C. BILHARZ.

Dental-Plugger.

No. 165,701. Patented July 20, 1875.

Fig. 1.

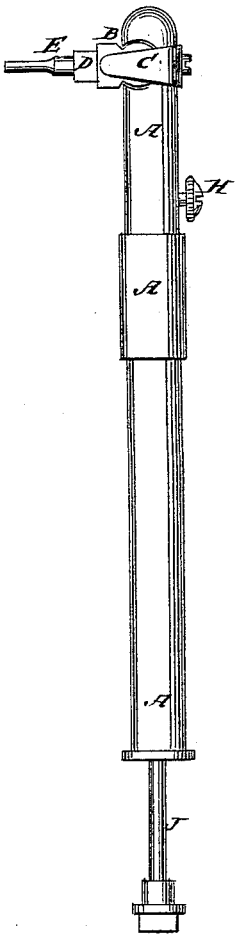

Fig. 2.

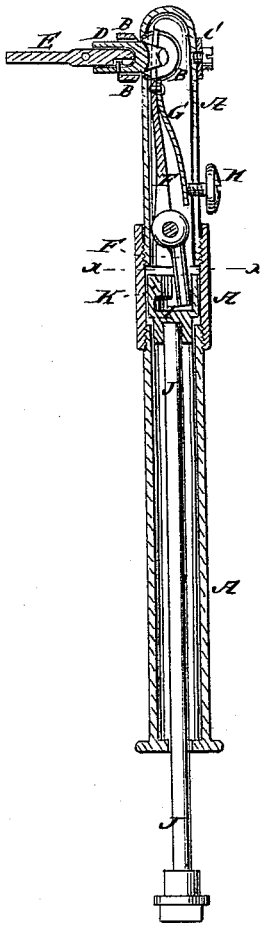

Fig. 3.

WITNESSES:

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CANDIDUS BILHARZ, OF PITTSYLVANIA C. H., VIRGINIA.

IMPROVEMENT IN DENTAL PLUGGERS.

Specification forming part of Letters Patent No. 165,701, dated July 20, 1875; application filed May 28, 1875.

To all whom it may concern:

Be it known that I, CANDIDUS BILHARZ, of Pittsylvania C. H., Pittsylvania county, Virginia, have invented a new and useful Improvement in Dental Pluggers, of which the following is a specification:

Figure 1 is a side view of my improved instrument. Fig. 2 is a longitudinal section of the same, and Fig. 3 is a cross-section of the same, taken through the line *x x*, Fig. 2.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved dental plugger which shall be simple in construction, convenient in use, easily adjusted and controlled, and which may be driven by any ordinary dental engine.

The invention consists in the combination of the adjustable guide with the notched case and with the point-holder; in the combination of the point-holder, the lever, the spring, the head, the rod, and the cam with each other and with the case, and in the combination of the set-screw with the case, the spring, and the lever to regulate the force of the blow, as hereinafter fully described.

A is the case of the instrument, which is made in three parts, the inner ends of the two end parts being screwed into the ends of the middle part. The forward end of the case A is closed and rounded off, and in its side is formed a concaved or circular notch, a little more than a semicircle in form, to receive the head of the hollow guide B, so that the said guide cannot drop out, but can only be inserted and removed laterally. The guide B is kept in place and held in any position by a U-spring, C, secured at its bend to the case A by a small screw, and the arms of which rest against the opposite sides of the guide B to be adjusted at right angles with the case A, or inclined outward or inward from a right-angled position. In the guide B is formed a square longitudinal hole to receive the point-holder D, which has a longitudinal socket formed in it to receive the shank of the point E. In the side of the shank of the point E is formed a half-spiral groove to receive a pin inserted in the side of the holder D. In the middle part of the point E is formed a transverse hole to receive a pin for turning the said point when inserting and removing it. Upon the inner end of the point-holder D is formed a T-head, the neck of which fits into a longitudinal slot in the forward end of the lever F. The lever F is pivoted to the case A near the inner or rear end of the forward end part of said case. To the forward part of the lever F is attached one end of the spring G, the other end of which rests against the inner surface of the said part of the case, and the tension of which is regulated by a set-screw, H, that passes in through a screw-hole in the case A. The rear end of the lever F projects into the cavity of the middle part of the case A and enters the cavity of the cylindrical head I, attached to the inner end of the rod J, which passes out through a hole in the center of a cap attached to the rear end of the case A, and the rear or outer end of which is designed to be connected with the flexible driving-shaft of a dental engine. Upon one side of the inner surface of the cavity of the head I is formed a cam, K, which, as the rod J and head I are revolved, strikes against the end of the lever F and turns it upon its pivot, so as to draw the holder D and point E inward. As the end of the lever F drops from the shoulder of the cam K the holder D and the point E are thrown out to give the blow by the elasticity of the spring G.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the adjustable guide B and the U-spring C, with the notched case A, and with the point-holder D, substantially as herein shown and described.

2. The combination of the point-holder D, the lever F, the spring G, head I, the rod J, and the cam K, with each other, and with the case A, substantially as herein shown and described.

3. The combination of the set-screw H with the case A, the spring G, and the lever F, to regulate the force of the blow, substantially as herein shown and described.

CANDIDUS BILHARZ.

Witnesses:

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