No. 625,354. Patented May 23, 1899.

A. H. PUTNAM.

DENTAL SPATULA.

(Application filed Mar. 9, 1898.)

(No Model.)

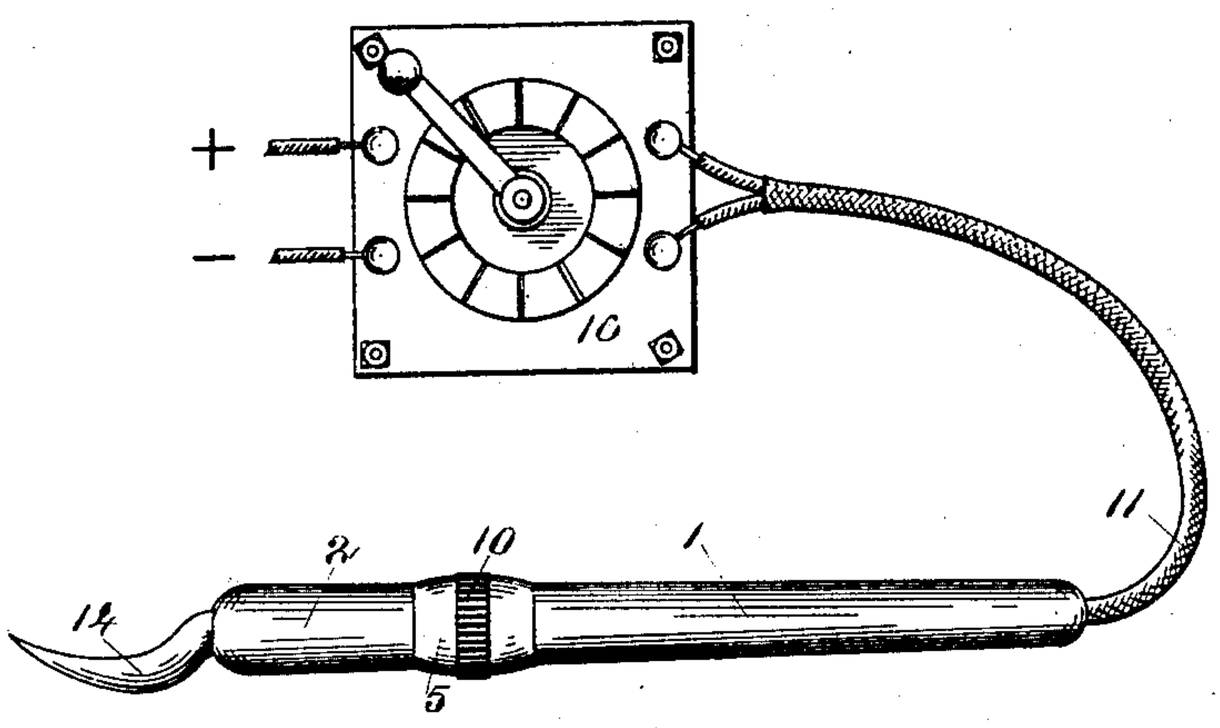

Fig. 1.

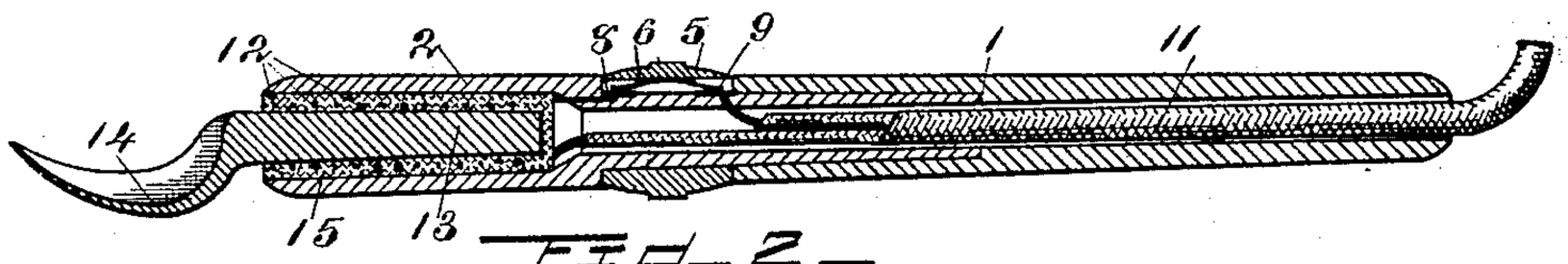

Fig. 2.

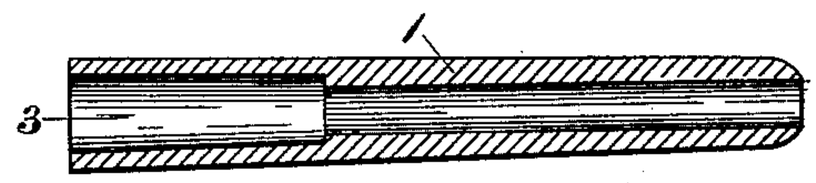

Fig. 3.

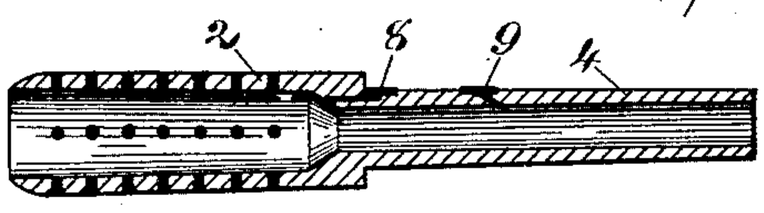

Fig. 4.

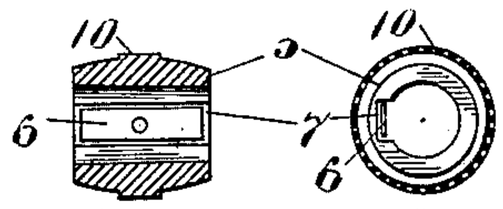

Fig. 5.

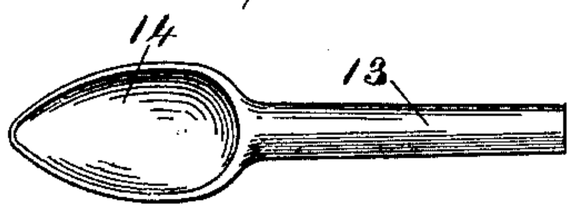

Fig. 6.

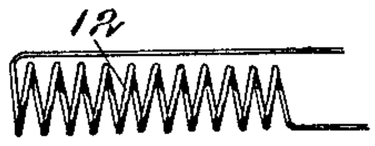

Fig. 7.

Witnesses

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UNITED STATES PATENT OFFICE.

ALANSON HARRIS PUTNAM, OF TORONTO, CANADA.

DENTAL SPATULA.

SPECIFICATION forming part of Letters Patent No. 625,354, dated May 23, 1899.

Application filed March 9, 1898. Serial No. 673,231. (No model.)

To all whom it may concern:

Be it known that I, ALANSON HARRIS PUTNAM, of the city of Toronto, in the county of York and Province of Ontario, Canada, have invented certain new and useful Improvements in Dental Spatulas, of which the following is a specification.

My invention relates to improvements in an electrically-heated spatula for carving and working upon wax in all its branches where heated instruments are required to retouch or form the same; and it consists in the construction and combination of parts hereinafter more particularly set forth and claimed.

With these objects in view my invention consists of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 shows the form of my improved spatula in elevation with controlling-rheostat. Fig. 2 is a longitudinal sectional view of the same somewhat enlarged. Fig. 3 is a detail view in section of the right-hand portion of the case. Fig. 4 is a detail view in section of the left-hand portion of the same. Fig. 5 consists of a sectional view and end elevation of the switch. Fig. 6 is a view in detail of the spatula, and Fig. 7 is a detail view of the heating-coil.

In the drawings, 1 and 2 represent the right and left hand portions of the case, as shown in Figs. 3 and 4, respectively. The portion 1 has the interior 3 enlarged to receive the end 4 of the portion 2. Located on the sleeve 4 is the collar-shaped switch 5, closing and breaking the circuit when rotated on the sleeve 4 by the metal strip 6, secured in the recess 7 within the collar 5. The switch 5 closes the circuit between the terminals 8 and 9 when the metal strip 6 is brought in line with the latter and breaks the circuit on further rotation of the same. To facilitate the moving of the switch, the center portion 10 is slightly raised and knurled, as shown.

Entering the interior of the case are the conducting-wires 11, which pass through, having one connected to the terminal 9 and the other to one end of the heating-coil 12, while the other end of the coil is connected to the terminal 8. The heating-coil 12 consists of a number of turns of wire wound in a spiral form containing ample resistance to raise the temperature sufficiently high to heat the stem 13 of the spatula 14. To retain the heat within the case and to insure the insulation, the coil 12 is embedded in asbestos 15, allowing the coil to lie as close to the stem 13 as is consistent with good insulation, thereby greatly facilitating the heating of the same.

The left-hand portion of the case 1, which incloses the heating-coil 12 and stem 13, I propose to perforate, as shown in Fig. 4, for the purpose of keeping the same cool or any other means for the same purpose.

The form of spatula shown is no part of my invention, being only the usual form employed for the purpose of carving and molding wax, for in place of the above I can substitute any desired form of instrument which requires heating for working with the same.

The conducting-wires 11 leave the interior of the case in the form of a braided conductor and of any desired length, terminating at the rheostat or controller 16, which is located in the circuit between the source of the current and the electrically-heated spatula. The rheostat is of the usual type and constructed to lower the electromotive force of the circuit to that found most desirable for heating the spatula.

The heat of the spatula is controlled by the rheostat, varying in temperature in proportion to the greater or less amount of resistance cut in or out by the same, increasing in temperature as the resistance decreases, and vice versa, and again by breaking the circuit with the switch 5 the operator can use the instrument cold, if desired.

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

The combination of a tubular casing having an enlarged forward interior space 3, a second tubular casing having an enlarged forward portion and a shank adapted to fit into the space 3 of the first casing and provided with passages for the reception of terminal

wires, a heating-coil embedded in a suitable non-conductor and fitting within the enlarged portion of the said second casing, a switch, comprising a collar and rotating on the shank of said second casing and carrying a metal plate adapted to make contact with terminals projecting from the body of the casing, and a tool to be heated, the shank of which fits within the heating-coil, substantially as set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

ALANSON HARRIS PUTNAM.

Witnesses:

W. H. GOLD,

C. E. GREEN.