C. A. DAMON.
DENTAL OBSTUDE.
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UNITED STATES PATENT OFFICE.

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DENTAL OBTUNDER.


To all whom it may concern:

Be it known that I, CHARLIE A. DAMON, a citizen of the United States, residing at Fenton, in the county of Genesee and State of Michigan, have invented a new and useful Improvement in Dental Obtunders, of which the following is a specification.

This invention appertains to improvements in dental obtunders. The purpose thereof is to provide a high-pressure obtunding-syringe with a hook which is carried by the syringe-barrel and is adapted to hold the syringe in place upon a tooth in order to apply hypodermically an anesthetic to such tooth in order to render the same less sensitive prior to or while operating thereon.

In the practice of dentistry it is common to introduce into a tooth by means of pressure an anesthetic, and dental syringes used in obtunding a tooth are usually provided with a force-feel plunger for forcing the anesthetic through the needle of the syringe into the tooth; and my invention consists in the combination, with an obtunding-syringe, of a hook or claw of the hook type which is pivotable to swing in a plane longitudinal of the barrel of the syringe, the same also being longitudinally adjustable upon the barrel of the syringe in such a manner that the hook serves as one member of a clamp and the needle-point of the syringe as the other end, whereby the instrument may be held by itself upon a tooth while the anesthetic is being forced into a tooth.

My invention also consists in the construction and combination of the parts for the purpose of making readily and effectively holding the implement upon a tooth by itself, as will be hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Fig. 1 is a side elevation showing my improvement applied to a syringe of ordinary construction, the barrel of such syringe being provided with external screw-threads to engage a ring or band that carries so as to swing upon said ring or band a hook that forms one member of a clamp. Fig. 2 is a perspective view of the instrument; and Fig. 3 is a plan view, partly in section.

Referring to the drawings, A is the barrel of a syringe to which is removably attached the discharge end or needle through which the sedative is discharged into the tooth. The barrel of the syringe carries a suitable grip or cross-bar B and has a removable cap \(\alpha\), the opening thereof having female threads with which engage the threads on the piston-rod \(c\), such rod having a handle \(C\) to project and retract the plunger \(C\). The external portion of the barrel adjacent to the discharge end is threaded, and with the threads engage an internally-threaded ring or band having on opposite sides projecting studs or trunnions for the holding member or hook \(D\), the connecting means being adjustable by simply turning the body of the syringe when the hook is held against rotation, such movement of one part upon the other changing the distance between the discharge end of the barrel and the point of the hook.

In practice the Shank of the hook is bifurcated and has perforations \(d\), through which pass projections \(e\) of an internally-threaded trunnion-ring \(E\), that engages the threads upon the external portion of the barrel of the syringe.

In use the obtunder is usually placed so that the end of the hook will impinge upon one side of the tooth to be treated, and the discharge end of the syringe is placed opposite thereto or in a small hole drilled through the enamel. When the hook has been adjusted, the anesthetic contained in the syringe is forced into the tooth. The hook when once properly adjusted will hold the syringe in place, and it is only necessary to turn the handle to force the anesthetic into the tooth.

The construction of the syringe may be varied as to the plunger and the means for connecting it to the body of the syringe. The hook being curved and spread where it spans the barrel of the syringe incidentally provides a degree of resiliency thereto sufficient in practice to prevent splitting a tooth when excessive pressure is applied. The notch or recess in the contacting end of the hook provides two bearing-points, distributing the pressure and providing a better holding surface than a single point or a flat surface. It will be noted that a construction which provides a swinging or pivotal connection for holding the syringe in place is a material advantage in an implement of this type, for when the hook engages one side of the tooth and the discharge point—the cavity—which may be either the result of decay or drilled in the tooth—the syringe will be held in place by itself, solely by the weight of the implement, and when so held by simply turning the barrel pressure may be applied in excess of the weight of the implement, after which
the anesthetic is forced from the barrel into the tooth. The range of adjustment of the hook upon the barrel is such that the hook may engage a tooth other than the one being operated upon, and the arched and open configuration of the hook does not materially obstruct the view of the operator.

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

1. In a dental obtunding-syringe, a band or ring which is adjustable longitudinally upon the barrel of the syringe, and a hook pivoted to swing upon the band or ring by which it is carried in a plane longitudinal of the barrel of the syringe.

2. In a syringe a barrel therefor having an externally-threaded portion adjacent to the discharge end of the syringe, an internally-threaded ring for engagement with the threaded portion of the barrel, and a hook pivoted to swing upon the ring in a plane longitudinal of the barrel of the syringe.

3. A dental instrument for producing pressure-anesthesia comprising a syringe-body with external threads adjacent to the discharge end of the body, an ejector for forcing the contents of the body through the discharge end of the syringe, an internally-threaded ring mounted on the threaded portion of the body of the syringe and provided with projecting studs, a hook pivoted to swing upon the studs of the ring, substantially as shown.

4. The combination in a dental obtundingsyringe, a contracted discharge end through which an anesthetic is forced into a tooth, screw-threads upon the barrel of the syringe, a ring adapted to turn upon the screw-threaded portion of the syringe-barrel and a hook pivoted to swing upon the ring in a plane longitudinal of the syringe-barrel, substantially as shown, whereby the discharge end of the hook that is pivoted to swing may embrace a tooth and hold the syringe thereon.

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

CHARLIE A. DAMON.

Witnesses:
W. F. Wolff,
R. W. Hughes.