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G. S. BENNETT & J. W. THATCHER.

DENTAL MOUTH MIRROR.

(Application filed Aug. 31, 1901.)

(No Model.)

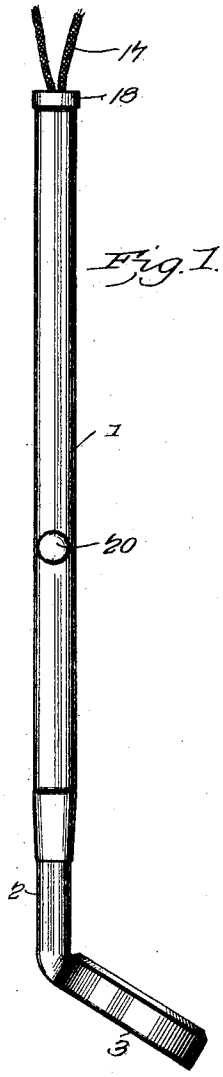


Fig. 1.

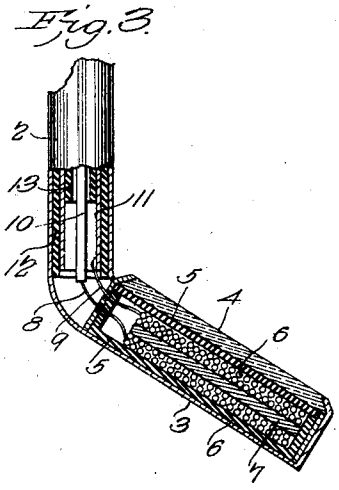


Fig. 3.

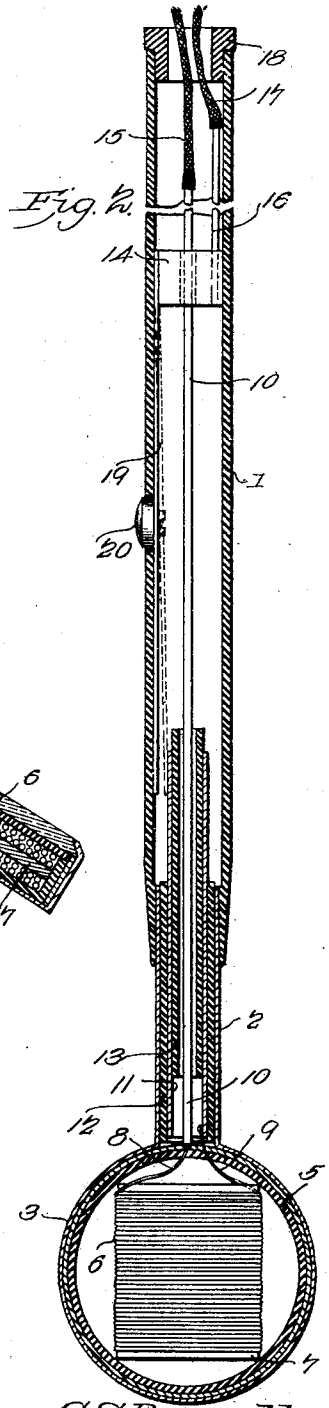


Fig. 2.

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UNITED STATES PATENT OFFICE.

GEORGE SEDAM BENNETT AND JOSEPH W. THATCHER, OF SAN FRANCISCO, CALIFORNIA; SAID BENNETT ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO SAID THATCHER AND AUGUST MEYENBORG, OF SAN FRANCISCO, CALIFORNIA.

DENTAL MOUTH-MIRROR.

SPECIFICATION forming part of Letters Patent No. 709,812, dated September 23, 1902.

Application filed August 31, 1901. Serial No. 73,998. (No model.)

To all whom it may concern:

Be it known that we, GEORGE SEDAM BENNETT and JOSEPH W. THATCHER, citizens of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented a new and useful Dental Mouth-Mirror, of which the following is a specification.

This invention relates to certain improvements in dental mouth-mirrors of that class in which a small resistance-coil is placed adjacent to the mirror and arranged in an electrical circuit for the purpose of heating the mirror and preventing the accumulation of moisture on the reflecting-surface of the mirror.

The object of the invention is to provide an improved construction of electrically-heated mirrors; and it consists in the novel combination and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claim.

In the drawings, Figure 1 is an elevation of a dental mouth-mirror embodying the features of the invention. Fig. 2 is a longitudinal vertical section through the same looking toward the front thereof. Fig. 3 is a transverse vertical section of the lower portion of the improved device.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates a tubular handle of suitable material obviously of an insulating nature and connected at the lower end to a tubular stem 2, which is secured to the lower body or bowl 3. This body or bowl may be of the usual or any preferred form of construction, which will be regulated in accordance with the devices mounted therein, and is arranged at an angle to the said stem, as in the ordinary dental mouth-mirrors. In the upper side of the body a reflecting glass or mirror 4 is held in the usual manner, the said glass or mirror having a beveled edge for convenience in attaching the same. Particular care will be exercised in forming a tight joint between the edge of the glass or mirror and the portion of the body holding the same to prevent moisture from the mouth of the patient from passing into the interior of the said body, and in forming this water-tight joint any of the well-known methods will be pursued.

Suitably held within the body 3 is an insulating casing or inclosure 5, of suitable insulating material, such as mica or asbestos, and inclosed by the said casing 5 is a resistance-coil 6, which is wound about an intermediate insulating-core 7. The terminals 8 and 9 are respectively attached to a conducting wire or rod 10, extending centrally through the handle 1 to a point adjacent to the upper end thereof and to a metallic tube 11, which also projects upwardly into the said handle. The wire or rod 10 and the metallic or conducting tube 11 both pass through the stem 2, and between the latter and the said tube is an insulating-sleeve 12, which extends upwardly to a point adjacent the inner limit of the joint formed between the stem and handle, so as to leave a portion of the tube 11 free for contact. Within the tube 11 and surrounding the wire or rod 10 is an insulating-tube 13, which extends far enough above the upper terminal of the tube 11 to prevent any possibility of contact of the wire or rod 10 with the said terminal of the tube 11.

In the upper portion of the handle 1 a conducting-plug 14 is snugly fitted, and therethrough the wire or rod 10 extends to a suitable distance above the same for attachment to a wire or other conductor 15. At the point where the wire or rod 10 passes through the plug 14 a suitable insulation will be interposed, as shown by dotted lines in Fig. 2, for obvious reasons, and also attached to said plug is a lead-wire 16, having the terminal of a connection 17 attached thereto. The connections 15 and 17 pass outwardly from the handle 1 through a tubular plug 18 in the upper end thereof and run to a battery or other suitable source of electrical generation. Also secured to the plug 14 and extending longitudinally of the handle 1 to a point below the upper extremity of the tube 11 is a spring 19, having a push-button 20 attached thereto and

exteriorly and operatively exposed through the handle. The said spring 19 is free for operation throughout its entire length or so that it can be pressed inwardly to contact with the upper extremity of the tube 11 to make the circuit.

In the operation of the improved device the button 20 is pressed inwardly by the operator to cause the lower extremity of the spring 19 to contact with the upper extremity of the tube 11. The circuit will then be closed and be made complete through the connections 17, lead 16, plug 14, spring 19, tube 11, terminal 9, through the resistance-coil 7, from the latter by the terminal 8 to the wire or rod 10, and thence by the connection 15 back to the source of electrical generation. When the circuit is closed in the manner set forth, the heat generated in the coil 7 will be transmitted to the glass or mirror 4, and thereby dry up the moisture that may have become deposited thereon, and thus render the said glass or mirror efficient in the performance of its desired function.

The improved device is simple and effective in its construction and operation and will overcome the inconveniences and annoyances heretofore encountered in the ordinary forms of dental mouth-mirrors. By the introduction of the several insulating devices shock to the patient will be avoided and the operator will also be protected.

Having thus described the invention, what is claimed as new is—

In a dental mouth-mirror, the combination of the metallic casing, a mirror carried thereby, a resistance-coil within said casing, a lining of insulating material entirely surrounding said resistance-coil, a tubular stem secured to said casing and provided with an internal insulating-sleeve, a metallic tube arranged within said sleeve, and having one of its ends electrically connected to a terminal of the coil, an insulating-tube arranged within said metallic tube, an insulating-handle secured to the tubular stem, a conductor extending through the handle and insulating-tube and connected to the opposite terminal of the coil, a conducting-plug carried by the handle, a conducting-wire electrically connected thereto, a spring-conductor secured to said plug and adapted to be moved into contact with the said metallic tube to complete the circuit, and a push-button carried by said spring and extending through an opening in the handle, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

GEORGE SEDAM BENNETT.
JOSEPH W. THATCHER.

Witnesses:
R. B. TREAT,
W. T. HAMMOND.