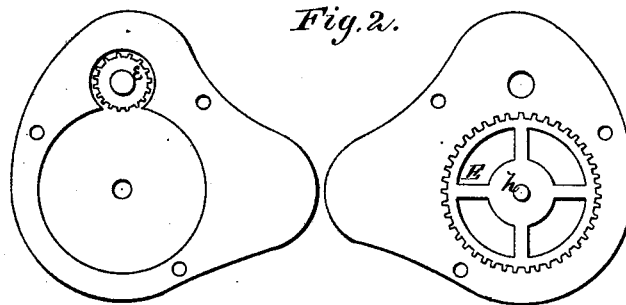
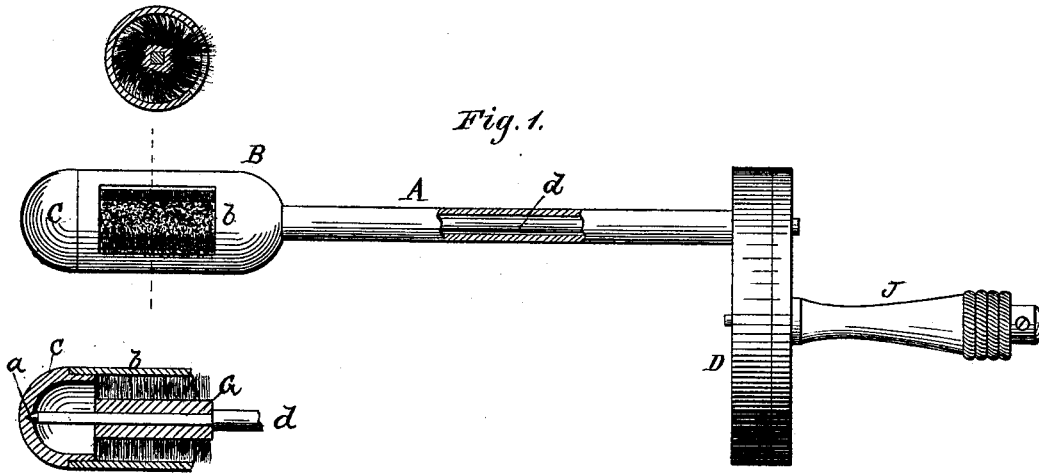


W. L. COAKLEY & S. W. LLOYD.

TOOTH-BRUSH.

No. 189,699.

Patented April 17, 1877.



WITNESSES

*Joseph A. Knight*  
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# UNITED STATES PATENT OFFICE

WALTER L. COAKLEY AND SAMUEL W. LLOYD, OF WASHINGTON, DISTRICT OF COLUMBIA.

## IMPROVEMENT IN TOOTH-BRUSHES.

Specification forming part of Letters Patent No. 189,699, dated April 17, 1877; application filed March 31, 1877.

*To all whom it may concern :*

Be it known that we, WALTER L. COAKLEY and SAM. W. LLOYD, of Washington, in the county of Washington, District of Columbia, have invented certain new and useful Improvements in Tooth-Brushes; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The nature of our invention consists in a revolving tooth-brush, arranged within a slotted case, and in the construction and combination of parts, as will be hereinafter more fully set forth.

In the annexed drawing, to which reference is made, Figure 1 is a side elevation, partly in section, of our invention. Fig. 2 is a detailed view of the gearing for operating the brush.

A represents a tubular stem, of any suitable dimensions, provided at one end with a cylindrical case, B, which is closed at its outer end by means of a semi-spherical or globular screw plug or cap, C.

The case B has on one side an aperture, *b*, as shown, and this side of the case may be flattened, if desired.

The other end of the stem A is fastened in a case, D, containing a pinion, *e*, and a cog-wheel, E. The pinion *e* is secured on a shaft, *d*, which passes through the stem A, and has its other end pointed, as shown at *a*, and enters a recess in the cap C.

On the shaft *d* within the case B is secured a cylindrical brush, G. This brush may be fastened on the shaft by any suitable means, in such a manner as to rotate with the shaft and yet be easily removable when the cap C is taken off and another brush put on.

The cog-wheel E is secured on a shaft, *h*, passing out from the case D in the opposite

direction from the stem A, and on this shaft is secured a handle, J, by means of which the cog-wheel E rotates the pinion *e* and shaft *d*, and thereby gives a rapid rotary motion to the brush G.

The cylindrical case B is to be held against the teeth—that is, so that the teeth will be across the aperture *b* in the said case, and by now turning the handle J the brush is rapidly revolved over the teeth, cleaning the same rapidly and thoroughly.

It will be seen that the action of the brush is lengthwise of the teeth, and not crosswise, as when an ordinary tooth-brush is used. By such motion of the brush the teeth are cleaned better and quicker, as well as in between the teeth.

The handle J and the gear-wheels may be dispensed with, and a crank may be applied to the end of the shaft *d* for rotating the brush; but, by the application of the gears, a more rapid motion of the brush is obtained.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A revolving tooth-brush, arranged within a case provided with a suitable aperture in the side, for the purposes herein set forth.

2. The combination of the hollow stem A, cylindrical case B with aperture *b*, cap C, and rotating shaft *d*, with tooth-brush G, substantially as and for the purposes herein set forth.

3. The combination of the hollow stem A and cylindrical case B with the case D, gears *e* E, handle J, shafts *h* and *d*, and brush G, substantially as and for the purposes set forth.

In testimony that we claim the foregoing as our own we affix our signature in presence of two witnesses.

WALTER L. COAKLEY.  
SAMUEL W. LLOYD.

Witnesses:

JOSEPH N. WRIGHT,  
P. M. KELLY.