

948,484.

G. B. SNOW.
DENTAL PLUGGING INSTRUMENT.
APPLICATION FILED MAY 3, 1909.

Patented Feb. 8, 1910.

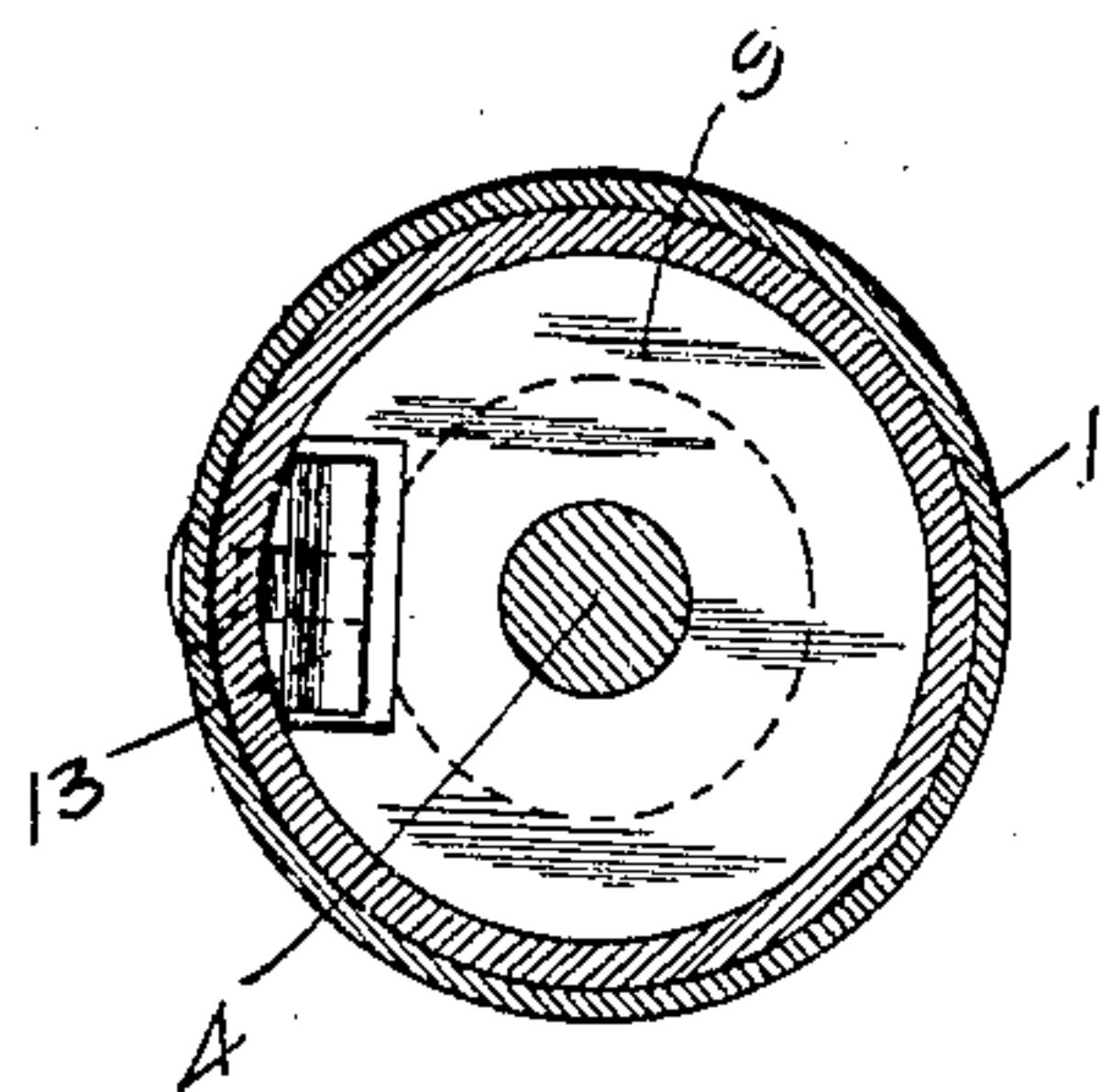


Fig. 3.

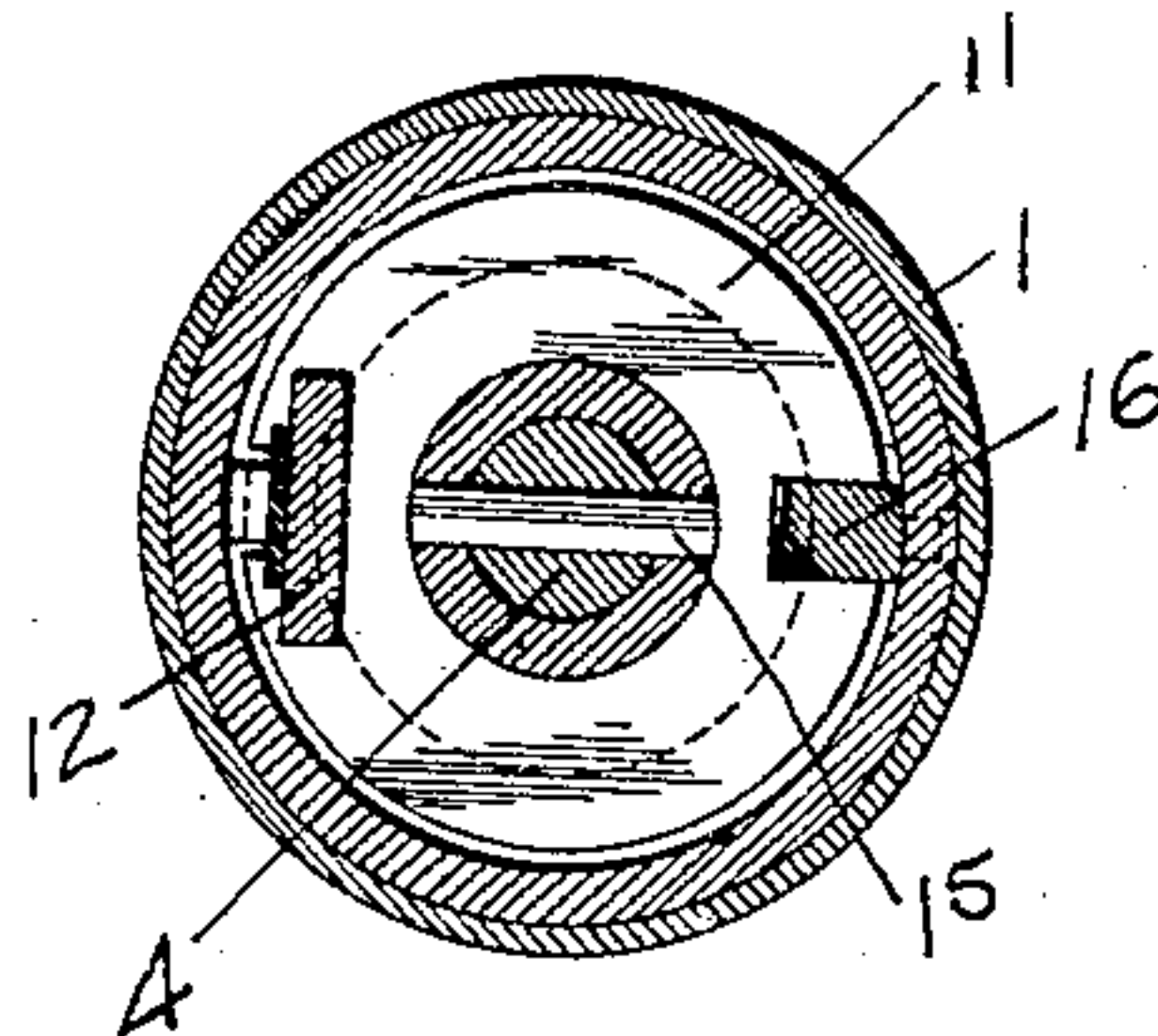


Fig. 4.

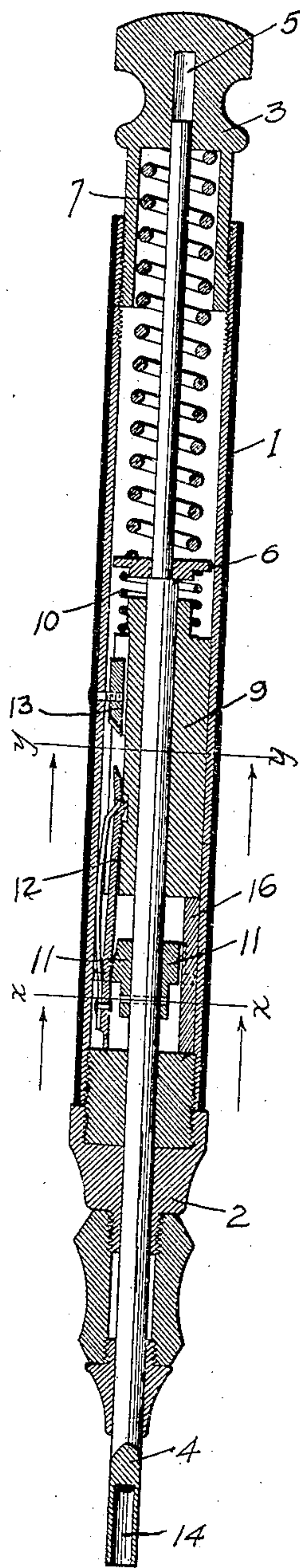


Fig. 1.

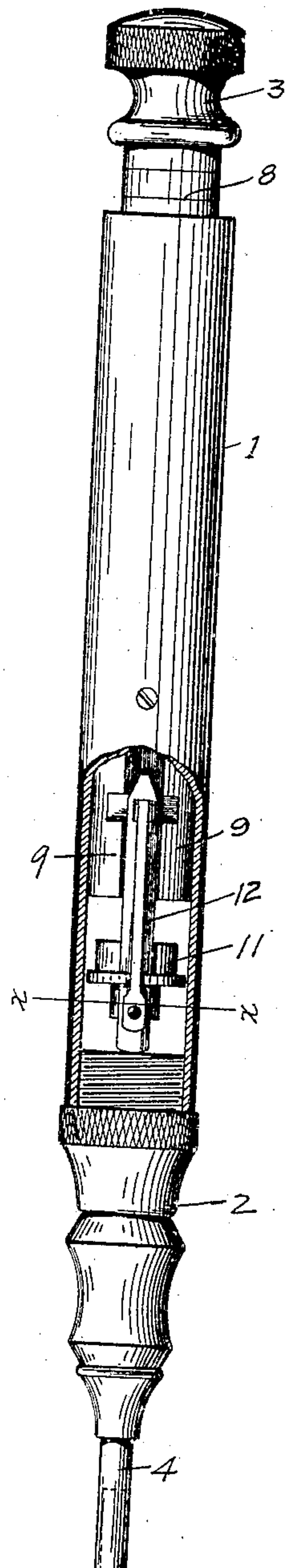


Fig. 2.

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DENTAL PLUGGING INSTRUMENT.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE B. SNOW, a citizen of the United States, and a resident of the city of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Dental Plugging Instruments, of which the following is a specification, reference being had to the accompanying drawing, in which—

Figure 1 is a longitudinal sectional view of the instrument. Fig. 2 is a lateral view of the same, partly in longitudinal section on a plane at an angle of 90 degrees from that shown in Fig. 1. Fig. 3 is a cross section of the instrument on the line $y-y$, Fig. 1. Fig. 4 is a cross section of the same on the line $x-x$, Fig. 1.

This invention relates to dentist's plugging instruments, used for consolidating the gold or other metals employed for filling cavities in teeth, and more especially to the variety of said instruments known as the "automatic mallet"; with which blows are delivered upon the filling material by pressing the instrument repeatedly against it. These instruments usually contain two springs; a hammer spring, by which a hammer is impelled to deliver the blow, and a thrust spring, by means of which the toolholder is thrust outwardly after a blow has been delivered, and the parts of the instrument brought into proper relation for the delivery of another blow. The hammer spring has heretofore been given a variable amount of compression for varying the force of the blows delivered by the instrument, while the thrust spring has had an invariable amount of compression, only sufficient to enable it to perform its office of restoring the parts of the instrument to the positions necessary for the repetition of the blow.

The object of this invention is the production of an instrument having a fixed amount of compression for the hammer spring and a variable amount of compression for the thrust spring; the latter being strengthened so that the greater part of the consolidation of the filling material will be accomplished by pressure instead of the concussion of the hammer blows; and the operation of the instrument thus made to simulate the use of the hand plugger and hand mallet.

In the drawing, 1 represents a tubular

casing which forms the body of the instrument. Threaded into its lower end is the nosepiece 2 which shoulders against the end of the casing 1. The compression cap 3 fills the upper end of the casing 1, having a long thread and considerable longitudinal movement in said casing. The toolholder 4 having in its lower end a socket 14 for the reception of plugging tools, passes through the nosepiece 2 and longitudinally through the casing 1; its upper end sliding in a socket 5 in the compression cap 3. The outward movement of the toolholder is arrested by contact of the heel of the tripping device 12 with the inner end of the nosepiece 2, as is plainly shown in Fig. 2. The abutment plate 6 rests upon a shoulder formed upon the toolholder 4 and a strong spiral thrust spring 7 is interposed between it and the inner end of the compression cap 3. The tubular casing also contains the hammer 9 which is actuated by the hammer spring 10, which is interposed between the hammer 9 and the abutment plate 6. The hammer is released by the tripping device 12—13 in the manner common to the instruments known as "automatic mallets", and then delivers a blow upon the collar 11 which is secured upon the toolholder by the cross pin 15. When the hammer has delivered its blow, its further downward movement is arrested by the feather 16, which is securely attached to, and forms a part of, the casing 1.

To operate this instrument, a plugging tool is placed in the socket 14 of the toolholder 4 and the compression cap 3 is screwed down upon the thrust spring 7, the amount of compression being shown by the scores 8 upon the compression cap 3, running up to fifteen pounds or more. The point of the plugging tool being placed upon the filling material which is to be consolidated in the tooth cavity, pressure is made upon the instrument, causing the casing 1 to slide downward over the toolholder 4 against the resistance of the thrust spring 7; the tool being thus forcibly pressed against the filling material to consolidate it. Eventually, the hammer 9 is released by the operation of the tripping device 12—13, and the pressure which has been exerted upon the filling is followed by a blow from the hammer 9. The noise made by the blow notifies the operator

to withdraw the instrument and replace it upon the filling, when the same process is repeated.

By properly adjusting the relative force
5 of the two springs, it is possible to condense the filling almost entirely by hand pressure instead of by the percussive force of the blows, as with the ordinary automatic mal-
10 let; with the result of doing much less injury to the tooth substance; something which often occurs when the automatic mallet is used by inexperienced hands.

I claim as my invention,

1. A dental plugging instrument consist-
15 ing of a tubular casing, a toolholder mounted to be moved longitudinally in said casing, a thrust spring bearing upon said toolholder, a screw cap compressing the thrust spring, a reciprocating hammer, a spring for actu-

ating said hammer, and a tripping device 20 for releasing the same; substantially as described.

2. A dental plugging instrument consist-
ing of a tubular casing, a toolholder mounted
to be moved longitudinally in said casing 25 and shouldered to support an abutment plate, a thrust spring interposed between said abutment plate and an adjustable compression cap, a hammer, an actuating spring
interposed between the hammer and the 30 abutment plate, and a tripping device for releasing said hammer; substantially as described.

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Witnesses:

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