No. 848,403. PATENTED MAR. 26, 1907.

P. R. SKINNER.

DENTAL OBTUNDOR.

APPLICATION FILED AUG. 11, 1906.

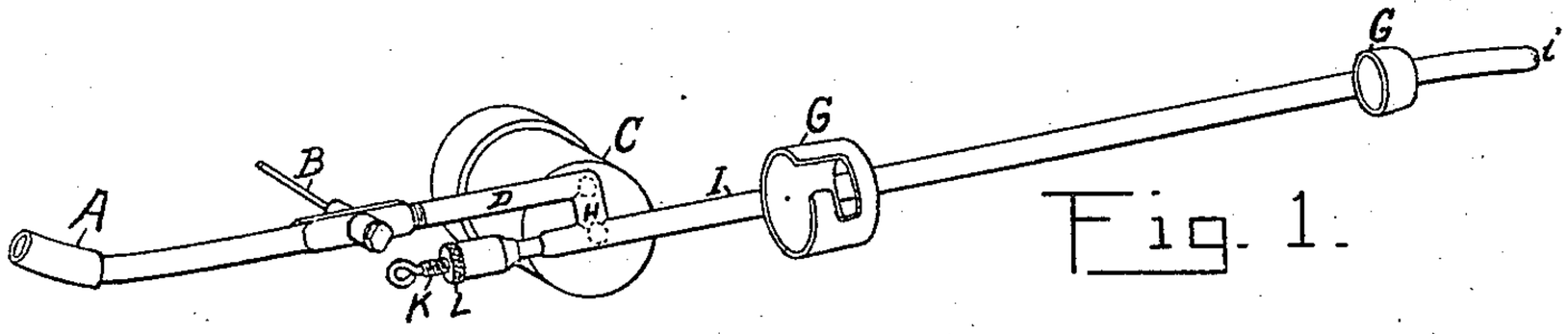

Fig. 1.

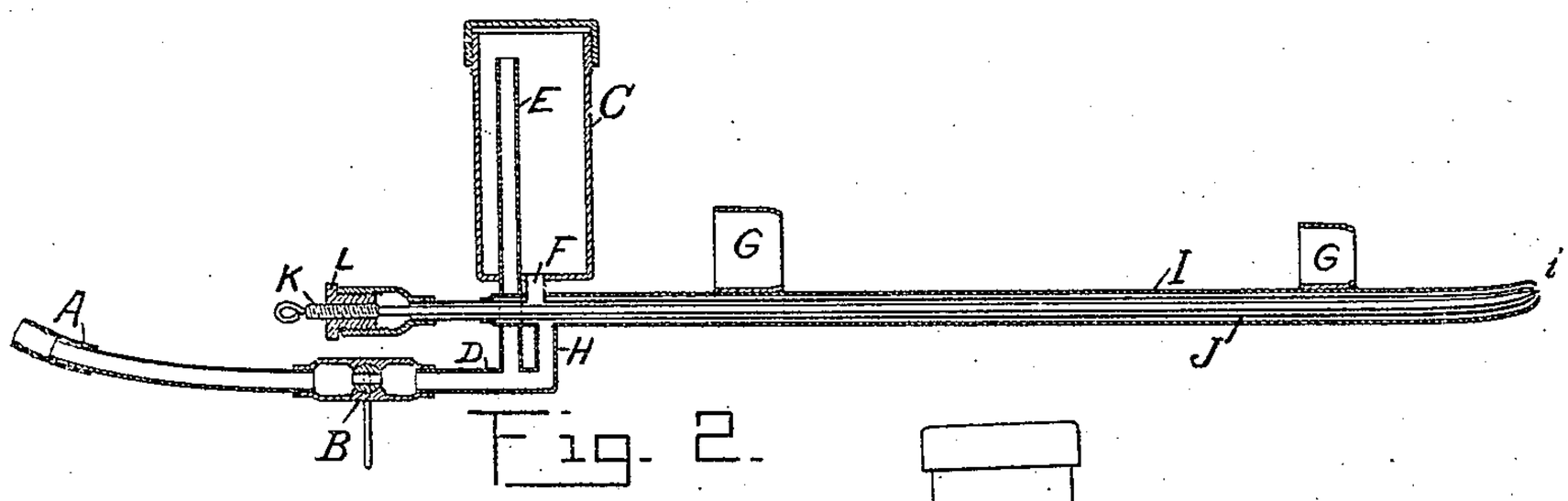

Fig. 2.

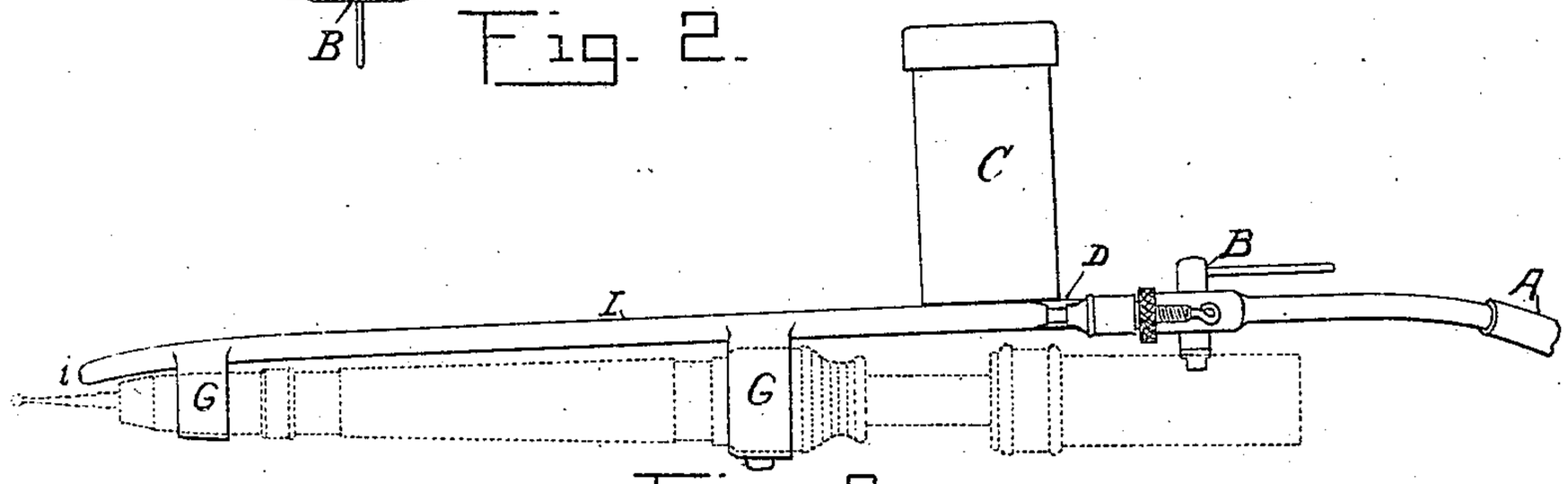

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

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DENTAL OBTUNDOR.

No. 848,403. Specification of Letters Patent. Patented March 26, 1907.

Application filed August 11, 1906. Serial No. 330,121.

To all whom it may concern:

Be it known that I, PERRY R. SKINNER, a citizen of the United States, residing at Amsterdam, in the county of Montgomery and State of New York, have invented certain new and useful Improvements in Dental Obtundors, of which the following is a specification.

My invention relates to the application of anesthetics in dentistry; and the object of my invention is to deliver a fine anesthetic spray at the exact point of contact where the drilling a tooth is being done and at the time when the drilling is in process, as hereinafter more fully set forth. I accomplish this object by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the bottom side of my spraying device. Fig. 2 is a section of my spraying device in diagram. Fig. 3 is an elevation of my spraying device with a drill-holder shown in dotted lines.

Similar letters refer to similar parts throughout the several views.

In dentistry it is usually necessary, in order to treat a tooth, for the dentist to drill the tooth for various purposes, as for making a hole or to enlarge a cavity or to clean out a cavity with a drill, cutting out various portions of the tooth. When a tooth is sensitive, as is often the case, the drilling operation is very painful. If an anesthetic can be properly applied at the point where the drilling is in process, it will render the operation painless.

My invention is for the purpose of applying an anesthetic of ether, ethyl-chlorid, chloroform, or other rapidly-evaporating liquid at the point where the drilling operation is being performed.

Referring to the drawings, A represents a small rubber tube attached to a compressed-air tank located at any convenient place.

B is a valve for regulating the flow of compressed air.

C is the anesthetic-tank attached to my spraying device and designed to hold ether, chloroform, or other anesthetic in liquid form.

D is a metallic tube extending from the valve B and into which the valve B admits the compressed air. The tube D has two outlets, one, the tube E, extending into and having an outlet near the top of the tank C, by which the compressed air is admitted into the tank C on the top of the liquid anesthetic, and presses the anesthetic in the tank C through its exit F. The other outlet of the tube D is by the tube H, by which the compressed air is admitted into the outer compartment of the long tube I.

I is a tube having a head L at one end, fitted with screw-threads and necessary packing, and a delivery-point *i* at the other end. Through this tube the compressed air passes to the delivery-point *i*, which is located near the point of the drill, and is bent so as to deliver the spray at the exact point where the drill is at work on the tooth. The compressed air enters this tube through the arm or tube H, as before stated. Within this tube is an inner tube J. The anesthetic from the tank C enters the inner tube J through the outlet or pipe F. The tube J has the delivery-point near the end of the tube I.

K is a thin needle-like rod with a fine point terminating in the opening at the end of the tube J and forming a valve to close said opening. The rod K has screw-threads near the other end, which mesh with the screw-threads in the head L, so that by turning the rod K in the head L the opening at the extreme end of the tube J may be closed or opened to the exact extent desired, and in this way the amount of the anesthetic to be used may be regulated to the finest degree.

The anesthetic being forced by the compressed air is discharged through the tube J and at the end of the tube I and mixing with the compressed air flowing from the end *i* of the tube I forms a fine spray. The amount of the pressure may be regulated by the valve B and the amount of the anesthetic regulated by the rod K and the point of delivery be at the exact point where the tooth is being operated upon. The valve B is located where it can be easily operated to regulate the pressure of the compressed air or to turn it on or off. The rubber tube A being small, it is not materially effected by the pressure of the compressed air.

The hand-drill is attached to my spraying device by the sleeves G G, as shown in Fig. 3, the drill being operated by any of the well-known means, either by hand, feet, water power, or electricity, the same as if used without any spraying device.

The anesthetic may be applied to the tooth for a few minutes before the operation begins to deaden the sensibilities, where desired, and the spray continued during the work.

The whole device furnishes a practical and efficient method of applying the anesthetic and is very useful and successful in relieving the tooth being treated from all pain.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A device for spraying a tooth with an anesthetic while the tooth is being operated upon by a drill in dentistry, consisting of a tube having a delivery-point at, or near the point of the drill and the other end having an opening provided with screw-threads; an inner tube contained within the first-mentioned tube having a delivery-point near the delivery-point of the first-named tube; a tank adapted to contain anesthetic mounted on said tube; and having an outlet in said inner tube; a pipe having two outlets, one extending into and near the top of said anesthetic-tank, and the other terminating in said outer tube adapted to admit compressed air into said tank and said tube; a long needle-like rod with a fine point on one end and screw-threads at the other adapted to pass through the inner tube, the screw-threads meshing with the screw-threads on the head of said outer tube, and the point adapted to fit the opening in said inner tube whereby the screwing of said rod in the screw-threads of said tube will open or close the outlet at the end of said inner tube, substantially as described, and for the purposes set forth.

2. A dental device for spraying a tooth with an anesthetic while being operated upon by a drill, consisting of two tubes, one contained within the other, having delivery-points near each other at one end and a common head with interior screw-threads at the other end, a tank mounted on said tubes adapted to contain liquid anesthetics, an outlet from said tank to said inner tube, a pipe having two outlets, one at or near the top of said tank, and the other within the outer tube, a needle-like rod with a fine point at one end adapted to fit into the opening of the delivery end of the inner tube and having screw-threads at the other end to mesh with the screw-threads of said head whereby the opening at the end of said inner tube may be opened or closed by turning said rod in said screw-head, and two or more sleeves attached to said tubes, adapted to hold the handpiece of a dental drill, whereby the drill mounted in said sleeves may be operated by power and the point of the drill be located near the delivery ends of said tubes, substantially as described, and for the purpose set forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

PERRY R. SKINNER.

Witnesses:
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DUDLEY B. WARE.