

(No Model.)

T. I. WALLAS.
TOOTH OR OTHER BRUSH.

No. 560,663.

Patented May 26, 1896.

Fig. 3.

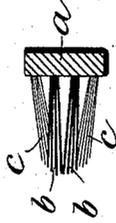


Fig. 1.

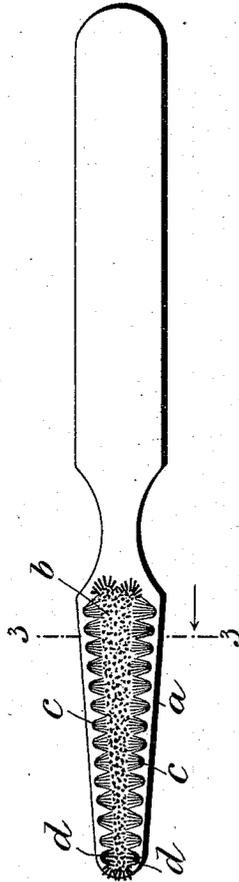
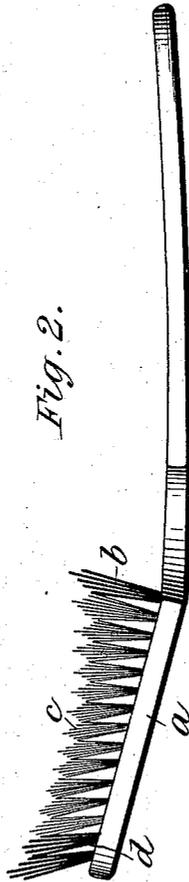


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

THOMAS IRWIN WALLAS, OF LONDON, ENGLAND.

TOOTH OR OTHER BRUSH.

SPECIFICATION forming part of Letters Patent No. 560,663, dated May 26, 1896.

Application filed September 9, 1895. Serial No. 561,898. (No model.)

To all whom it may concern:

Be it known that I, THOMAS IRWIN WALLAS, of London, England, have invented certain new and useful Improvements in Tooth or Like Brushes, of which the following is a specification.

My invention has reference to tooth or like brushes, and its object is to improve such articles.

My invention consists, first, of a brush having three or more longitudinal rows of tufts of bristles, in which the bristles in the several rows are of graduated degrees of hardness from the middle row or rows to the outside rows. For example, in a tooth-brush having four rows of bristles the bristles of the two middle rows will be hard and those of the two outside rows softer.

My invention further consists of a brush having three or more longitudinal rows of tufts of bristles, the tufts of the several rows (except those of the center row when there is an odd number of rows) being inclined toward the central longitudinal line of the brush, so that the brush is of conical shape in transverse section.

My invention further consists of a brush having three or more longitudinal rows of tufts of bristles, the tufts at and near the outer end of the brush having a forward inclination, while those at and near the handle end are not inclined either forward or backward, and preferably the tufts gradually increase in length from near the middle of the brush to the two ends.

In the accompanying drawings, Figure 1 is a face view of the brush in which my improvements are embodied; Fig. 2, a side view, and Fig. 3 a section on the line 3 3 of Fig. 1.

The brush shown has four rows of bristles secured to the back or stock *a* in any usual way, but the number of rows of bristles may obviously be more or less than four. The bristles in the two middle rows *b b* are hard and those of the two outer rows *c c* are softer. The last or end tuft *d* of each of the outer rows is, however, preferably of the same de-

gree of hardness as the tufts of the middle rows *b b*. The tufts of all the rows are inclined toward the central longitudinal line of the brush, so that the brush is of conical shape in transverse section, as seen in Fig. 3, wherein the inclination of the rows *b* is so slight that their outer bristles are substantially parallel while their inner bristles touch or approach, as desired. The tufts at and near the handle end are not inclined either forward or backward, but the other tufts have a forward inclination, and the inclination by preference gradually increases toward the outer end of the brush. The tufts are shown as also gradually increasing in length from near the middle of the brush to the two ends.

A tooth-brush made as above described is durable in wear and efficient in cleansing capacity. It is easy to use, it can reach all the teeth, and can be applied as readily to their inner surfaces as to their outer surfaces, and it penetrates the interstices of the teeth.

Although specially applicable to tooth-brushes, my invention is also applicable to other brushes of a similar character—such, for example, as nail-brushes.

What I claim, and desire to secure by Letters Patent, is—

As a new article of manufacture, a tooth-brush having longitudinal rows of tufts of bristles, the bristles in the several rows being of graduated degrees of hardness from the middle row or rows to the outside rows, and the tufts being inclined toward the central longitudinal line of the brush, and the said tufts, except those at and near the handle end, having also a forward inclination, substantially as hereinbefore described and shown.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

THOMAS IRWIN WALLAS.

Witnesses:

GEORGE BELOE ELLIS,
GEORGE C. BACON.