(No Model.)

M. L. RHEIN.

TOOTH BRUSH.

No. 306,776. Patented Oct. 21, 1884.

Fig. 1.

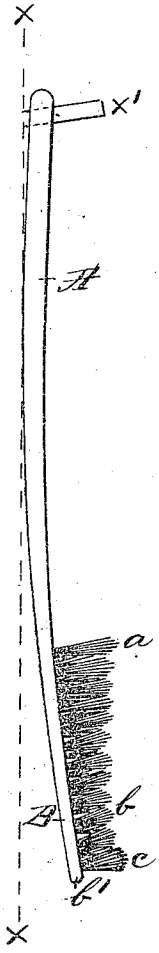
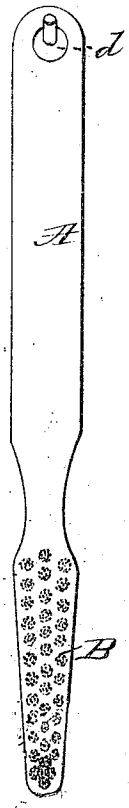


Fig. 2.



Witnesses,
John W. Lee
Jas. S. O'Callaghan.

Inventor,
Meyer L. Rhein M.D., D.D.S.
by Phillips Abbott
his attorney.

UNITED STATES PATENT OFFICE.

MEYER L. RHEIN, OF NEW YORK, N. Y.

TOOTH-BRUSH.

SPECIFICATION forming part of Letters Patent No. 306,776, dated October 21, 1884.

Application filed January 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, MEYER L. RHEIN, a citizen of the United States, and a resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Tooth-Brushes, of which the following is a specification.

My invention consists in the construction of the brush hereinafter described and claimed.

Figure 1 shows a side view of my improved brush. Fig. 2 shows a top view thereof, the bristles being presented upwardly.

Like letters indicate like parts in both figures.

It is now generally understood by those skilled in the dental art, for reasons which need not here be explained, that the teeth should be cleansed by passing the bristles of the brush over them lengthwise of the teeth—*i. e.*, from the gums toward their cutting or grinding surfaces—and not transversely across the teeth; and also that one of the reasons why the back teeth, and especially the "wisdom" teeth, have to be early extracted is because they are insufficiently cleansed, and therefore decay, and also that a large proportion of the cavities which occur in the "incisors" originate in the inside of these teeth for the same reason.

A is the handle of my improved brush, made of any suitable material. Instead, however, of being straight or curved backwardly, as such brushes have heretofore been made, I curve the handle forwardly, as shown in the drawings, the bristles being on the inside of the curve. The back of the brush, (shown at B,) instead of being of the same size throughout its length, tapers quite decidedly from about the rear end of the brush—or, in other words, that part thereof which is nearest the handle—toward the front end of the brush, (seen at *b'*,) and also the back is preferably reduced in thickness toward the front end as much as may be and still retain sufficient thickness to firmly hold the bristles. The bristles are set into the back, or are cut after being so set, in the manner shown in Fig. 1. At *a* they are long. They then gradually decrease in length until they reach a point—say at *b*—and then rise quite abruptly, and terminate at the front end of the brush in a prominent projecting tuft, C, and since the lines of bristles converge to this point, the tuft C is quite a compact mass of bristles. This curve given to the face of the bristles is intended to follow the curve of the line of teeth on the sides of the jaws.

It will be observed that by curving the handle, as shown, the brush will be more easily and naturally held in proper relation to the teeth than if it were straight or curved in the opposite direction, because the brush is usually held in the hand which is opposite the row of teeth being brushed. Thus the curvature of the handle and the curved outline given to the ends of the bristles coact to enable the user, by simply rotating his wrist, to cause the bristles to pass uniformly over all the teeth in juxtaposition to the brush from the gums downwardly; also, that, the bristles being cut in the curved outline shown, they rub equally against all the teeth in juxtaposition to them, and, owing to the front end of the back of the brush being reduced in width, and preferably in thickness also, it can be more easily carried up under the cheek, which, opposite the back teeth, is quite thick and heavy, to the junction between the gums and the teeth, than if the back of the brush were the same width and thickness throughout. And it will also be especially noticed that the stiff tuft of bristles C at the extreme end of the brush can be made to pass around behind the last tooth, which is normally a wisdom tooth, and thus thoroughly brush all sides of it.

When used to brush the inner surfaces of the teeth, especially the incisors, the curvature of the handle enables the user more naturally and easily to bring the tuft C against such surfaces.

Tooth brushes as usually made have no means by which they can be suspended, and consequently are usually placed in a mug or brush-dish, with the bristles either pointing downward or at least horizontal. The moisture in the brush does not readily evaporate

when it is left in either of these positions, and it therefore rapidly deteriorates. In order that the brush may be suspended, I make a hole, *d*, in the end of the handle sufficiently large to slip over a peg or other suitable support provided for it, whereby it may be suspended, as stated. Thus the air freely circulating around the brush dries it rapidly.

I am aware that a hole has been made through the handle of culinary utensils, whereby they may be suspended; but never to my knowledge has any provision been heretofore made for suspending a tooth-brush; and whereas the hole in the handle of said culinary utensils has been provided simply and solely as a means whereby the same may be kept in the place provided for it, without any special benefits resulting to such utensil by reason of its occupying a suspended position, it is not so with a tooth-brush, because, as heretofore stated, special advantages are incident to the suspension of a tooth-brush; and not only is this true, but, furthermore, special advantages result from having the means of suspension a rigid support and a hole in the handle of the brush, passing through it from front to rear, because if the means of suspension were a string or a ring passing through such a hole, then the brush could twist on the string or ring and the wet bristles come in contact with the wall or other thing against which the brush was suspended, thus injuring the bristles, and being also unpleasant to the user of the brush; but, on the contrary, the hole being made in the handle, as shown, and the brush hung with the bristles pointing outwardly, they cannot come in contact with anything, and because of the curvature of the handle the brush will assume the position shown in Fig. 1, X representing the vertical surface against which the brush is hung, and X′ the peg.

I am also aware that prior to my invention tooth-brushes have been made in which the bristles have been trimmed or cut on the arc of a circle, so that the central bristles were shorter than those at the ends, and also that that portion of the handle which constituted the back of the brush, into which the bristles were inserted, has been given a curved form, so that the outer ends of the bristles, although the bristles were all of the same length, have had a curved outline. I therefore do not claim these features, broadly.

Having thus described my invention, I claim—

1. As a new article of manufacture, the herein-described improved tooth-brush, having a handle curved one way throughout substantially its entire length, and tapered edgewise toward the end of the brush at the part which forms the back of the brush, provided with bristles placed on the inside of the curve, a projecting tuft of bristles on the extreme end of the brush, and a hole in the end of the handle, substantially as and for the purposes set forth.

2. A tooth-brush comprising a handle curved one way throughout substantially its entire length, and provided with bristles on the inside of the curve, that portion of the back which contains the bristles being tapered edgewise toward the end of the brush, and a tuft of bristles at the extremity of the brush projecting beyond the surface of the adjoining bristles, substantially as and for the purposes set forth.

3. A tooth-brush provided with two or more converging lines of bristles, which extend substantially the entire length of the brush, and terminate at the extremity of the brush in a tuft of bristles, which projects at right angles to the handle of the brush and beyond the surface of the adjoining bristles, substantially as and for the purposes set forth.

4. A tooth-brush in which the back of the brush tapers from the end of the brush nearest the handle toward the extremity of the brush, and also is reduced in thickness toward the extremity, substantially as and for the purposes set forth.

5. A tooth-brush having a handle formed in substantially the arc of a circle, the bristles being placed on the inside of the arc and at one end of the handle, and a hole through the handle from the front to the back side thereof at the end opposite the bristles, so that when the brush is suspended by means of a peg passing through the hole, with the bristles presented outwardly, the semicircular or arc shape of the handle will cause that part of the brush which contains the bristles to be held away from the wall or other object against which the brush is hung, substantially as and for the purposes set forth.

Signed at New York, in the county of New York and State of New York, this 31st day of December, A. D. 1883.

MEYER L. RHEIN.

Witnesses:
BENNO LOEWY,
WALTER H. CRITTENDEN.