

(No Model.)

J. W. IVORY.  
DENTAL NERVE BROACH.

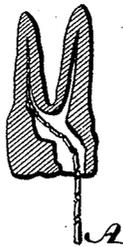
No. 444,383.

Patented Jan. 6, 1891.

*Fig. 1.*



*Fig. 2.*



WITNESSES:

*P. H. Chagler.*  
*L. Douville.*

INVENTOR  
*James W. Ivory.*  
BY *James D. Schuyler.*  
ATTORNEY.

# UNITED STATES PATENT OFFICE.

JAMES W. IVORY, OF PHILADELPHIA, PENNSYLVANIA.

## DENTAL NERVE-BROACH.

SPECIFICATION forming part of Letters Patent No. 444,383, dated January 6, 1891.

Application filed May 8, 1890. Serial No. 351,081. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES W. IVORY, a subject of the Queen of Great Britain, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Nerve-Broaches, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a nerve-broach of novel construction and possessing advantages, as will be hereinafter fully set forth.

Figure 1 represents a side elevation of a nerve-broach embodying my invention. Fig. 2 represents a side elevation of the broach apparently in operation.

Similar letters of reference indicate corresponding parts in the two figures.

Referring to the drawings, A designates a nerve-broach, the same being constructed of a piece of flexible elastic metal or other suitable pliable material, of helical or spiral form and tapering to a point, or approximately so, the edges of the coil being roughened or serrated, so as to take firm hold of the tooth, canal, vessels, and act as a cleanser.

It will be seen that the broach may be directed into the canal in the root of a tooth, and then by rotating the same it may screw into the vessels and nerve, so as to take firm hold of the same and readily follow the course of a canal, owing to its winding motion, after which the vessels and nerve may be removed by withdrawal of the broach. It will also be seen that the wide or thick end of the broach

constitutes a handle, so that the implement may be readily grasped and possesses increased strength at said end or place of handling.

It will be seen that the broach readily screws into the vessels and nerve and possesses sufficient firmness for the purpose intended.

It will be found that the broach will bodily carry out the vessels and nerve, and if broken while within the canal it may be readily attached by a piece of cotton or other material, and thus withdrawn by rotation in reverse direction.

It is evident that whatever vessels or tissue connect with a nerve or exist in the root of a canal may be readily removed by the proper manipulation of the broach or instrument aforesaid, said instrument being also serviceable for carrying antiseptics into the canals or medicating the same and cleansing purposes.

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

1. A nerve-broach of the form of a spiral or helical coil with roughened or serrated edges, substantially as described.
2. A nerve-broach formed of pliable material coiled and tapering, substantially as described.

JAMES W. IVORY.

Witnesses:

JOHN A. WIEDERSHEIM,  
WM. C. WIEDERSHEIM.