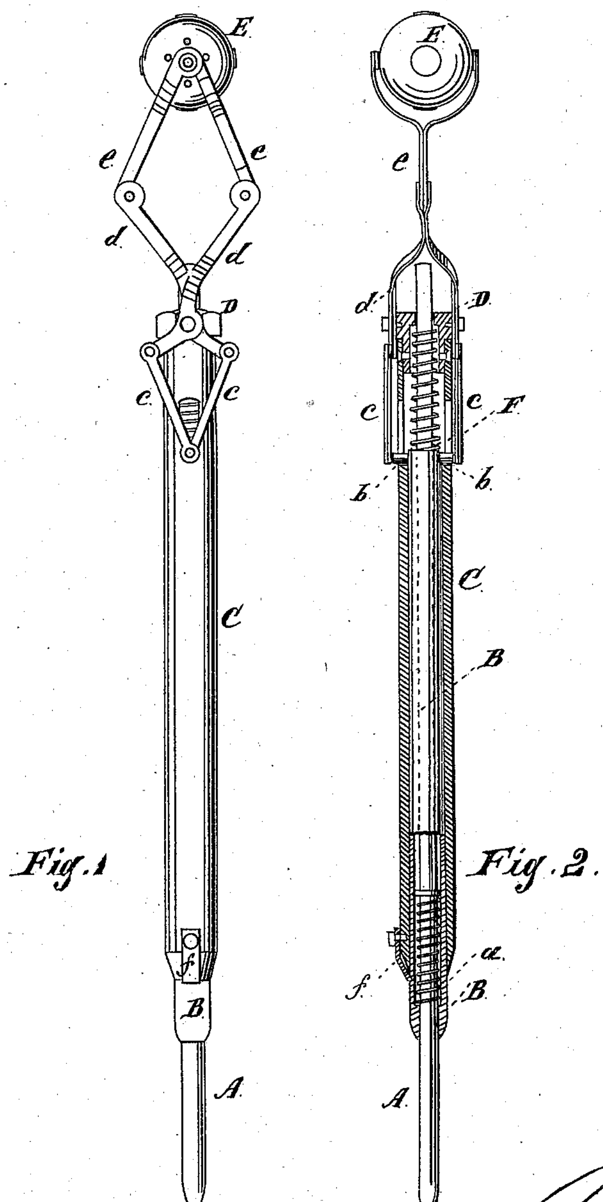
J. S. SWARTLEY.
Dental-Plugger.

No. 217,246. Patented July 8, 1879.



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JOHN S. SWARTLEY, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN DENTAL PLUGGERS.

Specification forming part of Letters Patent No. **217,246**, dated July 8, 1879; application filed October 16, 1877.

To all whom it may concern:

Be it known that I, JOHN S. SWARTLEY, of Chicago, Cook county, State of Illinois, have invented a new and useful Improvement in Automatic Dental Pluggers, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation; Fig. 2, a vertical section of the principal parts, portions being in elevation.

The object of this invention is to improve the dental plugger patented to George W. Levin, August 17, 1875; and its nature consists in providing a plugger having a mallet with a tool-holder disconnected from such mallet, and combining it with an interior tube and sliding case provided with return-springs, and in combining the interior tube and outer case with a locking-spring, and with a disconnected tool-holder, mallet, and springs, as hereinafter described and as claimed.

In the drawings, A represents the tool-holder, the upper end of which is square. B is a tube, through which the tool-holder or shaft A passes. *a* is a coil-spring around a portion of A, and within B. The lower end of this spring rests against a shoulder on the tube B, and its upper end against a shoulder on the shaft A.

C is another tube outside of B, so constructed that it can slide up and down over B. D is a cap suitably secured to the upper end of the tube C. It is provided with a square hole, through which the upper end of A passes. As shown, this cap is secured to C by means of two small screws.

b b are trunnions, secured to the shaft A at or near the upper end thereof. *c c* are arms pivoted to these trunnions *b b*. The tube C is provided with two slots, through which the trunnions pass, and which permit the movement of this tube C.

d e are levers, and E is a mallet-ball. These levers are pivoted, as shown, and substantially as shown in the patent above mentioned, and by them the mallet is operated.

F is a coil-spring around the upper part of the shaft A. Its lower end rests upon the top of the tube B, and its upper end against the inside of the cap D. The tension of this spring F holds the tubes in the position shown in the drawings, and the other spring, *a*, holds the shaft A, but permits its movement.

f is a spring, the upper end of which is secured to C near its lower end, and it is so arranged that its lower end, which is bent over, can be pressed into a recess in B, thus preventing C from sliding upon B.

In use, the operator clasps the instrument in his hand, places the end of the tool at the point where he wishes the force of the blow to be applied; then, by pressing down on the tube or stock C, this part will slide down over the tube B, and, by means of the arms *c c* and levers *d e*, the mallet E can be made to strike a blow upon the upper end of the shaft A, the force of which can be varied at pleasure. Thus far the operation is like that of the instrument described in said patent to Levin, substantially; but with my improvement, if the tool is against a soft filling, which yields under the force of the blow, the shaft A, not being in any way connected with the mechanism which operates the mallet, and being loose in the tube B, can follow the yielding filling, and hence the blow is more effective, its full force being operative.

When the operator relieves the pressure the spring F will restore the tubes and levers to their former position, and at the same time the spring *a* will restore the shaft to its former position, as shown in the drawings, and the instrument will then be ready for a repetition of the operation.

The instrument can be used for hand-pressure only by pressing the spring *f* down into the recess in B; then C cannot slide on B, and the mallet cannot be operated.

The spring *f* can be operated by the thumb, and, when released, will escape from the recess in B.

A coil-spring could be placed between the two cases B C, instead of the spring *f*, for the purpose of performing the functions of this spring.

What I claim as new, and desire to secure by Letters Patent, is as follows:

1. In a plugger having a mallet connected therewith, the tool-holder A, disconnected from the mallet, and spring *a*, in combination with the interior tube, B, sliding case C, and spring F, substantially as and for the purpose specified.

2. The spring *f*, in combination with the interior tube, B, case C, disconnected tool-holder A, springs *a* F, mallet E, arms *c*, and levers *d*, substantially as described.

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