

(No Model.)

M. L. BOSWORTH.
DENTAL PLUGGER.

No. 477,619.

Patented June 21, 1892.

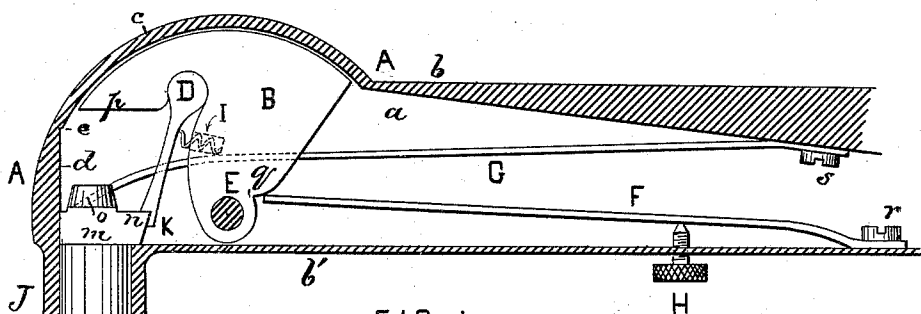


FIG. 1.

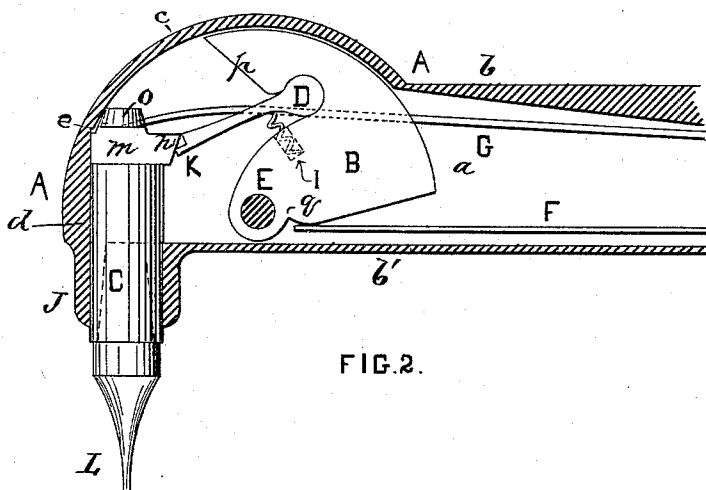


FIG. 2.

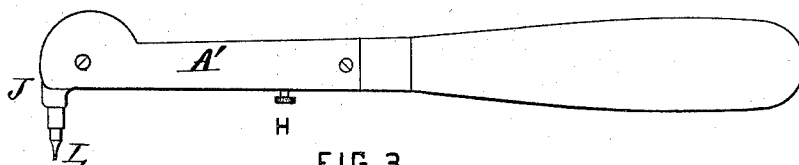


FIG. 3.

Martin L. Bosworth
INVENTOR

WITNESSES:
James H. Harris
George A. Bliss

BY *Ray. M. Bosworth*
ATTORNEY

UNITED STATES PATENT OFFICE.

MARTIN L. BOSWORTH, OF WARREN, RHODE ISLAND.

DENTAL PLUGGER.

SPECIFICATION forming part of Letters Patent No. 477,619, dated June 21, 1892.

Application filed February 11, 1890. Serial No. 340,056. (No model.)

To all whom it may concern:

Be it known that I, MARTIN L. BOSWORTH, of the town of Warren, in the county of Bristol, in the State of Rhode Island, have invented a certain new and useful Improvement in Dental Pluggers; and I declare the following to be a specification thereof, reference being had to the accompanying drawings.

Like letters indicate like parts.

Figure 1 is a side elevation of my invention, the side plate of the case being removed to show the operative parts. In said figure the plunger and tool are shown extended in the normal position. Fig. 2 shows in side elevation said invention when the plunger has been crowded inwardly to the full extent and is about to receive the blow of the hammer. Fig. 3 is a side elevation of my improved dental plugger with its handle, and shows the external appearance thereof.

My invention relates to dental pluggers used in filling teeth with gold or other metals.

It consists of the combination of a handle and case having a plugger and plunger movable in and out of said case in a direction at an angle with the longitudinal axis of said case and handle, a hammer pivotally mounted in the case and operated by a spring and provided with an oscillating arm, the end of which arm is notched or recessed to engage with a lip on the top of the plunger, and a spring to normally force the plunger outwardly, all arranged and operating substantially as hereinafter specified.

In the drawings, A represents a metallic case consisting of a plate *a* and flanges or sides *b b'*, the upper outer end *c* of which sides is formed in an arc of a circle. A' is a detachable side piece or cover for said case. The case is secured by screws or otherwise to a handle, as seen in Fig. 3. The case at its lower outer end has a tubular projection J, extending from the bottom or straight edge *b'* of the case at an angle, as shown. The inner surface of the arc portion of the case has a plane face *d* in continuation of the outer side of the bore of tubular projection J, and also a shoulder *e*. The plunger C is cylindrical and mounted in the bore of the tube J. At its outer end the plunger C is mortised to receive the plugger or point L. At its inner end the plunger C has a head *m* with plane

sides, a beveled lip *n*, and an upward extension *o*, which is recessed, as indicated in dotted lines in Figs. 1 and 2.

B is a hammer pivotally mounted on the axis or pivot E. The hammer has a striking-face *p*, adapted to deliver a blow upon the part *o* of the head of the plunger C. The hammer also has near its pivotal bearing a recess *q*. A spring F, fastened at one end to the inner side of the case by the screw *r*, has its free end engaged in the recess *q* of the hammer B. The tension or force of the spring F is regulated by the thumb-screw H. An oscillating arm D, having a round head, is mounted in a corresponding recess in the hammer B. At the end of the arm D is a notch K, adapted to engage with the beveled lip *n* of the head of the plunger C. A spring G is fastened at one end to the inner side of the case by the screw *s*. Said spring passes between the hammer B and the plate *a* of the case, and its free end enters the recess in the part *o* of the head of the plunger.

In the hammer B is a bore or chamber of proper size to receive a spiral spring I, the outer end of which bears against the arm D.

The operation of my improved dental plugger is as follows: The implement, taken in hand, is placed so that the point or plugger L is pressed upon the gold or filling in the tooth-cavity. As the pressure communicated by the hand continues the plugger L and the plunger C are crowded inwardly, thereby depressing the springs F G. The inward movement of the plunger is limited by the shoulder or stop *e*. At the same time this inward movement of the plunger C is communicated by the arm D to the hammer B, forcing the hammer back and turning it on its pivot E to the position shown in Fig. 2. As the plunger C is forced inwardly the arm D changes its angular position from that shown in Fig. 1 to that shown in Fig. 2. In the latter position the arm D is released from its engagement with the plunger C, as the notch K of said arm then slips off the beveled lip *n* of the head *m* of said plunger. The hammer B is now free to yield to the action of the spring F, and is thrown suddenly and forcibly forward and strikes its blow upon the head of the plunger C, thus driving the plugger L into the tooth-cavity to compact the gold or

metallic filling therein. The operative parts, as soon as the pressure on the point of the plugger L ceases, automatically return to the position shown in Fig. 1. The spring G crowds
5 the plunger C outwardly, and the spring I throws the notch K of the arm D into engagement again with the beveled lip *n* of the head
of the plunger C.

I claim as a novel and useful invention and
10 desire to secure by Letters Patent—

The combination, in a dental implement having a case and handle, of the tubular projection J, the plunger C, movable in the tubu-

lar projection and having the head *m* with beveled lip *n*, the plugger L, secured in the
15 plunger C, the pivotally-mounted hammer B, having the recess *q*, the arm D, mounted in the hammer B, so as to have a slight oscillation and provided with a notch K at its end
to engage the lip *n* of the head of the plun- 20
ger C, and the springs F G I, located and operating substantially as described.

MARTIN L. BOSWORTH.

Witnesses:

JAMES HARRIS,
GEORGE N. BLISS.