

No. 618,009.

Patented Jan. 17. 1899.

W. J. LA VARRE.

FLOSS HOLDER FOR CLEANING TEETH.

(Application filed Sept. 12, 1898.)

(No Model.)

Fig. 1.

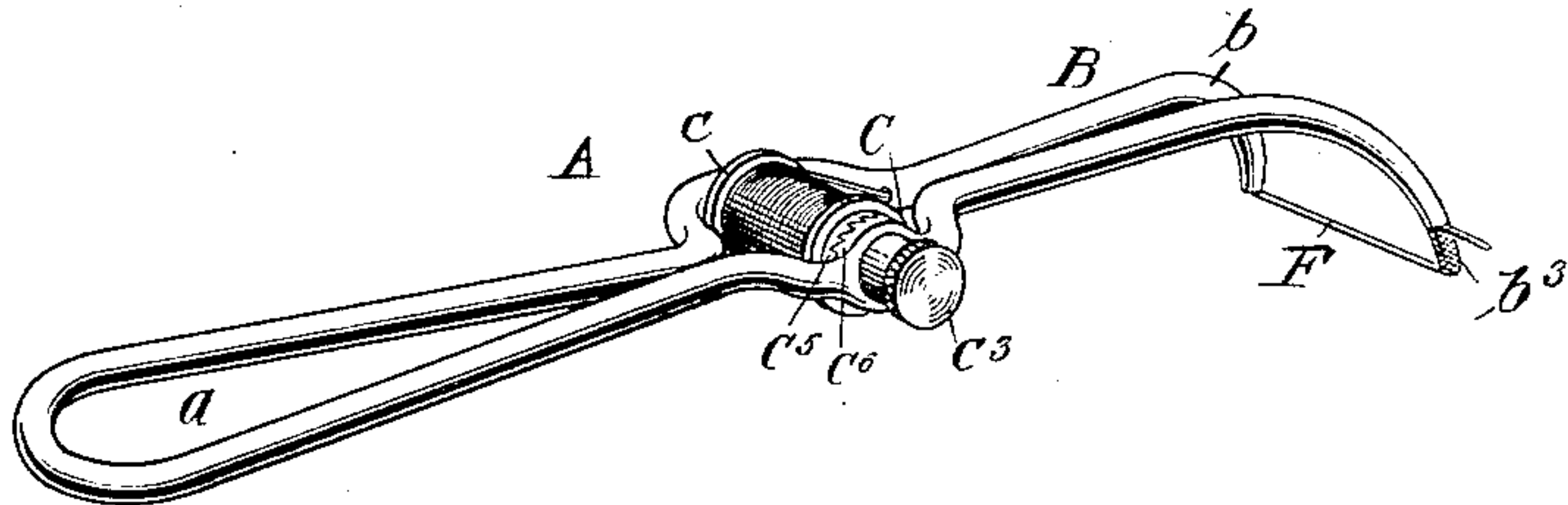


Fig. 2.

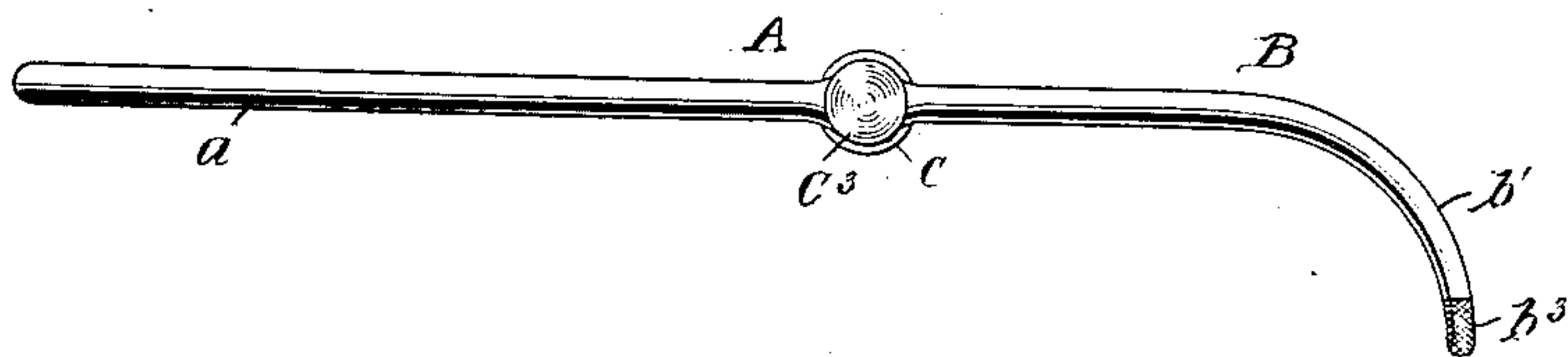


Fig. 3.

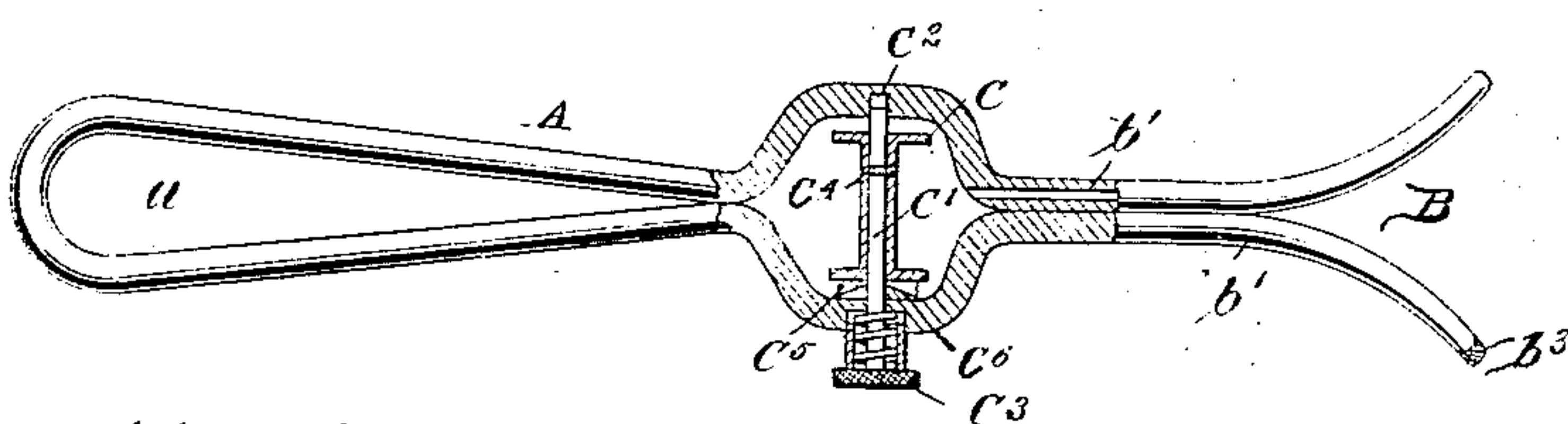


Fig. 4.

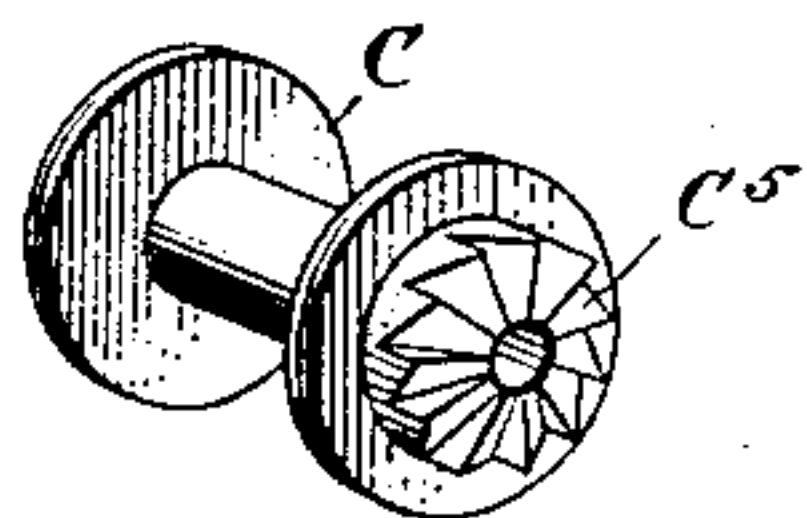


Fig. 5.

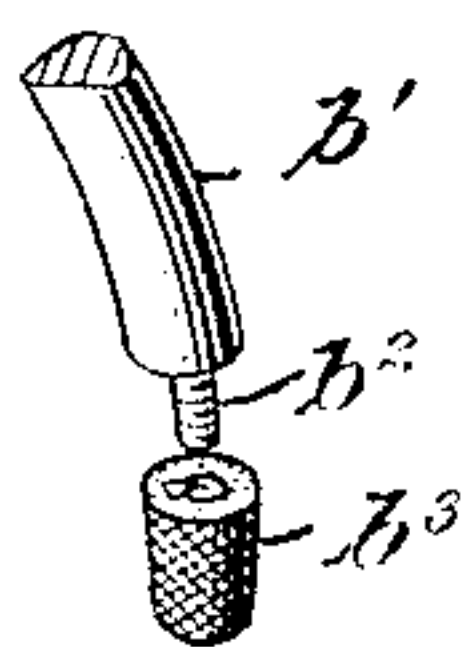


Fig. 6.

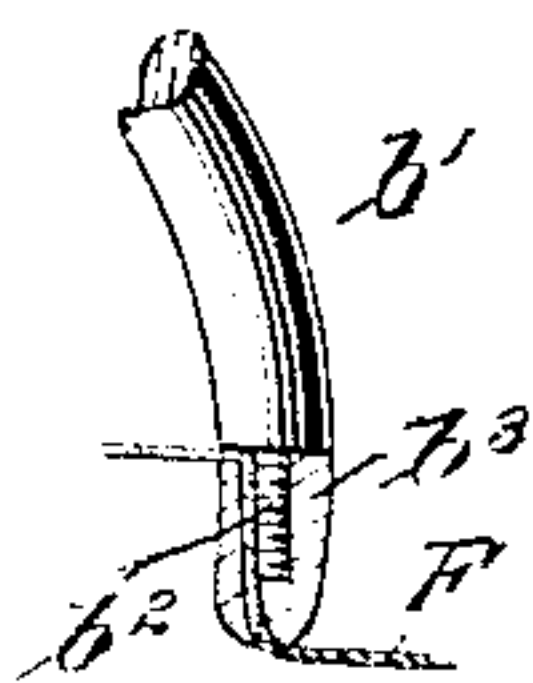


Fig. 7.

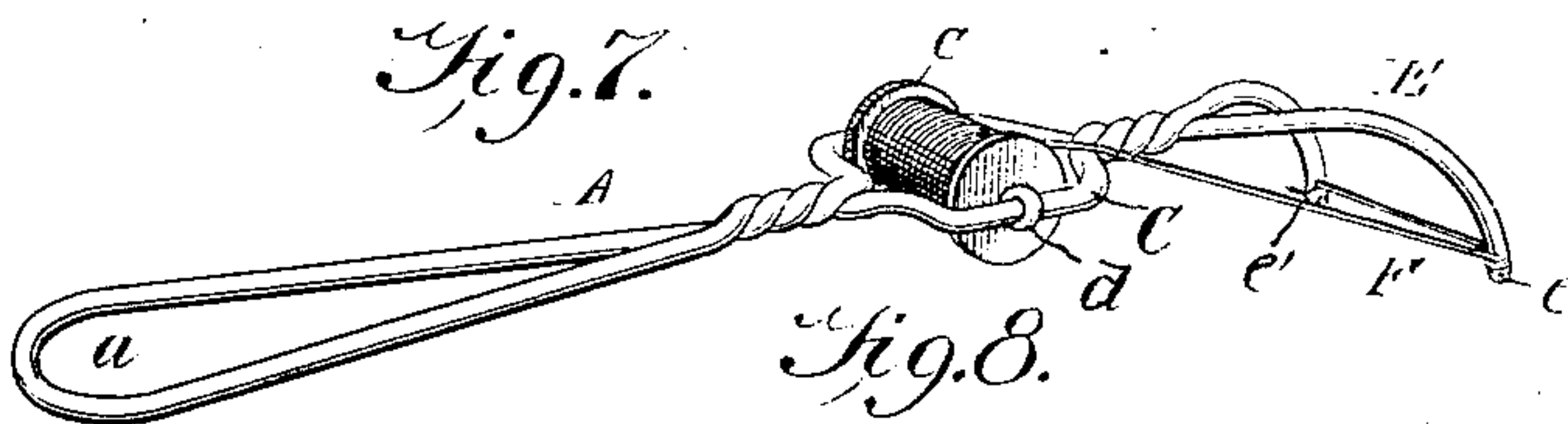
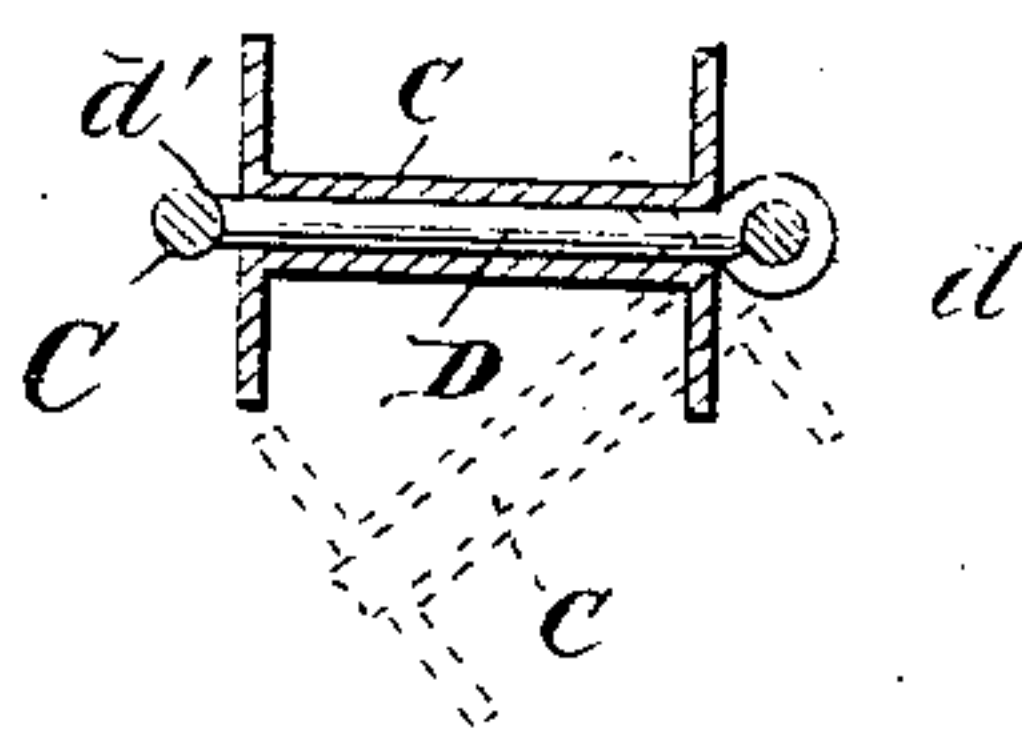


Fig. 8.



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UNITED STATES PATENT OFFICE.

WILLIAM J. LA VARRE, OF WASHINGTON, DISTRICT OF COLUMBIA.

FLOSS-HOLDER FOR CLEANING TEETH.

SPECIFICATION forming part of Letters Patent No. 618,009, dated January 17, 1899.

Application filed September 12, 1898. Serial No. 690 765. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. LA VARRE, a citizen of the United States, residing at Washington, in the District of Columbia, have
5 invented certain new and useful Improvements in Dental Floss-Holders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which
10 it appertains to make and use the same.

My invention relates to dental instruments or to an instrument to be carried in the pocket by persons other than dentists, the object being to provide an instrument which is designed to hold waxed or other thread while
15 the same is being drawn through the teeth for removing fine impurities or small particles of waste filling after a tooth has been filled, a quantity of waxed or other thread being carried by the instrument, which is capable of being drawn out as desired and after
20 the same has been used to be cut off and another portion of unused thread be presented for use.

25 The invention consists in certain novel constructions, combinations, and arrangements of parts whereby these objects can be accomplished.

In the accompanying drawings, Figure 2 is
30 a side elevation of the instrument. Fig. 1 is a perspective view of the same. Fig. 3 is a plan view, partly in section. Fig. 4 is a perspective view of the spool. Fig. 5 is a perspective view of one end of a prong, showing
35 how the thread is held from slipping; and Fig. 6 is a sectional view of the same, showing the thread in engagement therewith. Fig. 7 is a perspective view of a modified form of my invention, and Fig. 8 is a trans-
40 verse section through the spool-retaining portion and the spool on the line of the shaft.

A in the drawings represents a suitable body portion which forms a suitable handle
45 a, a curved forked portion B, and an intermediate spool-retaining portion C. In the construction shown in Figs. 1, 2, and 3 one of the prongs b of the forked portion B is made hollow and is left open at its outer end. The other prong b' is provided with a screw-
50 threaded portion b², on which is screwed a cap b³, which is open at both ends and through which the thread F is inserted and is held

from slipping by the cap being screwed onto the screw-threaded end b². The spool-retain-
ing portion C is constructed to hold a spool 55
c by means of a shaft c', which has a bearing in one side of the spool-retaining portion, as at c². This shaft extends through an aperture in the other wall of the spool-retaining
60 portion and is provided with a head c³, which is preferably milled to facilitate turning the shaft. The spool c is fixed on the shaft in any suitable manner, so as to revolve there-
with, one form of securing the spool to the shaft being a pin, as c⁴, which passes through 65
a portion of the spool into the shaft. The outer face of one of the heads of the spool is provided with a ratchet c⁵, and the inner face of one of the walls of the spool-retaining por-
70 tion adjacent to the ratchet on the spool is also formed with a ratchet c⁶. A spring c⁷ is interposed between the milled head c⁵ and the wall of the spool-retaining portion, so as to normally keep the ratchet on the head of
75 the spool in engagement with the ratchet on the inner wall of the spool-retaining portion. The teeth on both of the ratchets are so shaped that the spool will be prevented from
80 having a forward movement while they are engaged; but the teeth of the ratchet on the spool are adapted to pass by the teeth on the spool-retaining portion when the spool is
wound to tighten the thread. By this construction and arrangement it will be seen
85 that it would be impossible for the thread to slip or be accidentally unwound and that it can only be unwound by the shaft being pushed in upon pressure being applied to the milled head connected therewith.

To secure the thread between the prongs 90
of the fork, it is simply necessary to pass the thread through the hollow arm b and then through the removable screw-cap b³, a short
95 portion of the thread being allowed to extend beyond the inner end of the cap. The cap is then screwed onto the prong b², where-
upon the thread would be securely held in place. To make the thread perfectly tight
100 between the prongs, any slack in the thread can be taken up by revolving the spool toward the rear, the spool being prevented from accidentally unwinding by the ratchets. When the thread which is held between the prongs has been used and it is desired to pre-

sent a new portion of unused thread, it is simply necessary to loosen the cap b^3 and draw the used portion of the thread through the same and cut it off and then replace the cap.

5 By providing means whereby the thread is secured immediately at the end of one of the prongs no unused portion thereof is wasted in cutting or breaking off the used portion of a thread, as would be the case if the thread
10 after being passed through or across the prongs were carried back and its ends secured to the body portion near the spool-retaining portion, as in some constructions.

It will be observed that by curving the
15 outer ends of the prongs out of the plane of the handle and having the thread extend between the prongs at right angles to the handle portion the instrument can be conveniently inserted without having to open
20 the mouth very wide and the spaces between the back teeth thoroughly cleaned while the instrument is held horizontally. If the instrument were not provided with a fork or prong having its outer end curved out of the
25 plane of the handle, it would have to be held at an inclination, or it would have to be provided with means for adjusting the head portion (which construction would enhance the cost of production) in order to readily use the
30 instrument between the back teeth.

The instrument will be found very convenient for dentists' use in cleaning between the teeth, particularly the back teeth, which are difficult to reach, and to carry in the pocket
35 by persons other than dentists for cleaning the teeth after meals. Provision being made for the ready removal of the used thread and the presentation of an unused portion of thread, the instrument will not only be found
40 very convenient, but will be entirely sanitary and healthful. So far as I am aware no instrument has ever been designed for this purpose, and it is therefore a great improvement over the old method employed by dentists for
45 inserting a thread between the teeth for removing small particles of food or waste filling, which operation was usually accomplished by holding the thread between the fingers and drawing it through the teeth, an operation
50 which was quite cumbersome and unhandy, especially in operating between the back teeth.

In Figs. 7 and 8 of the drawings I have illustrated a modified form of construction.
55 In this form of the apparatus the spool is made more readily removable and the entire apparatus is constructed of fewer parts than are shown in the other views and it is intended to be gotten up at less expense and to be sold
60 for a smaller price to secure certain classes of trade. In Figs. 7 and 8 the shaft D is formed with an eye d at one end, which is secured around one wall of the spool-retaining portion, the wall at this point being formed
65 with a depression or seat, within which the eye rests for the purpose of preventing it

from having a longitudinal movement. The other end of the shaft is provided with a concaved surface d' to fit the other arm or wall of the spool-retaining portion, by which construction the said shaft can be sprung into
70 position and held by the concaved portion engaging the said wall and can, when desired, be readily lowered, as shown in Fig. 8 of the drawings, for the purpose of conveniently re-
75 moving the spool or inserting a spool thereon and again snapped up into position, the material constituting the spool-retaining portion being sufficiently springy to admit of the same being accomplished. In this construction
80 the prongs E are preferably made solid and the thread is carried from the spool to one of the prongs, as clearly shown in Fig. 7, and passed through a slit e and then given
85 about three turns around the said prong and then extended across to the other prong and passed through a slit e' in said prong, and then the thread given two or three turns
90 around the said prong. The slits in the prongs being narrow, the thread will be securely held in a stretched condition between the said prongs.

Having now described my invention, what I claim as new, and desire to secure by Letters
95 Patent, is—

1. An instrument for dental purposes comprising in its construction a suitable handle, a spool-retaining portion, a removable thread-carrier, and a forked portion, the extreme
100 outer ends of the forked portion being curved out of the plane of the handle and each provided with a single slit for holding a thread in a stretched condition at a right angle to the body portion so that the thread can be readily
105 passed between the teeth, the construction and arrangement being such that the used thread can be removed without wasting the unused thread and when the thread has all been used, another spool of thread can be inserted, substantially as described.
110

2. An instrument for dental purposes comprising in its construction, a suitable body portion provided with means for holding a thread in a stretched condition, so that it can
115 be passed between the teeth, a removable thread-carrier, a shaft for holding the thread-carrier, said shaft being pivotally secured at one end to the instrument and adapted to be sprung into position and held at its other end,
120 the construction and arrangement being such that a portion of the thread can be removed and a new portion of thread presented, substantially as described.

3. As an improved article of manufacture, an instrument for dental purposes the body
125 portion of which is constructed of a single piece of wire and comprising in its construction, a handle, a spool-retaining portion and a forked portion, the outer ends of the forked portion being curved out of the plane of the
130 handle and provided with means at the ends of the fork for holding a thread in a stretched

condition at a right angle to the body portion and a spool for holding thread, substantially as described.

4. As an improved article of manufacture,
5 an instrument for dental purposes, the body
portion of which is constructed of a single
piece of material and comprising in its con-
struction a handle, a spool-retaining portion,
and a forked portion, the outer ends of the
10 forked portion being curved out of the plane
of the handle and each provided with a sin-

gle slit for holding a thread in a stretched
condition at a right angle to the body portion,
and a spool for holding thread, substantially
as described.

In testimony whereof I hereunto affix my
signature in presence of two witnesses. 15

WILLIAM J. LA VARRE.

Witnesses:

JOHN L. FLETCHER,
T. REED CLIFT.