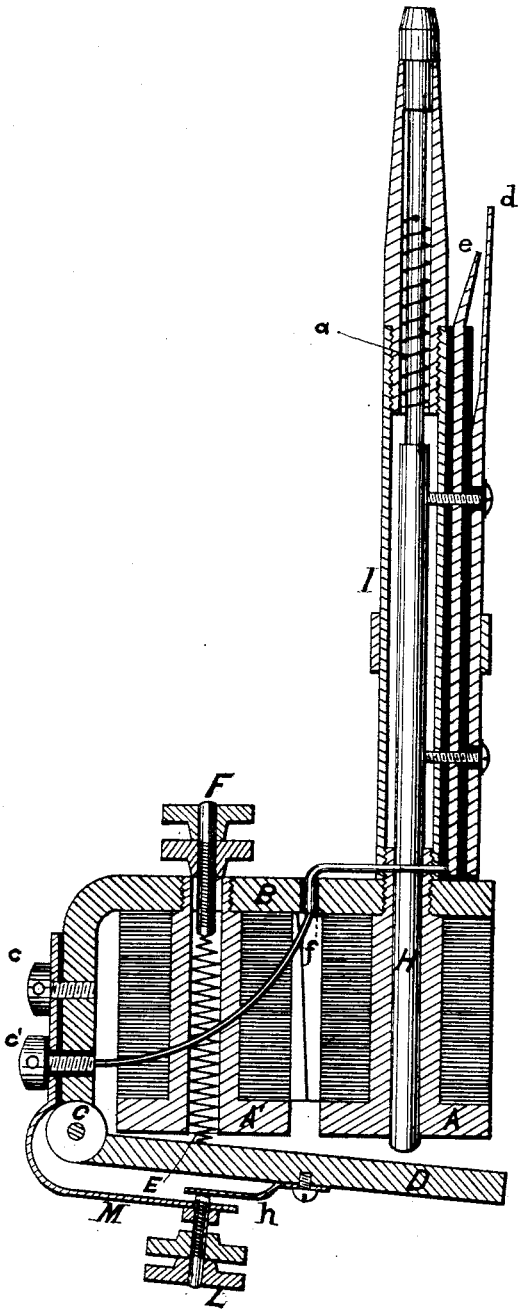
E. L. PAINE.

Electric Dental-Plugger.

No. 216,055. Patented June 3, 1879.



WITNESSES

E. R. Knowles.

James J. Thornley

By

INVENTORS

E. L. Paine

By J. P. McLean

his Attorney

UNITED STATES PATENT OFFICE.

EDWIN L. PAINE, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN ELECTRIC DENTAL PLUGGERS.

Specification forming part of Letters Patent No. **216,055**, dated June 3, 1879; application filed December 20, 1878.

To all whom it may concern:

Be it known that I, EDWIN L. PAINE, of the city of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Electric Pluggers for Dental or Analogous Uses; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in electro-magnetic dental tools.

My invention relates, specially, to dental pluggers, but is also adapted to various purposes incidental to operative dentistry; and consists, principally, in improvements in the motor actuating the tool.

The accompanying drawing, making part of this specification, is a sectional view of the several parts in combination.

A and A′ are bobbins, secured in the frame-bar B. The bar is prolonged and turned up to the head of bobbin A′, and terminates in a hinge-joint, C, the axis of which is in the plane of the heads of the bobbins A A′.

The armature D is hinged in the joint C. The axis of the bobbin A′ is drilled out, and a spiral spring, E, is inserted, one end of which rests against the armature D, and the other on the end of an adjusting-screw, F.

The bobbin A is likewise drilled through its axis, through which the tool-bar H reciprocates up and down, and the stock I is screwed onto the shank of bobbin A. A spiral spring, *a*, is so secured to the bar H as to insure proper contact of the bar H and armature D.

L is an adjusting-screw, supported by the arm M, which is in its turn secured to the frame-bar B by the binding-post *c*. One end of the wire on the bobbin A is fastened to the frame-bar B, and the other to the insulated binding-post *c*.

The circuit of the coils on the bobbin is broken at *e*, and restored when the spring finger-piece *d* is brought in contact with *e*.

This arrangement only relates to making the circuit or opening and closing the same, and possesses no novelty that I claim; but the vibration of the armature D is accomplished by contact of the adjusting-screw L with the release-spring *h*. Contact might be direct between the screw L and armature D without the intervention of the spring *h*; but in that case the range of vibration of the armature is extremely limited and the instrument subject to injurious work.

I disclaim electric alarms of any kind; but

What I claim is—

The construction of an electric dental plugger having the release-spring *h* secured to the top of the armature D, operating upon the hinged joint C, in combination with adjusting-screw F, to raise or lower the spring E in the axes of an independent bobbin, A′, substantially as above set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

EDWIN L. PAINE.

Witnesses:
WM. AP. REES,
JOHN R. MCLEAN.