

(No Model.)

G. C. COURTRIGHT & J. W. PURDY.
ROTARY TOOTH BRUSH.

No. 569,409.

Patented Oct. 13, 1896.

Fig: 1.

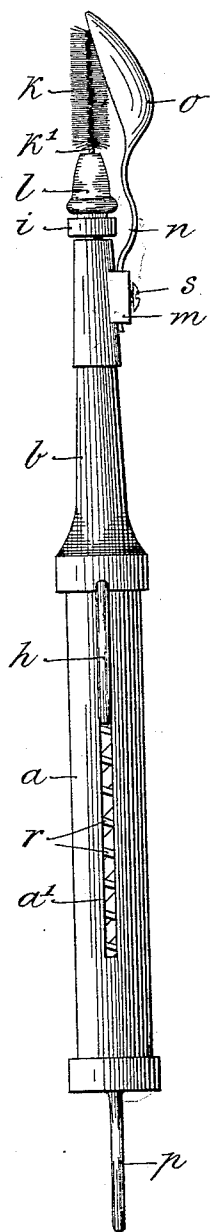
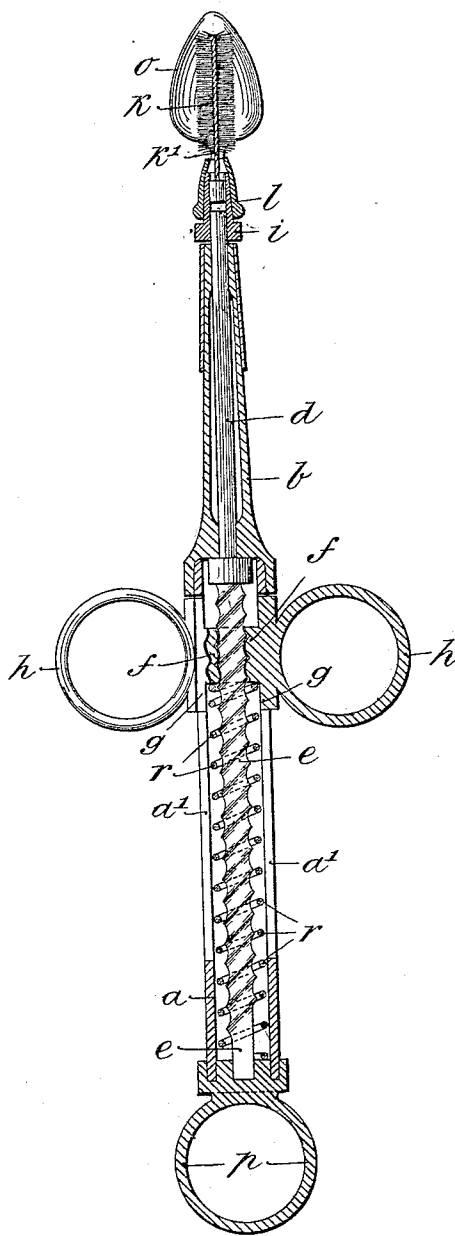


Fig: 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE C. COURTRIGHT AND JOHN W. PURDY, OF PHILADELPHIA,
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ROTARY TOOTH-BRUSH.

SPECIFICATION forming part of Letters Patent No. 569,409, dated October 13, 1893.

Application filed November 13, 1895. Serial No. 568,807. (No model.)

To all whom it may concern:

Be it known that we, GEORGE C. COURTRIGHT and JOHN W. PURDY, citizens of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Rotary Tooth-Brushes, of which the following is a specification.

Our invention has relation to a rotary tooth-brush, and in such connection it relates particularly to the construction and arrangement of such a tooth-brush.

The principal objects of our invention are, first, to provide a rotary tooth-brush of simple and durable construction, and, second, to provide in such a tooth-brush a spoon-shaped shield partially surrounding the brush but not resting upon the teeth or gums, and adapted to prevent the fleshy portions of the mouth from coming in contact with the brush and to receive and retain the matter removed from the teeth by the brush.

Our invention, stated in general terms, consists of a rotary tooth-brush constructed and arranged in substantially the manner herein-after described and claimed.

The nature and scope of our invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a side elevation of a rotary tooth-brush embodying features of our invention; and Fig. 2 is a vertical cross-section of the tooth-brush, illustrating the construction and arrangement of the various parts constituting our improvement.

Referring to said drawings, *a* represents a cylindrical case provided with the slots *a'*. From the forward end of this case projects a tapered case *b*, united to the case *a* by a screw-joint, or in any suitable manner. Through the case *a* and case *b* extends a stem or spindle *d*, mounted to rotate freely in said cases. The lower end of this spindle *d* is spirally fluted or twisted, as at *e*. Surrounding the spirally-twisted portion *e* of the spindle *d* is a block or sliding piece *f*, adapted when slid up or down upon the portion *e* to

rotate the spindle *d* in either direction. The interior of the piece or block *f* is internally threaded in a manner corresponding to the threads or spiral flutings of the portion *e* of the spindle *d*. From the sides of the piece or block *f* extend the guides *g*, which fit into the slots *a'* of the case *a* and are guided up and down therein. To the guides *g* are secured the finger-pieces *h*, which may consist of rings, as shown in the drawings, or of any suitable projections adapted to receive the fingers of the operator.

The spindle *d* terminates, preferably, in a split sleeve *i*, extending beyond the case *b*, and adapted to receive the shaft *k'* of a brush *k*. Surrounding this sleeve *i* is a cap *l*, adapted to be screwed down thereon to compress the same.

It is obvious that the cap *l*, when screwed down, will secure the shaft *k'* of the brush to the sleeve *i* of the spindle *d*.

On the side of the case *b* is placed a box or clamping device *m*, adapted to receive the handle or stem *n* of a spoon-shaped shield *o*. This shield *o* projects slightly beyond the brush *k* and partially surrounds the same.

If desired, a finger-piece *p* may be secured to the bottom of the case *a*, and adapted to receive the thumb of the operator.

Between the lower edge of the piece or block *f* and the lower end of the case *a* and within the case is placed a spiral spring *r*, which is coiled around the spiral portion *e* of stem *d*, and is adapted to normally support the piece or block *f* in its highest position, as indicated in the drawings.

The spoon-shaped shield *o* is secured in the box *m* by means of a thumb-screw *s*, clamping the stem of said shield to the box, or, if desired, the shield may be secured to the box in any other well-known way, the principal object being that the shield *o* may be easily secured to or removed from the case *b*.

In operation the operator places a finger in each of the finger-pieces *h* and his thumb preferably in the finger-piece *p*. In this position by drawing down the block *f* against the tension of the spring *r* the spindle *d* and brush *k* are rotated in one direction, and by releasing the pressure on the finger-pieces *h* the spring

7 returns the block *f* to its former position,
 thus rotating the spindle *d* and brush *k* in the
 other direction. The brush end of the instru-
 5 ment is inserted in the mouth, so that the brush
 will rest on the teeth and the shield *o* against
 the fleshy portion only of the mouth. In this
 position the shield *o* not only serves to distend
 the mouth in the proper manner, but it also
 10 serves to receive and retain the offensive mat-
 ter removed by the brush from the face of
 and crevices in the teeth without resting upon
 the gums or teeth. By removing the brush
k and substituting another of similar char-
 15 acter the instrument may be used upon the
 teeth of any number of persons, the shield *o*
 being also capable of being removed for the
 purpose of cleansing or for the substitution
 of larger or smaller shields or of shields of
 20 varying conformation conforming to the size
 and conformation of the mouth of the per-
 sons whose teeth are to be cleansed. It is
 therefore obvious that our brush may be used
 either by dentists or private individuals and
 that those portions coming in contact with
 25 the mouth or teeth may be easily removed
 and replaced. It is also obvious that the cas-
 ing *a b* for the spindle, if preferred, may be
 made in one instead of two portions.

Having thus described the nature and ob-

jects of our invention, what we claim as new, 30
 and desire to secure by Letters Patent, is—

The combination, in a rotary tooth-brush,
 of a two-part casing, one portion of which is
 vertically slitted and provided at the end with
 a removable cap having a thumb or finger 35
 supporting ring and the other portion is made
 tapering, a spindle adapted to be rotated in
 said casing, one portion of said spindle being
 spirally fluted or twisted, a block or piece
 provided with ring-handling devices, said 40
 block thereby adapted to be slid in said slitted
 casing on said spindle, a spiral spring mount-
 ed in said casing between said block and bot-
 tom of said casing, a rotary brush connected
 with the upper end of said spindle and a 45
 spoon-shaped shield removably secured to the
 tapered portion of said casing and projecting
 beyond and sidewise of said brush, substan-
 tially as shown and for the purposes de-
 scribed. 50

In testimony whereof we have hereunto set
 our signatures in the presence of two subscrib-
 ing witnesses.

GEORGE C. COURTRIGHT.

JOHN W. PURDY.

Witnesses:

THOMAS M. SMITH,

RICHARD C. MAXWELL.