

C. KING.  
DENTAL-PLUGGER.

No. 179,201.

Patented June 27, 1876.

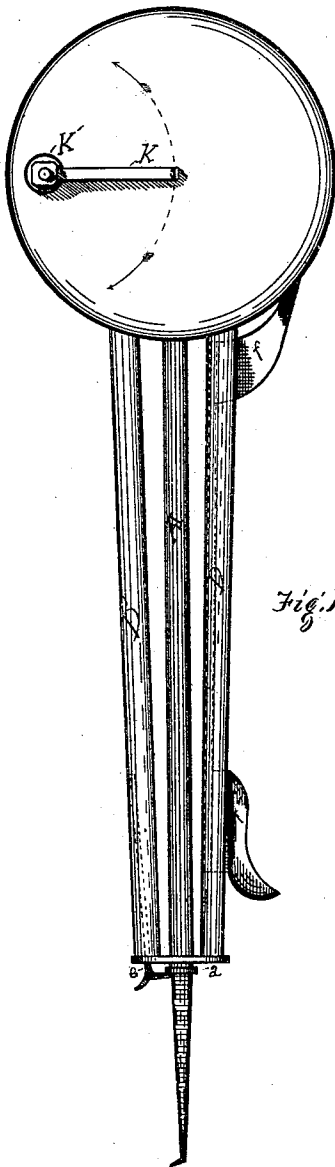


Fig. 1.

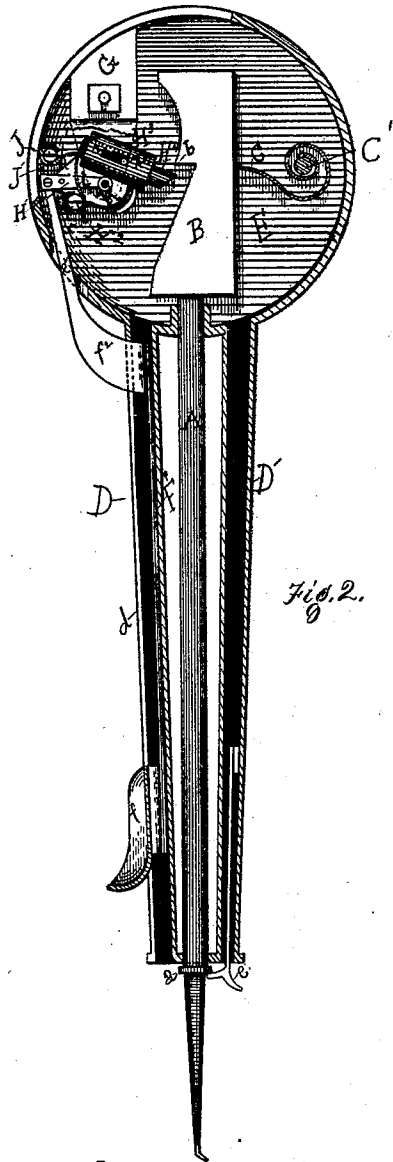


Fig. 2.

WITNESSES.

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN DENTAL PLUGGERS.

Specification forming part of Letters Patent No. **179,201**, dated June 27, 1876; application filed March 28, 1876.

*To all whom it may concern:*

Be it known that I, COURTLEN KING, of Pittsburg and State of Pennsylvania, have invented a new and useful Improvement in Automatic Dental Pluggers, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to empower the operator in filling a tooth to control the plugging process and perform the plugging at one and the same time.

In the accompanying drawing, Figure 1 is a plain top view of my automatic dental plugger. Fig. 2 shows a longitudinal section of the same.

In the drawings, A represents the plugging-instrument; B, the hammer, and C a coil-spring which holds and gives momentum to the mallet. C is a post, around which the spring C' is coiled. D D' are hollow tubes supporting the circular chamber E. In the tube D' is placed a spring-catch, *e*, which holds the instrument in place by a pressure from below the shoulder of the instrument at *a*. The tubes D D' are connected together at the bottom ends thereof in a circular or other shaped disk, having an aperture through or near its center to admit the instrument. In the tube or supporter D is a slot, *d*, extending along the outer edge of the same, and in this slot the slide F works. At the bottom end of the slide F is a finger-hold, *f*, and at the upper end of the slide F is an arm, *f*<sup>2</sup>, which also operates in the slot *d*. In the side of the chamber E is a slot, *e*, through which passes the arm *f*<sup>2</sup>. G is a metallic frame-work secured to the bottom of the chamber E. In this frame-work the lever H works. This lever is pivoted to the frame-work G and inner bottom surface of the chamber E. H<sup>2</sup> is a post, around which and attached thereto is a wire spring, *i*. H<sup>3</sup> is a cylinder, having in the side thereof a slot, *h*, and in which cylinder is the lifting-bolt H<sup>4</sup>, having a pin, *h*<sup>2</sup>, working in the slot *h*. H<sup>1</sup> is an arm of the lever H, to which arm is attached, by a bolt or other usual way, the arm *f*<sup>2</sup>. J is a post, around which is a wire spring, J', the end of which spring presses against the lever H. In constructing the lever H the cylinder H<sup>3</sup>

(having working within the same the bolt-lifter H<sup>4</sup>) is, when at rest, on an incline, as shown in Fig. 2. In this position the bolt requires less spring force to keep it in place.

In Fig. 1, K is a regulator, which is pivoted at K' to the post G.

In constructing my plugger I use one or more tubes or stems for the purpose of supporting the instrument; but I claim a plugger with supporters, whether solid or tubular, as the slide F and spring-catch *e* may be placed on the outside as well as on the inside of the supporters. Also, in constructing my plugger I use an instrument such as is in common use, having a rounded or other-shaped handle or stem, which, in operation, is placed in the disk at the lower end of the supporters, and up through an aperture in the chamber E, between the supporting tubes or stems. When in place it is loose, so as to be under easy control of the operator in the plugging operation.

It will be seen that by means of my two tubes or stems, D D', and the placing between them the instrument, the operation of the plugger is one by a natural movement of the finger, while at the same time the controlling of the instrument is also a natural one, by means of the other fingers and thumb of the hand.

To enable others to operate my plugger I will now proceed to explain the operation of the same. The operator, holding the plugger in his right-hand, or left, places his finger against the finger-hold *f*; then, by a forward pressure on the finger-hold, the arm H is drawn down, and the bolt-lifter H<sup>4</sup> is brought up against the catch of the hammer B at *b*, and the hammer is raised up to the diverging point of the two circles, (formed by raising both lifter and hammer,) where the lifter slides off, and the hammer descends, striking the plugging-instrument at its upper end. The main force given to the hammer is conveyed to it by means of the spring C. The hammer, after giving the stroke, returns automatically to its first condition, the spring C operating for that purpose. The spring *i* rests against the end of the lifter H<sup>4</sup>, and forces it to place after the return of the lifter to its position below the point *b* of the hammer B, and this return of

the lifter is effected by the spring J', which operates for that purpose against the lever H. The spring-regulator K is intended to convey to the spring C a greater or less force by tightening or loosening the coil around the post C', which may be done by movements in direction of the arrow-points.

Having thus described my invention, what I claim is—

1. The lifting-bolt H<sup>1</sup>, slotted cylinder H<sup>3</sup>, lever H, springs i and J', slide F, arm f<sup>2</sup>, and finger-hold f, in combination with the hammer B and coil-spring C, as and for the purposes substantially as described.

2. The coil-spring C, adjustable post C', lever K, in combination with the hammer B,

as and for the purposes substantially as described.

3. A dental plugger having one or more slotted stems or rods, either solid or tubular, running parallel with the plugging-instrument and distinct from it, substantially as described.

4. In a dental plugger, the rod or slide F, running parallel with (but distinct from) the plugging-instrument, operated by the finger in the direction of the point of the instrument, as and for the purpose described and shown.

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Witnesses:

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