

(No Model.)

R. N. STOCKTON.
DENTAL PLUGGER.

No. 571,176.

Patented Nov. 10, 1896.

Fig. 1.

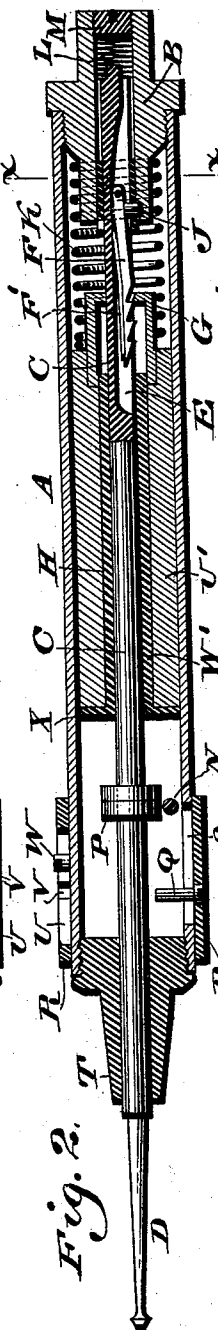
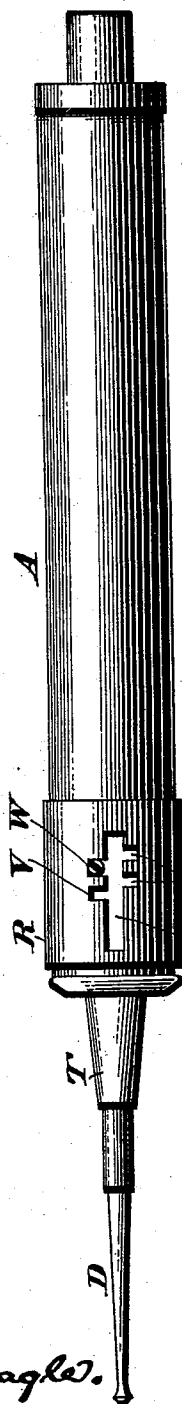


Fig. 2.

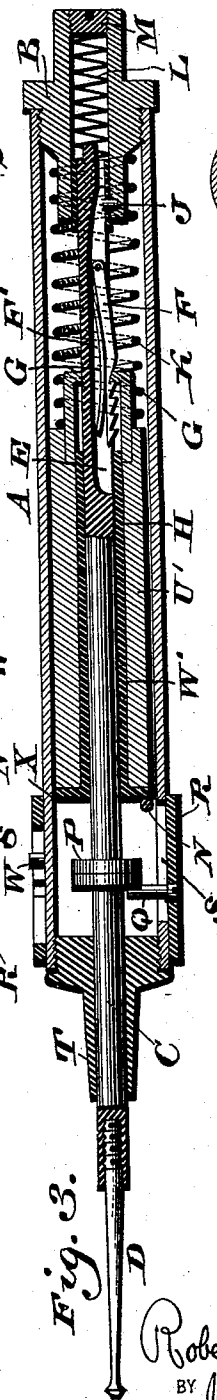


Fig. 3.



Fig. 4.

WITNESSES:

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DENTAL PLUGGER.

SPECIFICATION forming part of Letters Patent No. 571,176, dated November 10, 1896.

Application filed April 16, 1896. Serial No. 587,746. (No model.)

To all whom it may concern:

Be it known that I, ROBERT N. STOCKTON, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Dental Pluggers, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a dental plugger in which novel means are employed for placing the hammer in operative position and for releasing the same, so as to effectively impart its blows to the plugging implement.

It also consists of a novel device for adjusting the extent and force of the blows imparted to said implement.

It also consists of details of construction, as will be hereinafter set forth.

Figure 1 represents a side elevation of a dental plugger embodying my invention. Figs. 2 and 3 represent longitudinal sections of the same, showing the parts in different positions. Fig. 4 represents a transverse section on line *x x*, Fig. 2.

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

Referring to the drawings, A designates the casing of the instrument, to the rear end of which is screwed or otherwise secured the collar B, within which projects the adjacent end of the sliding spindle C, the forward end of which carries the plugger D, said spindle having a longitudinally-extending groove E, within which is pivoted the serrated dog F, whose teeth are adapted to engage with the flange G on the inner end of the sliding hammer H, which is located within the casing A and freely fitted on the spindle C.

Connected with the forward end of the collar B is the stud J, which projects inwardly from the bore of said collar and enters the groove E, so as to contact with the adjacent side of the dog F when the spindle is forced back, and thus clears said dog of the flange G, whereby the hammer H will be released, as will be hereinafter more fully described. The dog F has bearing against it the spring F', whose tendency is to hold said dog engaged with the hammer at the flange G thereof.

K designates a coiled spring, which bears against the hammer H and the collar B or other proper part of the instrument for advancing

said hammer and imparting the blow to the plugger D.

L designates a spring, which bears against the inner end of the spindle C, forming a cushion for the latter and imparting a proper forward pressure against the same, said spring also bearing against the plug or shoulder M in the collar B.

In the forward part of the casing is the cross-bar or pin N, against which the head of the hammer H is adapted to abut as a stop, and on the spindle C adjacent thereto is the projection P, which is adapted to receive the blow of the hammer and to abut against the stud Q as a stop.

In order to limit the play of the spindle, and thereby adjust the extent and consequently the force of the blow on the plugger, I secure the stud Q to the sleeve R, which latter freely encircles the casing A, said stud Q projecting through the longitudinally-extending slots S in the casing, so that it may slide in said stud and be moved nearer to or farther from the nose T of the instrument.

The sleeve R is adapted both to slide and rotate on the casing, so as to set the stud Q in the desired position and lock the same. For the latter purpose the sleeve is formed with the longitudinally-extending slot U and the transverse slots V, communicating therewith.

A screw-pin W is secured to the casing and enters either of the slots V, when the adjustment of the stud Q is accomplished, it being noticed that when the sleeve is rotated so that the pin W occupies the slot U said sleeve may be removed to the right or left, so as to change the position of the stud Q after said sleeve is rotated, so that the walls of the proper slot V receives the pin W, thus locking said sleeve, as may be seen in Fig. 1, the said sleeve in the present case being adapted to adjust the stud Q in four positions, but it is evident that the number of slots V may be increased or decreased, as desired.

The operation is as follows, the parts being in normal position, as shown in Fig. 3: The plugger D is pressed against the tooth, whereby the spindle is forced rearward, so that the dog K carries the hammer with it, and the spring K is compressed, the parts being in the position shown in Fig. 2. When the dog K reaches the stud J, it rides on the latter and

raises the same clear of the flange G, whereby the hammer advances quickly under the impulse of the spring K and delivers its blow against the collar P, which blow is consequently imparted to the plugger D and to the tooth. The plugger is again pressed against the tooth, and the spindle is forced back and the hammer is carried with the same until the stud J again operates the dog K, when the hammer is released and delivers its blows as before.

In order to render the hammer weighty and its blows consequently more forcible, I form the body U' of the same of lead, the same inclosing the bushing W', which latter is in contact with the spindle C, said bushing being formed of brass or other suitable metal, of which also the head X of the hammer is formed, thus avoiding battering of the body of the hammer while preserving the advantageous features imparted to it by the lead, which, being soft, deadens the blows, avoiding vibrations, while the brass or hard metal takes up the wear of the hammer in its motions on the spindle.

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

1. In a dental plugger, a casing with a collar secured to the rear end thereof, a spindle projecting into said collar and bearing against a spring therein, a hammer moving freely on said spindle, a serrated dog pivoted in a longitudinal slot in said spindle, and adapted to engage a flange on said hammer, and a stud projecting inwardly from said collar against said dog, said parts being combined substantially as described.

2. In a dental plugger, a casing with a collar secured to one end thereof, a sliding spindle projecting into said collar, a hammer moving freely on said spindle, a spring bearing against said hammer and collar, said spindle

having a longitudinal slot with a serrated dog pivoted therein, and a stud on said collar in contact with said dog, said parts being combined, substantially as described.

3. In a dental plugger, a casing with a collar on one end thereof, a sliding spindle projecting into said collar, and having a longitudinal slot, a hammer moving freely on said spindle, and having a flange on one end, a serrated dog pivoted in the said slot in the spindle, and engaging said flange, a spring bearing against said dog, and a stud on said collar in contact with said dog, said parts being combined substantially as described.

4. In a dental plugger, a casing, a sliding spindle therein, a hammer movable on said spindle, a collar on said casing, having a stud forming a stop for said spindle, and a cross-bar in said casing forming a stop for said hammer, said parts being combined, substantially as described.

5. In a dental plugger, a casing, a sliding spindle with a projection thereon, a collar on said casing having a longitudinal slot with transverse recesses, a pin on said casing in said slot or recesses and a stud on said collar, said parts being combined, substantially as described.

6. A dental plugger, having a casing with a collar secured to its rear end, a sliding spindle projecting into said collar, and against a spring therein, a hammer movable freely on said spindle, and having a body with an inclosed bushing, a coil-spring bearing against said body and said collar, a serrated dog pivoted in a slot in said spindle and engaging a flange on said hammer, and a stud on said collar in contact with said dog, said parts being combined, substantially as described.

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Witnesses:

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