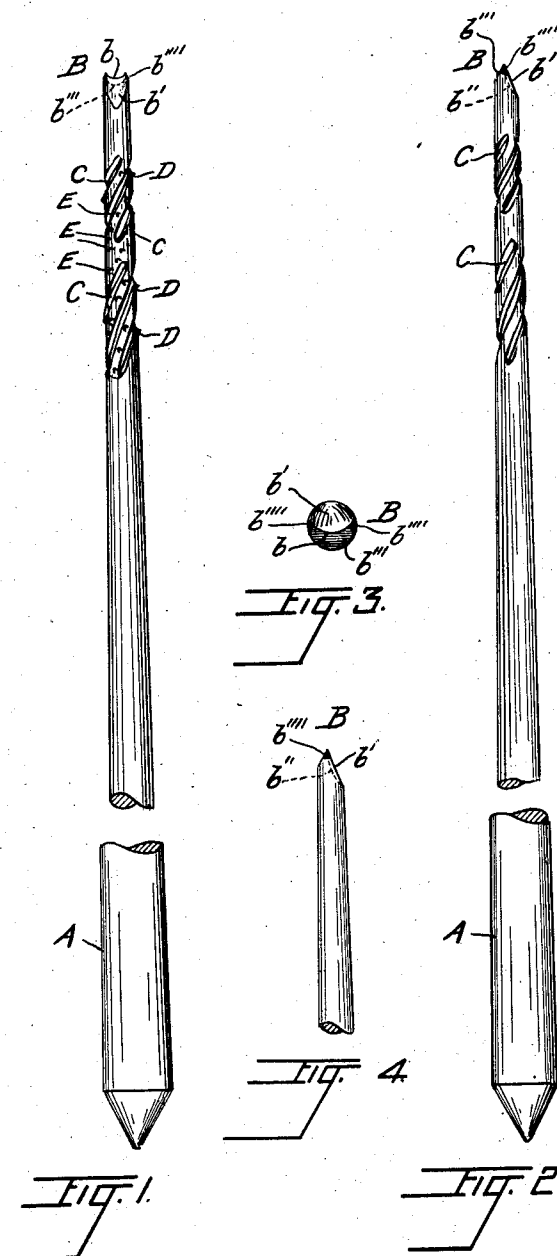


L. L. FUNK.
DENTAL BROACH.
APPLICATION FILED OCT. 16, 1911.

1,022,838.

Patented Apr. 9, 1912.



WITNESSES:

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DENTAL BROACH.

1,022,838.

Specification of Letters Patent.

Patented Apr. 9, 1912.

Application filed October 16, 1911. Serial No. 654,990.

To all whom it may concern:

Be it known that I, LEVI L. FUNK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Dental Broaches, of which the following is a specification.

This invention relates to broaches which are used by dentists as bases around which cotton or silk fiber is wrapped for the purpose of cleaning the root canals in teeth, for packing pyorrhea pockets and fistulas, and for other purposes. And the principal object of this invention is to obtain a broach by means of which said fiber may be forced to the apex or ends of the root canals.

A further object of this invention is to obtain a broach around which cotton or silk fiber prepared in the ordinary way for dentists' use may be closely wrapped.

A further object of the invention is to obtain a broach which, when cotton is wrapped around it and it is forced into the root canal of a tooth or other place and then withdrawn therefrom, the fiber which is so wrapped around it will be withdrawn with the broach; but which will nevertheless permit said fiber to be easily removed therefrom after its withdrawal from said canal or other place.

A further object of the invention is to obtain a broach of the character described which may be easily made to follow the walls of the root canal of a tooth, whether said canal is straight or curved, to the end thereof, both for the purpose of cleaning said canal of foreign matter, as pus or blood cells, and for the purpose of depositing and tamping cotton in said canal at the end thereof, after the same has been properly treated.

In the drawing Figure 1 is an elevation of a broach embodying this invention. Fig. 2 is a modification of the broach illustrated in Fig. 1. Fig. 3 is an end view of the broach embodying this invention, and Fig. 4 is a side elevation of one end of a broach embodying this invention.

Similar letters refer to similar parts throughout the several views.

A is the end of the broach which is inserted in a handle, and B is the apex of said broach at the end opposite to end A. The apex of the broach is curved as at *b*, Figs. 1 and 3. One side of the broach, adjacent to the apex, is cut away, as is shown by line *b'*,

to beyond the axial line of said broach, and the face obtained thereby is hollowed out, or made convex, as is indicated by broken line *b''*, Figs. 2 and 4. The other side of the broach, opposite to the cut away portion which is indicated by *b'* is also cut away, as is indicated by line *b'''*. The end of the broach is rounded slightly on the sides which are the ends of apex *b*, as is shown at *b''''*. The end of the broach is thus made a peculiar chisel shape, one face of said end being larger than the other and convex. The end indicated by line *b* is easily engaged with fiber in such manner that said fiber will not become disengaged as said end is forced into the tortuous canal of a tooth.

The peculiar chisel shape which is given to the end of the broach by extending face *b'* thereof beyond the axial line of said broach is for the purpose, that when it is forced into a curved root canal, in case the end *b* engages with one of the walls of the canal, by turning said broach in the canal, say one fourth or one half way around, said end will be disengaged from said wall and the broach can be forced farther in, together with the fiber which is thereon. The end is rounded at *b''''* also to prevent, as far as possible, engagement of the ends of edge *b* with the walls of the canal.

C, C, are short raised edges extending along and partially around the broach which are forced out from the body of the broach. The raised edges C commence a short distance back of the end of the broach and are not continuous. The forcing out of said edges results in the making of shallow grooves with one of the edges thereof raised and ragged as is shown at B, Fig. 1.

E, Fig. 1, are irregular ragged cuts on the periphery of the broach between the cuts C thereon. The cuts C and E are respectively made to force a portion of the body of the broach out therefrom and no part of said body is cut away or removed from the said broach. Said cuts E give a holding quality to said broach so that the fiber wrapped around it is held in place thereon when the broach is forced into a canal root of small diameter.

The device illustrated in Fig. 4 does not have thereon the cuts C or the irregular ragged cuts E and is used for depositing fiber in the canal roots of teeth and for tamping said fiber.

I claim:—

1. A broach, provided with a chisel shaped end having two faces, and said end concave at the intersection of said faces.
- 5 2. A broach provided with a chisel shaped end, having two faces, one of the faces of said end concave and extending beyond the axial line of the broach and said end concave at the intersection of said faces, and curved at the ends of said concaved 15 intersection.
- 10 3. A broach provided with a chisel

shaped end, having two faces, one of the faces of said end concave and extending beyond the axial line of the broach and said end concave at the intersection of said faces, and curved at the ends of said concaved intersection.

LEVI L. FUNK.

In the presence of—

CHARLES TURNER BROWN,

C. A. ADAMS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."