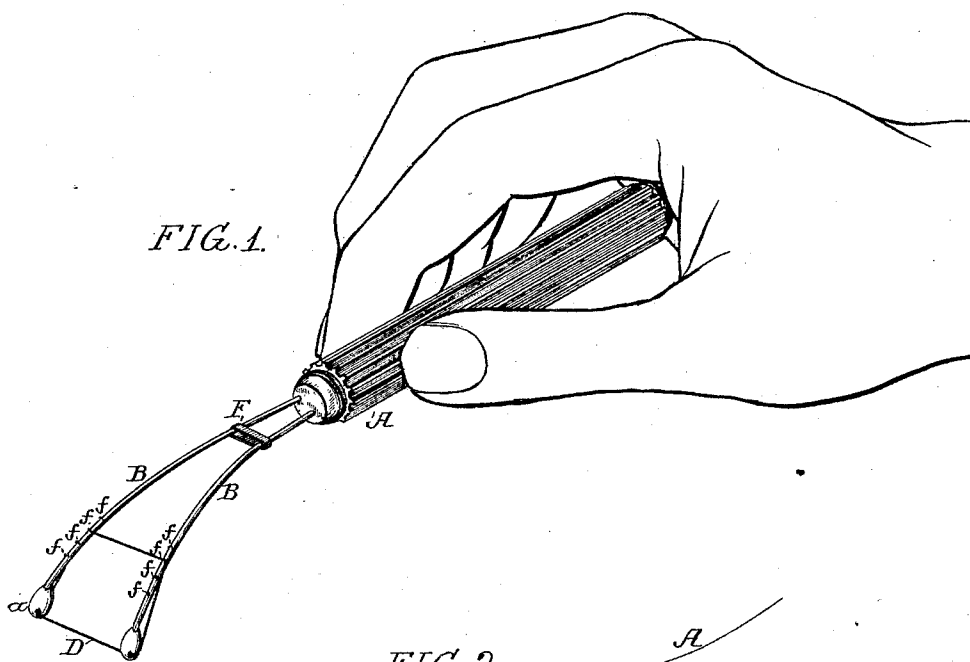
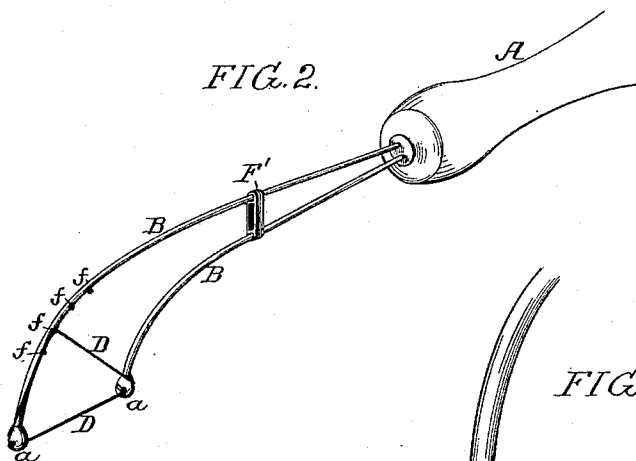
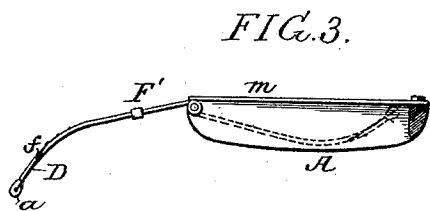
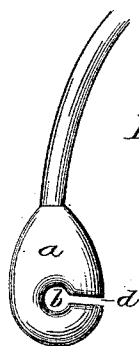


(No Model.)

J. A. WALSH.
TOOTH CLEANING IMPLEMENT.

No. 413,001.

Patented Oct. 15, 1889.



Witnesses.
Jno. E. Parker.
William D. Conner.

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UNITED STATES PATENT OFFICE.

JOSEPH A. WALSH, OF PHILADELPHIA, PENNSYLVANIA.

TOOTH-CLEANING IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 413,001, dated October 15, 1889.

Application filed July 8, 1889. Serial No. 316,822. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH A. WALSH, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Tooth-Cleaning Im-

plements, of which the following is a specification.
The object of my invention is to provide a simple, convenient, and effective device for the removal of foreign matters from between the teeth; and this object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a tooth-cleaning device constructed in accordance with my invention. Fig. 2 is a perspective view illustrating another form of the device. Fig. 3 is a sectional view illustrating still another form of the same, and Fig. 4 is an enlarged view of a portion of the device shown in Fig. 1.

The implement shown in Fig. 1 comprises a handle A, with two projecting spring-fingers B B, having enlarged ends *a*, in each of which is an opening *b* and a slot *d*, extending from said opening to the outer edge of the enlargement, as shown in Fig. 4, so that a filament D, in the form of a ring or band, can be introduced into the openings *b* of the two arms and retained therein by engagement with one or other of a series of projections *f*, formed by nicking or recessing the wires constituting the arms B B. The filament which I prefer to use for the purpose is rubber, as I have found that such a filament exercises a much better cleaning effect than the filaments of silk or other textile material which have heretofore been used for the purpose, while, owing to the elasticity of the rubber band, the size of the cleaning-filament can be readily varied by stretching the same to a greater or less extent. In the device shown in Fig. 1 this stretching of the filament is effected by the spreading of the arms B B, said arms having an inherent tendency to spread so as to stretch the filament to its full limit, but this tendency being restricted to any desired extent by the adjustment on the arms of a retaining or confining yoke F. As the latter is moved

outward toward the ends of the arms, said arms will be drawn together and the rubber band will be permitted to contract, while if the yoke is moved rearward on the arms the latter will be permitted to expand so as to stretch the band. The inherent tendency of the arms may, however, be to approach each other, and the arms may be separated in order to stretch the band by the adjustment of a yoke F' exercising a positive control upon the arms, as shown in Fig. 2, for instance, in which device also the arms are shown as located one above the other instead of being side by side, as in the implement shown in Fig. 1.

The arms may in some cases be pivoted to the handle, as shown in Fig. 3, for instance, the handle being recessed so that the arms can be folded down into the same, as shown by dotted lines, and being provided with a spring *m*, similar to that of an ordinary pocket-knife, and serving to retain the arms both when extended and folded down into the handle.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. The combination of the rubber band with the holder, comprising two arms having near their outer ends openings for the reception of the band, and provided with means for holding the band in position at the outer ends of the arms, substantially as specified.

2. The combination of the rubber band with a holder comprising two arms, means for supporting the band thereon, and a yoke for governing the expansion of the arms, substantially as specified.

3. The combination of the rubber band, the elastic arms carrying the same and having an inherent tendency to spread apart, and a confining-yoke movable on the arms and tending to contract the same, substantially as specified.

4. The combination of the rubber band with the carrying-arms therefor, having enlarged ends with openings for the reception of the band, and slots to permit the passage of the band into said openings, substantially as specified.

5. The combination of the rubber band

with the holder, consisting of a recessed handle, and band-holding arms pivoted to said handle so as to be turned down into the same, said arms having near their outer ends openings for the reception of the band, and means
5 for retaining said band, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH A. WALSH.

Witnesses:

WILLIAM D. CONNER,
HARRY SMITH.