

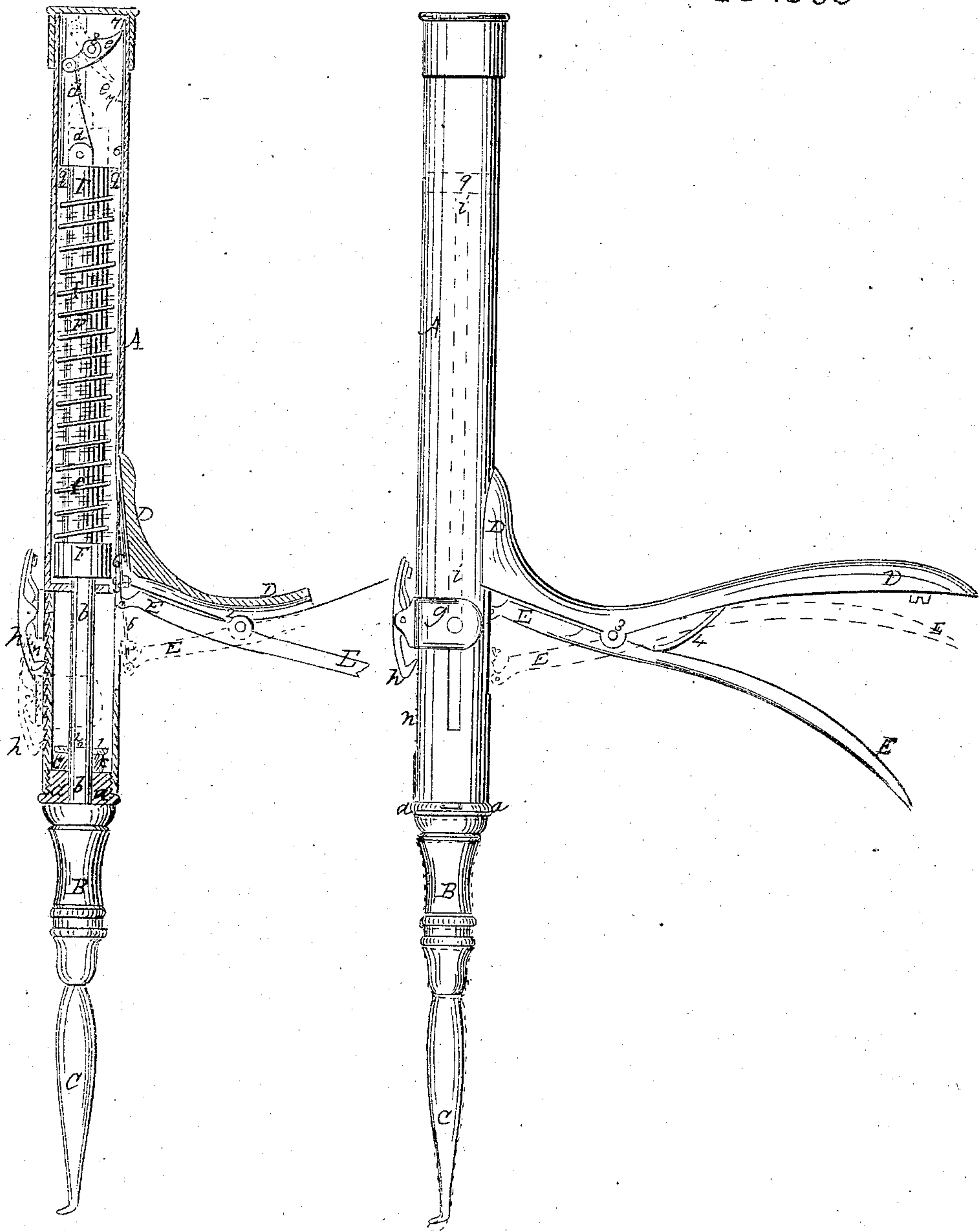
Samuel C. Taylor's,  
Improved Dental Instrument, for Plugging Teeth.

PATENTED  
FEB 18 1868

74629

Fig: 2.

Fig: 1.



Witnesses.  
*John D. Patten*  
*Morris Pool* } Samuel C. Taylor.  
 By atty A.B. Stoughton

# United States Patent Office.

SAMUEL C. TAYLOR, OF TOLEDO, OHIO.

Letters Patent No. 74,629, dated February 18, 1868.

## IMPROVEMENT IN DENTAL INSTRUMENTS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, SAMUEL C. TAYLOR, of Toledo, in the county of Lucas, and State of Ohio, have invented certain new and useful Improvements in a Dental Instrument, which I term an "Automatic Plugger;" and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents an external view of the instrument, and

Figure 2 represents a vertical section through the same.

Similar letters of reference, where they occur in the separate figures, denote like parts of the instrument in both of the drawings.

My invention consists, first, in combining with an upright mallet, which may operate by its own gravity or be accelerated by a spring, a permanent and pivoted lever, so that the operator with one and the same hand may raise the mallet and let it fall, and steadily hold the instrument and operate it.

My invention further consists in combining with a pivoted lever a rod and hook, for catching upon the toe-piece or "crotchet," and raising up the mallet and then tripping it, to let the mallet fall, as will be explained.

My invention further consists in a ready means of increasing the power of the spring upon the mallet, or diminishing it at pleasure, or removing it entirely, as the condition of the work to be done may require.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings and the letters of reference thereon.

A is an external case or hollow tube, for containing much of the mechanism of the instrument. To the lower end of the case there is screwed a nut, *a*, to which the socket B is united by having its shank *b* to pass through the nut, through a rubber or other spring, *c*, and held therein by a washer, 1, and pin, 2, so that the socket can be freely turned around or in the case, but at the same time held thereto by a spring-attachment, for a purpose to be hereafter explained. In the socket B the plugging-tool C, of any known kind, is placed, removed, replaced, or exchanged for others, as may be required. On the case is permanently secured a projecting lever or handle, D, by which the instrument is mainly held by the operator, and to the under side of this handle D there is pivoted, as at 3, a vibrating-lever, E, the free end of which is grasped in the hand that holds the lever D, to raise up the mallet, and the spring 4, between the levers, restores the hinged one E to the position shown in fig. 1, when the grasp of the hand or pressure of the fingers upon it is removed or relaxed. To that end of the lever E which projects into the case A there is connected, by a link, 5, a rod, 6, which extends upward to near the top of the case, and its extreme upper end is furnished with a hook, 7, which catches over the "crotchet" or toe-piece *e* to draw down one of its ends, it being pivoted at 8, which drawing down correspondingly raises up its other end, to which the plunger or mallet F is connected by a link, *d*.

As the mallet F is raised up, it, under some circumstances, compresses the coiled spring *f* around it, so that, when the hook 7 slips off from the "crotchet" or toe-piece, as it will do after drawing it down below its centre of motion, the reaction of the spring brings down the mallet with an increased force over that of its own gravity, and that the blow of the mallet F upon the shank *b* of the socket may be noiseless, or comparatively so, I insert a piece of hard wood, or equivalent hard non-conducting material, in the end of the mallet, which strikes upon the shank *b*.

The instrument is so arranged as that the mallet may fall with its gravity only upon the shank, socket, or plugging-tool, and thus give a very delicate blow, or the recoil of the spring may be connected with the mallet, so as to graduate the blow, as follows: Upon the exterior of the case A there is a clasp, *g*, to which is pivoted a spring-dog, *h*, to which clasp are attached rods *i*, (one only being seen in dotted lines in fig. 1, but both alike, and one on each side,) that extend upward, and are fastened to a cap or button, 9, and on the case A there are teeth, *n*, upon which the dog or catch *h* will take and hold.

By sliding the clasp downward the spring is compressed and made stronger, and by sliding it upward the spring is relaxed, and its recoil and consequent throw of the mallet less violent, so that the blow may be regulated anywhere between the gravity of the mallet alone to the extreme of the power of the spring. The blow, it will be perceived, is not transmitted through the case or body of the instrument, which would cause a jar and unsteadiness of the instrument in the hands of the operator, but is transmitted through the shank *b* and spring-



cushion *c* to the plugging-tool *C*, without moving or jarring the body of the instrument. The turning of the shank is important, as it allows the curved end of the tool to work under any portion of the cavity that is being plugged.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with the mallet and the trip-motion, a permanent and a hinged lever, so that the user may hold the instrument and operate the mallet at the same time, and by one and the same hand, substantially as described.

2. I also claim, in combination with a pivoted lever and toe-piece or "crotchets," a rod and hook, for catching, drawing down, and releasing said toe-piece, substantially as described.

3. I also claim, in combination with the mallet and a spring in a plugging-instrument, the sliding dog or catch and the teeth, for the purpose of compressing, graduating, or regulating the action of the spring upon the mallet, without changing the extent of motion of the lever *E*, substantially as described.

S. C. TAYLOR.

Witnesses:

A. B. STOUGHTON,

EDM. F. BROWN.