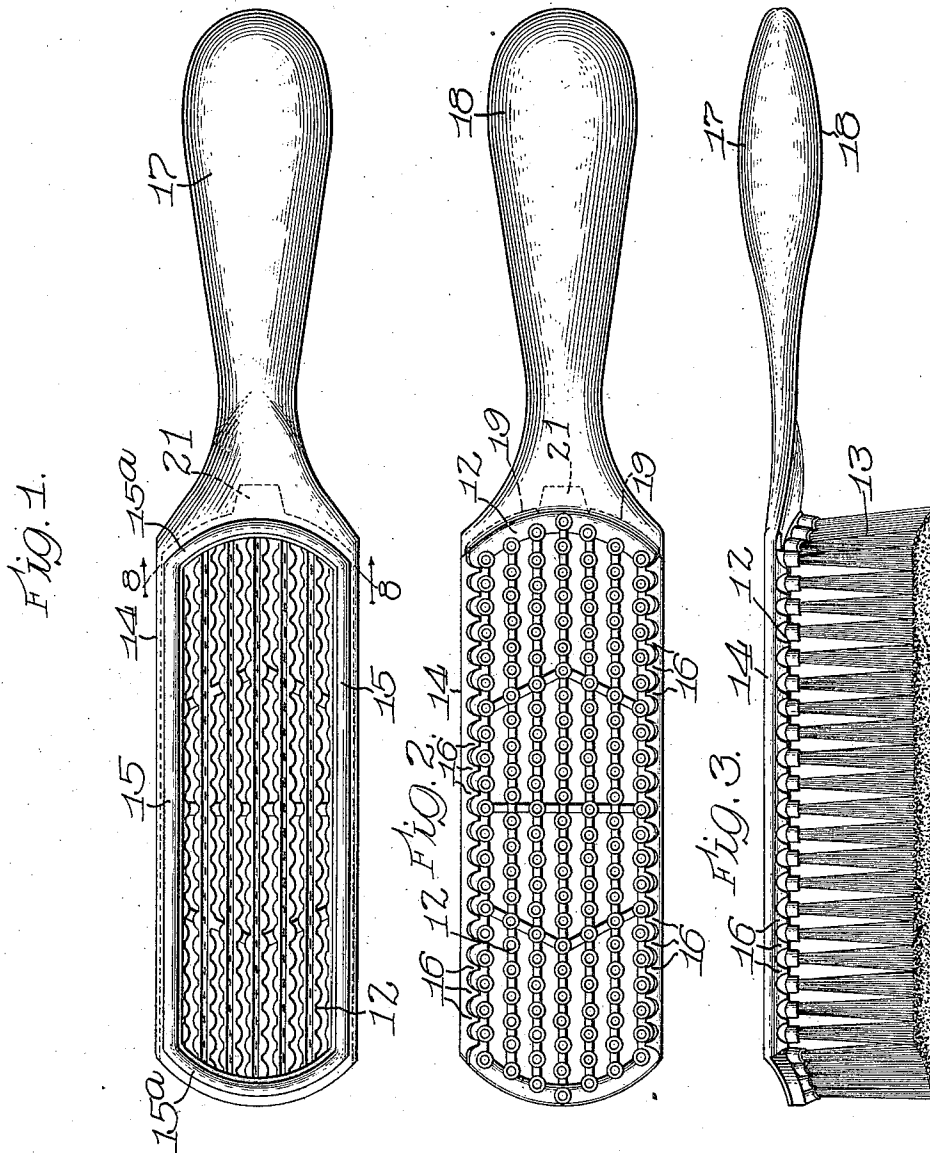


R. J. MONTGOMERY.
BRUSH.
APPLICATION FILED MAY 24, 1912.

1,063,279.

Patented June 3, 1913.

2 SHEETS-SHEET 1.



Witnesses:
G. W. F. Marus &
R. Burkhardt.

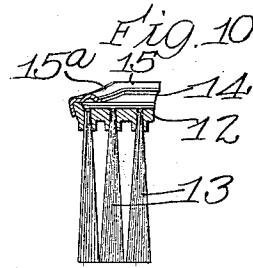
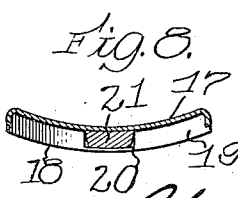
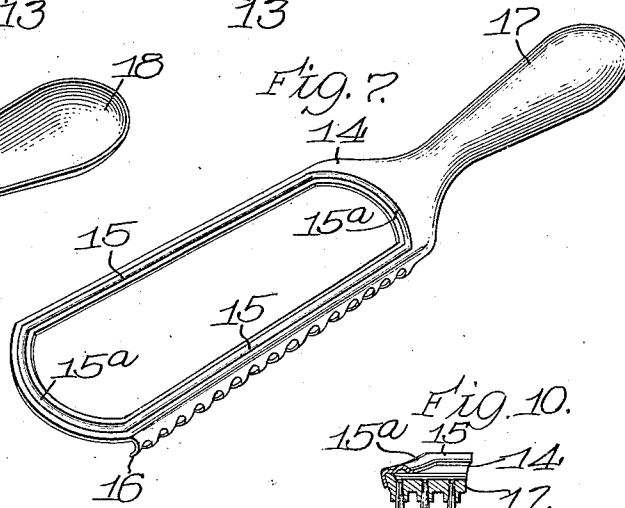
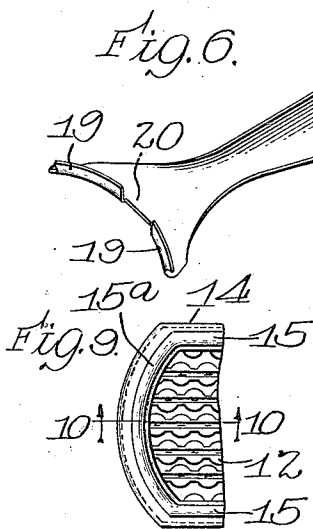
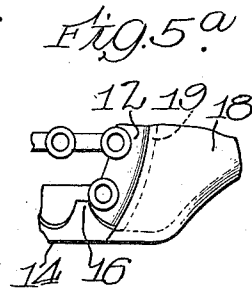
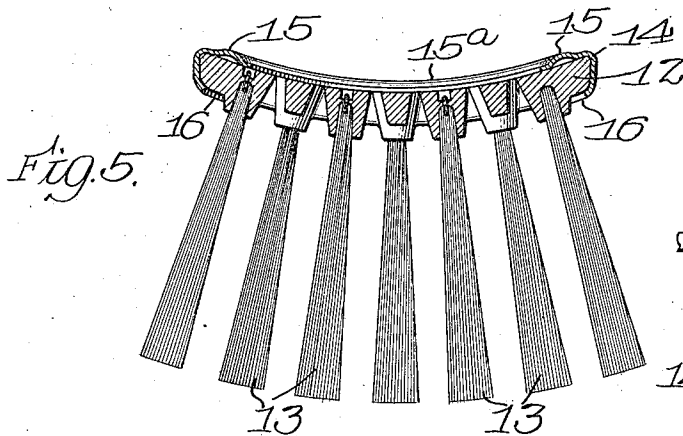
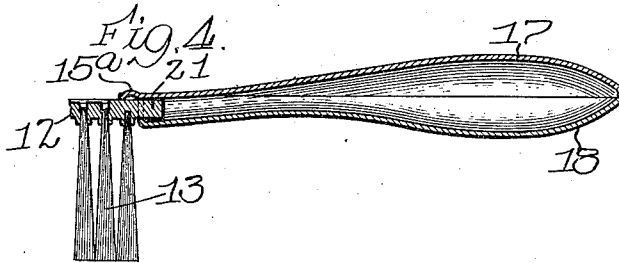
Inventor:
Robert J. Montgomery.
By Boyd, Adams, & Co. Attys.

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2 SHEETS-SHEET 2.



Witnesses:
G. W. Donatus Jr.
R. Burkhardt.

Inventor:
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UNITED STATES PATENT OFFICE.

ROBERT J. MONTGOMERY, OF CHICAGO, ILLINOIS.

BRUSH.

1,063,279.

Specification of Letters Patent.

Patented June 3, 1913.

Application filed May 24, 1912. Serial No. 699,453.

To all whom it may concern:

Be it known that I, ROBERT J. MONTGOMERY, a citizen of the United States, residing at Chicago, in the county of Cook, in the State of Illinois, have invented certain new and useful Improvements in Brushes, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in brushes, more especially brushes designed for toilet use, and has for its objects to produce a metal brush that will be very strong and durable and at the same time light in weight; that can be easily kept in a perfectly sanitary condition, and that can be economically constructed. I attain these objects by the means shown in the drawings and hereinafter specifically described.

That which I believe to be new will be set forth in the claims.

In the drawings: Figure 1 is a top view of the brush; Fig. 2 is a bottom view thereof—the brush bristles being omitted in both of these figures; Fig. 3 is a side elevation of the complete brush; Fig. 4 is a vertical central section through the handle portion and a part of the bristle-holding frame; the brush back or frame being partly broken away; Fig. 5 is a vertical cross-section, enlarged, through the brush; Fig. 5^a is an enlarged detail being a bottom view of a portion of the back and handle and a portion of the bristle-holding frame; Fig. 6 is a perspective view of the lower member of the handle portion, the view showing the inner face thereof; Fig. 7 is a perspective view of the brush back or frame; Fig. 8 is a detail in cross-section taken at line 8—8 of Fig. 1 and illustrating the straightening means employed for joining the forward end of the lower handle member in place and connecting it with the rear end of the bristle-holding frame; Fig. 9 is a detail being a plan view of the front end of the brush and illustrating a slight modification in the construction of that end of the brush-back or frame; and Fig. 10 is a cross-section taken at line 10—10 of Fig. 9.

Referring to the several figures of the drawings in which corresponding parts are indicated by like reference characters 12 indicates a bristle-holding frame, best made of metal and, as shown, of open construction, that is, formed with a number of separated longitudinal and transverse strips, in the lower faces of which strips are provided

at regular intervals a series of hollow plugs in which are suitably secured bunches of bristles 13 as usual. This bristle-holding frame, as a whole, is curved throughout its length from side to side, the convex surface being the lowermost, so that the bunches of bristles will be spread outward in the desired manner, as best shown in Fig. 5.

14 indicates the brush-back or frame which, in the construction shown, is provided with a large opening therethrough so that when it is applied to the bristle-holding frame 12 it will rest only upon the side and end members of such frame 12 thereby leaving exposed practically all of said open bristle-holding frame and thus rendering it possible to run water through the brush for cleansing purposes without separating the bristle-holding frame and the brush-back. Such a frame as 14 is necessarily very light in construction and would, unless special means were taken to guard against injury, easily become dented or bent and present an unsightly appearance, and to prevent this I form it so that it is curved from side to side throughout its length to correspond to the similar curvature given to the bristle-holding back and thereby the two frames fit snugly against each other. Furthermore, to add strength to this brush-back or frame 14 I provide it with an upwardly struck bead 15 which extends along the top of the frame at both sides, said side portions of the bead being connected, as clearly shown in Fig. 7, by curved bead portions at the ends, said curved portions being indicated by 15^a. The brush-back or frame 14 has its sides turned down against the side edges of the bristle-holding frame 12, and it is held to the bristle-holding frame 12 by a series of prongs 16 formed along the side edges of the frame 14, the prongs referred to being turned inward so as to project slightly in between the outer rows of bristle-holding plugs (see Fig. 2). Such construction effectually holds the frames 12 and 14 together. Bending or curving the back or frame 14 so that it corresponds to the curvature of the frame 12 and fits snugly thereon, and providing such frame 12 with the beads 15—15^a, enables the brush-back to be made of light, thin metal and yet be strong enough to maintain its shape even when subjected to rough usage. The forward edge of the brush-back or frame 14 is to be flush with the forward edge of the bristle-holding frame ordinarily, but

if desired for the purpose of giving a different finish or appearance to the brush such brush-back or frame 14 may be made slightly longer than the frame 12 and be turned down against the forward edge of such bristle-holding frame, as illustrated in the modification shown in Figs. 9 and 10.

17 indicates the upper portion of the brush-handle which, in the construction shown, is made integral with the brush-back or frame 14. The other or lower portion of the brush handle is indicated by 18, both portions 17 and 18 being so curved that when united along their edges in any suitable manner they will form a hollow handle. Now, a handle of thin metal is liable to be weak at the point of juncture with the body of the brush unless special provision is made for strengthening the device and I have, therefore, provided a construction for giving it needed strength, which strengthening means I will now describe.

19 indicates an upturned flange formed at the forward end of the lower handle-portion 18, such forward end and the flange thereon being curved from side to side to conform to the curvature of the rear end of the bristle-holding back, such rear curved end of the bristle-holding back abutting against such curved flange. This curved flange is provided centrally with an opening 20 through which projects a short tongue 21 on the rear end of the bristle-holding frame and preferably formed integrally therewith, such tongue having, in the form of construction shown, slightly inclined side edges so that it may be wedged very tightly into the opening 20. Furthermore it will be noticed that the upturned curved flange 19 does not extend out quite to the edges of the lower handle-member 18 thereby permitting the flange to fit snugly in between the downturned edges of the frame 14, just about where such frame merges into the handle portion 17, as seen in Fig. 8. After the lower handle-portion 18 has been fitted into place, as just described, the edges of the two handle-members are suitably united by brazing or otherwise and the hollow handle thus formed will be found to be a very secure and strong one. Its internal flange 19 fits snugly against the rear end of the bristle-holding frame to which it is also tightly secured by the wedge-shaped tongue on said bristle-bearing frame projecting through the opening 20 and additional strength is imparted by reason of the ends of said flange fitting snugly against the downturned edges of the rear portion of the frame 14, such downturned edges resting, as shown in Fig. 8, against the upper face of the handle-member 18.

The brush, as a whole, is light, strong and durable, due to the construction and arrangement of the parts, as hereinbefore set forth, and can be easily kept clean by run-

ning water through the open bristle-holding frame, as will be readily understood.

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

1. In a brush, the combination with a bristle-holding frame having its upper face concaved so that its side edges are higher than its central portion and having bristle-holding plugs projecting from its under face, of a metal back curved from side to side and fitting over and upon said bristle-holding frame with its edge portions turned down against the sides of the said frame and provided with prongs that project between some of the said bristle-holding plugs.

2. In a brush, the combination with a bristle-holding frame having its upper face concaved so that its side edges are higher than the central portion and having openings through it, of a metal back curved from side to side and having its central portion cut away so that water may be passed through both the frame and back, said back being curved from side to side to correspond to the curvature of the frame and having its edge portions turned down and provided with means for engaging the under face of said bristle-holding frame to hold the frame and back together.

3. In a brush, the combination with a bristle-holding frame having openings therethrough, of a metal back cut away in its central portion so that water can be passed through both the said frame and back, and having its side portions resting upon the upper face of said frame and turned down and in to engage the under face of said frame to hold the said two members together.

4. In a brush, the combination with a bristle-holding frame having openings therethrough and provided on its under face with projecting bristle-holding plugs, of a metal back cut away in its central portion so that water can be passed through both the said frame and back, and having its side portions resting upon the upper face of said frame and having prongs at the edges that are turned in to project between some of the said bristle-holding plugs.

5. In a brush, the combination with a bristle-holding frame having a tongue projecting from its rear end, of a back secured to said frame and carrying a handle portion, and a second handle portion adapted to be united to said first-mentioned handle portion to form a complete handle, said second-mentioned handle portion having a flange that abuts against the rear end of the bristle-holding frame and being provided with an opening through which projects said tongue.

6. In a brush, the combination with a bristle-holding frame having a wedge-shaped tongue projecting from its rear end,

of a back secured to said frame and carrying a handle portion, and a second handle portion adapted to be united to said first-mentioned handle portion to form a complete handle, said second-mentioned handle portion having a flange that abuts against the rear end of the bristle-holding frame and being provided with an opening through which projects said wedge-shaped tongue.

7. In a brush, the combination with a bristle-holding frame having a tongue projecting from its rear end, of a back secured to said frame and carrying a handle portion with downwardly-turned edges, and a second handle portion adapted to be united to said first-mentioned handle portion to form a complete handle, said second-mentioned handle portion having a flange that abuts against the rear end of the bristle-holding frame and being provided with an opening through which projects said tongue, said

flange being slightly less in length than the width of the first-mentioned handle portion so as to fit between the said downwardly-turned edges thereof.

8. In a brush, the combination with a bristle-holding frame having a convex rear end and a tongue projecting from such rear end, of a back secured to such frame and carrying a handle portion, and a second handle portion adapted to be united to said first-mentioned handle portion to form a complete handle, said second-mentioned handle portion having a curved flange that fits against the said convex rear end of the bristle-holding frame and being provided with an opening through which projects said tongue.

ROBERT J. MONTGOMERY.

Witnesses:

ALBERT H. ADAMS,
W. A. FURNNER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."