E. S. RIDER.

Dental-Plugger.

No. 163,412. Patented May 18, 1875.

Fig. 1

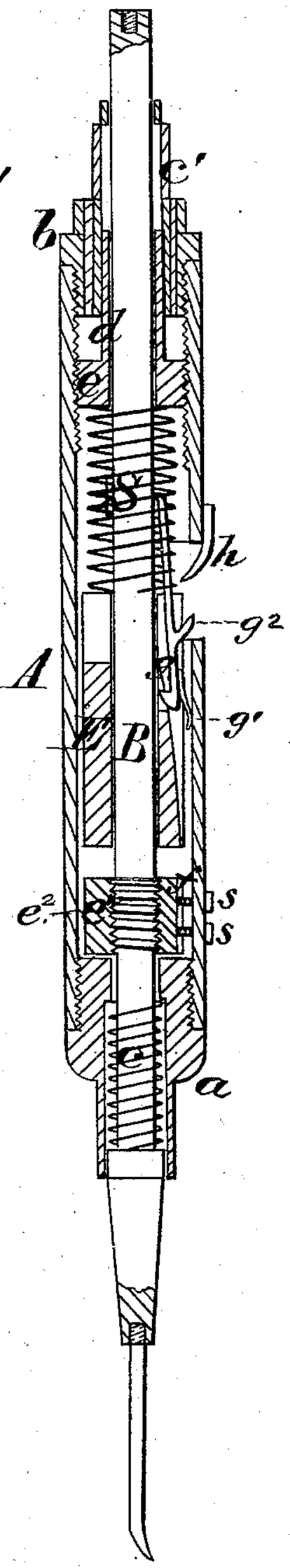


Fig. 2.

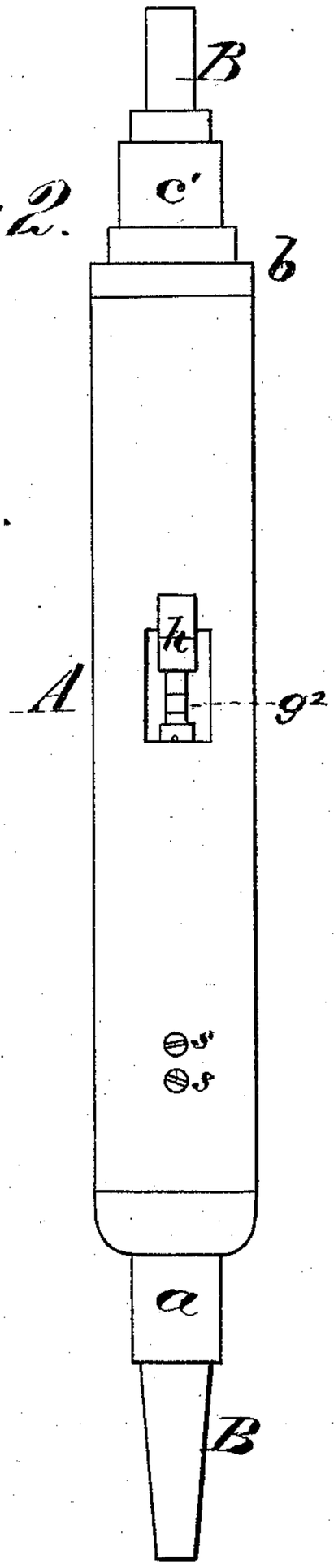
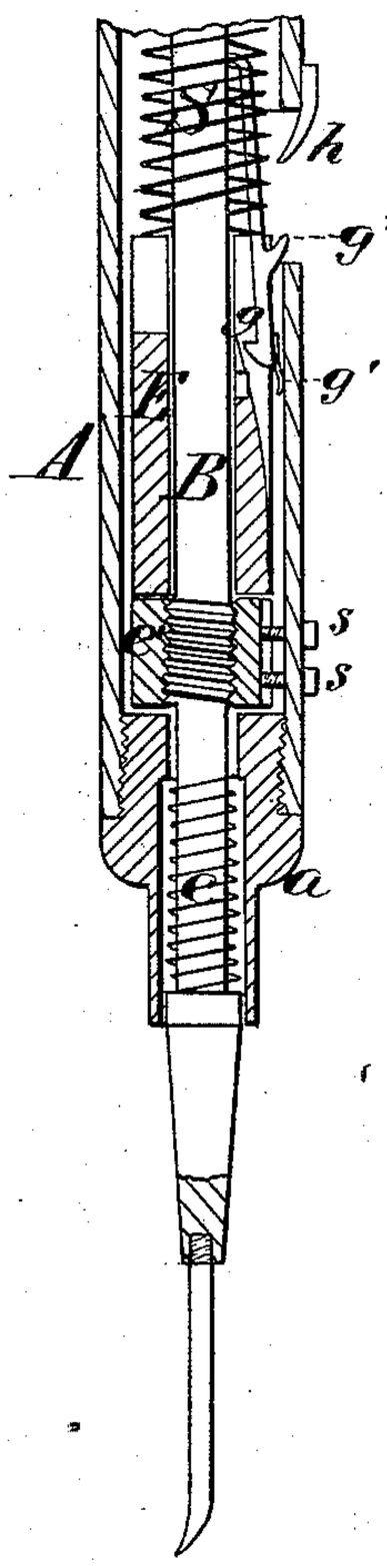


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

EDWARD S. RIDER, OF CATLETTSBURG, KENTUCKY.

IMPROVEMENT IN DENTAL PLUGGERS.

Specification forming part of Letters Patent No. **163,412**, dated May 18, 1875; application filed February 6, 1875.

To all whom it may concern:

Be it known that I, EDWARD S. RIDER, of Catlettsburg, in the county of Boyd and State of Kentucky, have invented a new and valuable Improvement in Dentists' Mallets; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figures 1 and 2 of the drawings are representations of vertical central sections of my mallet, and Fig. 3 is a plan view of the same.

This invention has relation to dentists' mallets; and it consists in certain novel means for adjusting the anvil on the pull-and-push rod, and also in the method of adjusting the tension of the spring that operates the hammer, as hereinafter more fully set forth and claimed.

In the annexed drawings, A designates a tubular handle, in which works the rod B, to which the dental tools are attached. This rod B is allowed to receive endwise play through caps *a b*, which are screwed into the ends of the tube A. The cap *a* is tubular, and incloses a spring, *c*, which is compressed between shoulders, and which, by its recoil, returns the rod B to its place after each blow. The cap *b* receives loosely through it a hollow stem, *c'*, one end of which is square, and in this stem a square tube, *d*, is received, which is secured to a follower-screw, *e*, which latter is tapped into the handle A, and adjustable by turning the stem *c'*. The tube *d* receives through it the rod B, and on this rod, next to the cap *a*, an anvil, *e'* is rigidly secured. The anvil has a straight groove, *f*, in its periphery, which receives the ends of screws *s s*, thus preventing the rod B and the anvil from turning. E designates a cylindrical hammer, which is of less diameter than the bore of the handle A, and through which passes loosely the rod B. This hammer E is grooved longitudinally, and near one end of the groove a hole is made for the purpose of receiving the beveled nose of a spring-catch, *g*, one end of which is attached to the rod B, and the other end is acted on by a spring, g^1. The catch *g* has a beveled lip, g^2, formed on it, which, when brought in contact with a tongue, *h*, will release the catch from the hammer, and allow a spring, S, between the hammer and the follower *e*, to strike the anvil *e'* and give the blow, after which the spring *c* will throw back rod B and engage the hammer with its catch *g*. When the blows are to be given by the recoil of spring S, and the bit is inserted into that end of rod B nearest the follower *e*, the operator draws this rod endwise until g^2 strikes the tongue *h*, which will release the hammer E and allow spring S to forcibly throw it against the anvil *e'*, and thus give the blow. If the bit is inserted into the opposite end of the rod B, the blows are given by tapping with the finger on this rod, the spring S in this case operating to retract the rod.

It will be seen that by means of the follower-screw *e*, provided with the square tube *d*, in connection with the square stem *c'*, turning in the screw-cap *b*, by revolving the stem *c'*, the follower-screw *e* can be raised and lowered at pleasure, thereby increasing or decreasing the tension of the spring S, thus varying at will the blow of the hammer on the anvil.

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

1. In a dental plugger, the reciprocating rod B, adjustable anvil *e'*, catch *g*, having lip g^2, and springs g^1, S, and *c*, in combination with the grooved sliding hammer E and slotted tube A, having the tongue *h*, substantially as described, and for the purpose set forth.

2. The reciprocating rod B, carrying the sliding hammer E and spring S, in combination with the screw-follower *e*, having square tube *d*, square stem *c'*, and screw-cap *b*, substantially as described, and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

EDWARD S. RIDER.

Witnesses:
J. H. MCCONNELL,
W. H. HAMPTON.