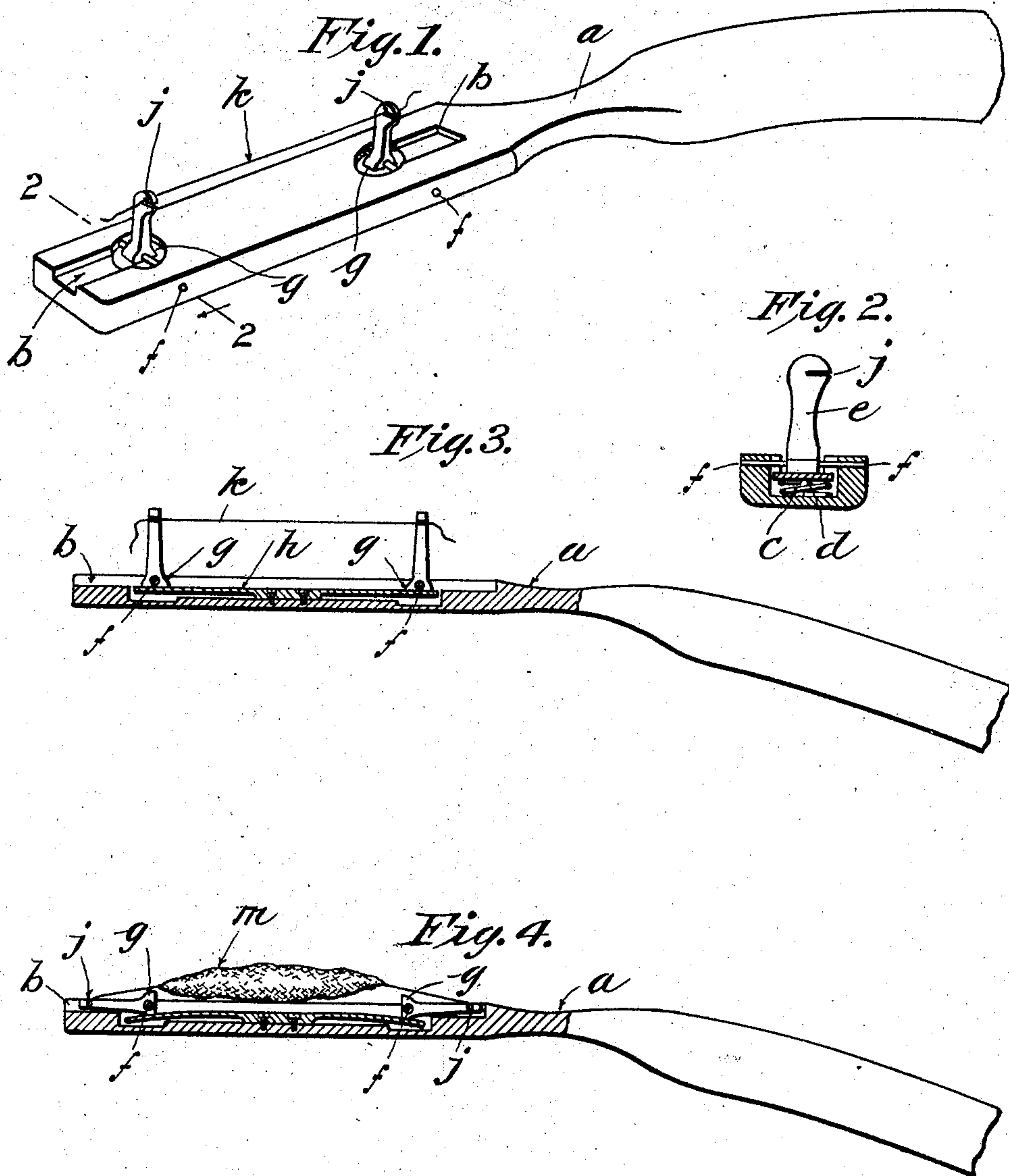


No. 827,121.

PATENTED JULY 31, 1906.

P. F. ROACH.
TOOTH CLEANING DEVICE.
APPLICATION FILED OCT. 31, 1905.



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UNITED STATES PATENT OFFICE.

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TOOTH-CLEANING DEVICE.

No. 827,121.

Specification of Letters Patent.

Patented July 31, 1906.

Application filed October 31, 1905. Serial No. 285,309.

To all whom it may concern:

Be it known that I, PATRICK F. ROACH, a citizen of the United States of America, residing at Westfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Teeth-Cleaning Devices, of which the following is a specification.

This invention relates to improvements in teeth-cleaning devices, the object thereof being to provide an article of this class which may be used either to hold a piece of dental floss subtended between two suitable supports or to hold a suitably-prepared swab of cotton or other material to the end that the same article may be used for passing the floss between the teeth or for brushing or cleansing the exposed faces of the teeth; and having these ends in view the invention consists in the construction which will be hereinafter fully described and claimed.

The invention is clearly illustrated in the drawings, in which—

Figure 1 is a perspective view of a handle part on one end of which posts are mounted to hold the floss or the cleansing-swab. Fig. 2 is a cross-sectional view, on an enlarged scale, in the plane of line 2 2, Fig. 1, and shows the manner of supporting the posts, whereby it may be swung from horizontal to vertical position, means being provided to hold it in either position. Fig. 3 is a sectional elevation showing a slight modification of the construction shown in Fig. 1. Fig. 4 is a sectional elevation similar to Fig. 3, but showing the posts swung down into the plane of the handle portion and showing a cleansing-swab attached to the posts, whereby it is held firmly against the handle portion.

In carrying my invention into practice the handle *a* is made of any suitable material in the same manner as the handle of an ordinary tooth-brush, and near each end of that part which in the ordinary construction receives the bristles a slot or channel *b* is formed longitudinally thereof, the inner ends of which slot are deepened, as shown in Fig. 2, to form a cavity for the reception of a spiral spring *c* and a flat washer *d*. This washer forms a platform on which the post *e* is seated, this post, as shown in the drawings, having a flat base and being pivotally supported on a pin or pins *f* centrally over this washer. On one side of the base of the posts is a projection *g*,

which constitutes a stop and which will prevent the posts from being easily swung toward each other, the opposite side of the base being so constructed as to permit the posts to swing away from each other, whereby, as shown in Fig. 4, they may be located in the slots *b* to bring them practically flush with the surface of the handle part, the spring *c* serving to hold these posts firmly in either position. The construction which I prefer is that which is illustrated in Figs. 1 and 2, in which the spiral spring *c* and the washer *d* are used. A legitimate modification, however, of this construction is shown in Figs. 3 and 4, which consists in extending the slot *b* through the surface of the handle part between the two posts, and instead of fitting a separate spiral spring and washer under each post of locating a flat spring *h* in the slot *b* and securing it therein midway between the posts, the free ends of the spring extending in either direction to a point under each post and out of contact with the bottom of the slot *b*, the action of these ends of the spring being against the under side of the posts, whereby the same result will be obtained as with the spiral spring.

Each of the posts is provided with a slit *j*, near the outer end thereof, of such width that a piece of dental floss *k* or like material may be drawn into these slits and tightly held therein to hold the floss subtended between the posts and far enough away from the handle portions to permit the floss to be passed between the teeth as desired.

When it is desired to cleanse the teeth, instead of the floss a suitable pad or swab *m* is used, such as is shown in Fig. 4, which is provided with a cord or thread extending through it lengthwise, whereby it may be tightly secured to the handle part between the posts. In this case, however, the posts are swung downwardly away from each other into the slot *b*, the thread extending through the pad or swab and to which the latter is secured, being first slipped into the slits *j* and the posts then turned down to horizontal position, as shown, whereby the thread will be subtended between the posts in the same manner as though the latter were in the position shown in Fig. 1, thus stretching the pad or swab over the surface of the handle in position which permits its use in the same way as a brush is used. As the posts are swung down

the thread will slip in the slits *j*; but it fits tightly enough to be drawn taut between the posts when the latter are down.

5 Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

10 1. A teeth-cleaning implement comprising a suitable handle part, posts pivotally mounted near one end thereof to swing toward and from each other, and means to subtend a thread or the like between the ends of the posts.

15 2. A teeth-cleaning implement comprising a suitable handle part, posts pivotally mounted near one end thereof to swing toward and from each other from horizontal to vertical position, a slot or slots in which said posts are mounted, and means to subtend the thread or the like between the ends of the posts.

20 3. A teeth-cleaning implement comprising a suitable handle part, posts pivotally mount-

ed near one end thereof, there being a cavity in the handle part beneath said posts, and a suitable spring in said cavity to bear against the bottom of the posts to hold the latter 25 firmly in vertical or horizontal position, and means to subtend a thread or the like between the ends of the posts.

30 4. A teeth-cleaning implement comprising a suitable handle part, posts pivotally mounted near one end thereof, a spring located between the handle part and the bottom of said posts to hold the latter firmly in vertical or horizontal positions, a projection on the base of said posts to limit the swinging movement 35 thereof in one direction, and means to subtend a thread or the like between the ends of the posts.

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