No. 870,573. PATENTED NOV. 12, 1907.

C. G. MYERS.

INSTRUMENT FOR INTRODUCING LIQUID MEDICAMENT INTO TEETH.

APPLICATION FILED APR. 12, 1904.

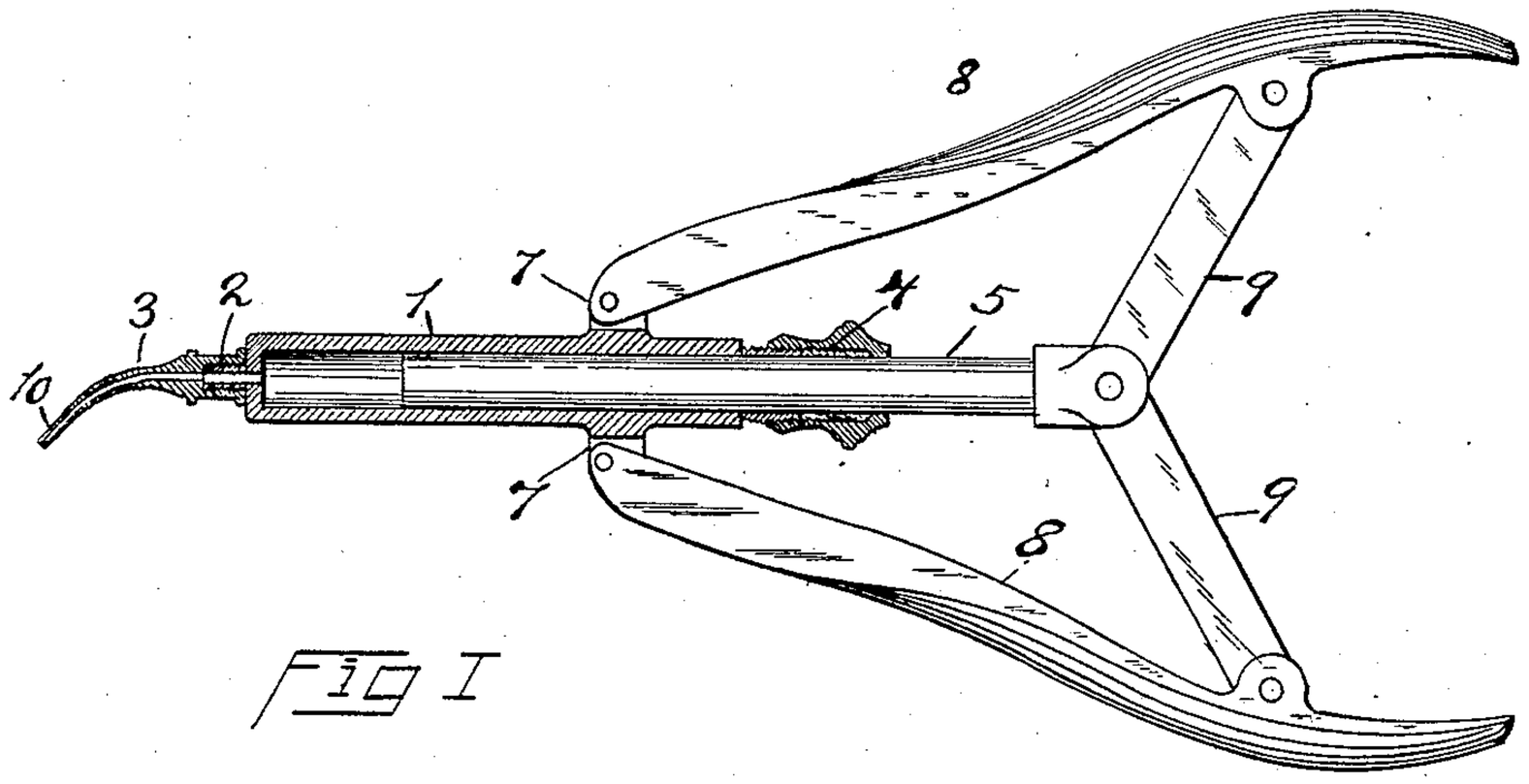

FIG I

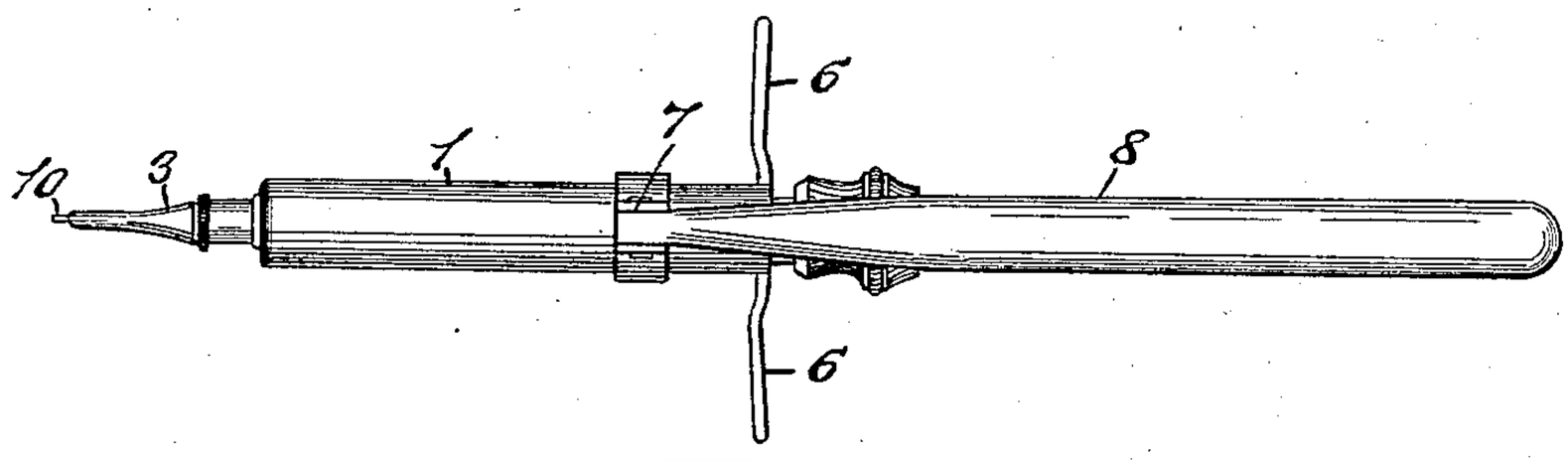

FIG II

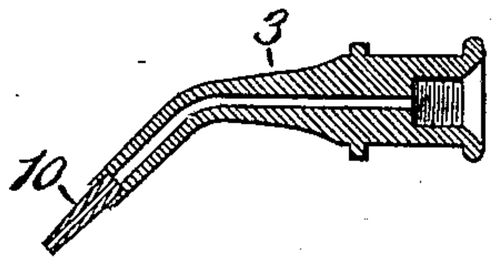

FIG III

Witnesses
H. J. Heaton
C. E. Johnson.

C. G. Myers,
Inventor,
by Geo. Fecher
Attorney

UNITED STATES PATENT OFFICE.

CHARLES G. MYERS, OF CLEVELAND, OHIO.

INSTRUMENT FOR INTRODUCING LIQUID MEDICAMENT INTO TEETH.

No. 870,573. Specification of Letters Patent. Patented Nov. 12, 1907.

Application filed April 12, 1904. Serial No. 202,807.

To all whom it may concern:

Be it known that I, CHARLES G. MYERS, a citizen of the United States, resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Instruments for Introducing Liquid Medicament into Teeth, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle so as to distinguish it from other inventions.

My invention relates to syringes and particularly to that class of these instruments designed for introducing medicament into teeth. It will be understood that the requirements which such instrument must meet are considerably different from those met with in the use of the ordinary syringe for injecting medicaments into softer tissues. This is true where the syringe, or obtunder, is used in the practice of the old method of pressure anesthesia, and still more so in the case of the later method of introducing the medicament, or obtundent substance, into the nerve cavity by forcing the same through the tubuli of the dentine of the tooth.

Said invention consists of means hereinafter fully described and particularly set forth in the claims.

The annexed drawing and the following description set forth in detail certain means embodying the invention, such disclosed means constituting but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawing:—Figure 1 represents a partial side elevation and axial section of a device embodying my invention; Fig. 2 represents a plan view thereof; and Fig. 3 represents, upon an enlarged scale, a form of nozzle used in connection with said device, taken in axial section.

My said invention as illustrated in the drawing comprises a barrel 1 for receiving the liquid anesthetic to be used, to which is attached by means of a threaded end portion 2 a bent tapering nozzle 3 made of unyielding material such as steel and circular in cross-section. At the opposite end of the barrel 1 is provided a suitable gland or stuffing box 4, which allows of the close fitting operation of a piston or plunger 5 within the barrel. Fixed relatively to the barrel and projecting transversely relatively to the axis thereof are two oppositely disposed members 6 6, the purpose of which will be hereinafter fully explained. Secured to or formed integrally with the barrel are two oppositely disposed ears 7 7, upon which are fulcrumed respectively two handles 8 8, as shown. Near the respective ends of the handles are pivoted the outer ends respectively of a pair of toggle links 9 9, whose inner ends are pivoted to the outer end of the piston and have a common axis. It will be seen that by means of the handles 8 8 and the links 9 9 the piston may be caused to reciprocate in the barrel by causing the handles to approach and recede from each other. The extreme end or tip 10 of the nozzle 3 is made frusto-conical in form and is made of unyielding material such as steel.

The manner of using the instrument will be obvious. Where the method of obtunding last referred to above is practiced, an aperture is made through the enamel of the tooth, and the syringe barrel is filled with the desired medicament by spreading the handles and pulling out the plunger. The tapering needle is then introduced and held tightly into the opening in the tooth by pressing upon members 6 6, and the handles thereupon pressed together, for the purpose of expressing with great force into the dentine and therethrough into contact with the nerve substance.

It is, of course, understood that other types of nozzle may be employed instead of the needle point illustrated, where dental operations of other character than that just described are to be performed.

In whichever method of use my improved obtunder may find employment, the toggle arrangement, which I utilize for connecting the handles with the reciprocable plunger, will be found to render easily attainable whatever maximum degree of pressure may be desired. This toggle-arrangement has, moreover, the further advantage of increasing the available power or leverage as the plunger is pressed forward and the resistance to be overcome thus increased.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by the following claim, or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:—

An instrument for introducing fluid medicament into teeth, consisting of a barrel; a plunger in the same; a pair of handles fulcrumed upon the barrel; and a pair of toggle-links pivoted to the handles and the plunger.

In testimony that I claim the foregoing to be my invention I have hereunto set my hand this 29th day of March, A. D. 1904.

CHARLES G. MYERS.

Witnesses:
WM. SECHER,
C. E. JOHNSON, Jr.