate or veneer 19 of celluloid or other plastic or not readily tarnishable material, a series of tufts 20 of bristles whose knot-ends are inserted through openings in said plates and extend beyond the upper surface of the plate 18, and a body 21 of rubber heat-vulcanized on the plate 18 and inner ends of the tufts of bristles and securing said tufts. The plates 18, 19, except at the front end of the plate 18, correspond in outline and are in face to face contact with each other, and at the inner ends of said plates are formed tongues 22, 23, respectively adapted to snugly fill the aforesaid recess 17, the tongue 22 bearing against the filler 16 and the tongue 23 being flush with the adjacent exposed lower surfaces of the back 10 and handle 11 and having formed in it a lug 24 over which the locking-ring or band 15 may be slid and which will aid in holding the said ring or band in locking position.

The plate 19 fits closely within the oblong opening defined by the inwardly turned edges of the front and side walls of the

back 10, as shown in Figs. 5 and 6, and is flush with said edges, thereby imparting to the brush a finished appearance and leaving no rough or exposed edges to injure the mouth. The outer end of the plate 18, which preferably sets within the recess in the back, curls outwardly upwardly and inwardly, as at 25, to engage the inner surface of the outer end wall of the back 10 and also the lower surface of the top of said back, this being for the purpose of assuring the rigid relation of the brush-head to the back. It is intended that the body of hard rubber 21 or such other material as may be employed for setting the tufts of bristles, shall bear against the lower surface of the back 10 and add stability to the brush as a whole, but in order to guard against any irregularity in the upper surface of the body 21, whereby it might not engage the lower surface of the back 10, I provide the extension 25 on the plate 18 so as to engage not only the end of the back, but a lower surface of said back and thereby rigidly maintain the outer end of the head in rigid relation to the back. The extension 25 fits within the convex surface presented by the end wall 12 of the back and prevents the front end of the head from being loose within the back. The edges of the plate 19 fit snugly within the inturned edges of the end and side walls of the back 10 and in that way serve to center the head within the back and resist lateral strains which might otherwise tend to move the head laterally. The tongues on the plates 18, 19 fit within the recess 17 formed therefor and they also serve to center the head within the back, and the fact that the filler 16 is provided to take the pressure of the tongues 22, 23, adds to the stability and efficiency of the brush. In applying the brush head to the brush back, the outer end of the head is with the other end thereof tilted downwardly, inserted into the end of the brush back and thereupon the body of the head is pressed upwardly into said back and there secured by sliding the ring 15 over the tongues 22, 23. When a brush head is to be replaced by a new one or is to be removed for any purpose, the ring 15 is slid outwardly to about the position shown in Fig. 2 and thereupon the head may be removed from the back, the outward pulling strain being applied to the inner end of said head so as to tilt the outer end of the head from over the shoulder afforded by the curved end wall 12 of the brush back.

I prefer to employ both the metal plate 18 and celluloid plate 19 in the manufacture of the heads and to locate the plate 19 flush within the edges of the sides and end of the back 10, but I may construct the head in the manner shown in Fig. 7, in which the inner metal plate numbered, being a modification,

26, is offset from the end extension 27 thereof to set flush within the lower edges of the sides and end of the back 10 so that said plate may take the end and side thrusts which might in the use of the brush otherwise tend to shift the head within the back. I show a plate 28 of plastic material or other coating substance on the lower surface of the plate 26, but do not limit the invention to the use of said plate 28, since in the construction shown in Fig. 7 the metal plate fits within the opening leading to the recess in the brush back. The plates 26, 28 are respectively provided with tongues 29, 30, corresponding with the tongues 22, 23 of the construction shown in Figs. 1 to 6 inclusive.

My invention may be embodied in a brush having a back and handle of any suitable material, but I contemplate the production of an expensive brush in which the back and handle may be of gold or silver or other metal. Brushes having detachable heads have long been known, and hence my invention is directed to a special coöperative construction of back and head permitting of the convenient detachment of the head and the very secure and efficient connection of the head with the back.

What I claim as my invention and desire to secure by Letters Patent, is:

1. A brush comprising a sheet metal back and a handle, said back having a recess in its lower side and convexly curved outer end and side walls whereby the edges of the metal along said recess are carried inwardly from a position in which they might otherwise injure the mouth of the user of the brush, a removable brush head carrying the bristles and adapted to said recess and having at its front end a part to extend over the inturned front end of said back and at its rear end a tongue, and means for securing said tongue and thereby detachably fastening said head, said head comprising a plate which fits flush within the inturned edges of the said back at the front end and sides of said recess.

2. A brush comprising a back and handle, said back having a closed integral back and edge portions and a recess in its lower side and an in-turned lower front edge, a removable brush head carrying the bristles adapted to said recess and comprising an inner metal plate extended above said front edge and an outer covering plate concealing said metal plate, and means for securing the rear end of said head.

3. A brush comprising a back and handle, said back having in its lower side a main recess and a rear recess and at its front end an in-turned edge, a removable brush head carrying the bristles adapted to said main recess and having a rear tongue fitting said rear recess and said head, comprising an inner metal plate extended above said front

edge and an outer covering plate concealing said metal plate, and means for securing said tongue in its recess.

4. A brush comprising a back and handle, 5 said back having in its lower side a main recess and a rear recess and at its front end an in-turned edge, a removable brush head carrying the bristles adapted to said main recess and having a rear tongue fitting said 10 rear recess and said head comprising an inner metal plate extended above said front edge and an outer covering plate concealing

said metal plate, and means for securing said tongue in its recess, said outer plate fitting flush within the lower edges of said 15 main and rear recesses.

Signed at New York city, in the county of New York and State of New York, this 17th day of February, A. D. 1913.

THOMAS F. BARRY.

Witnesses:

ARTHUR MARION,
CHAS. C. GILL.

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