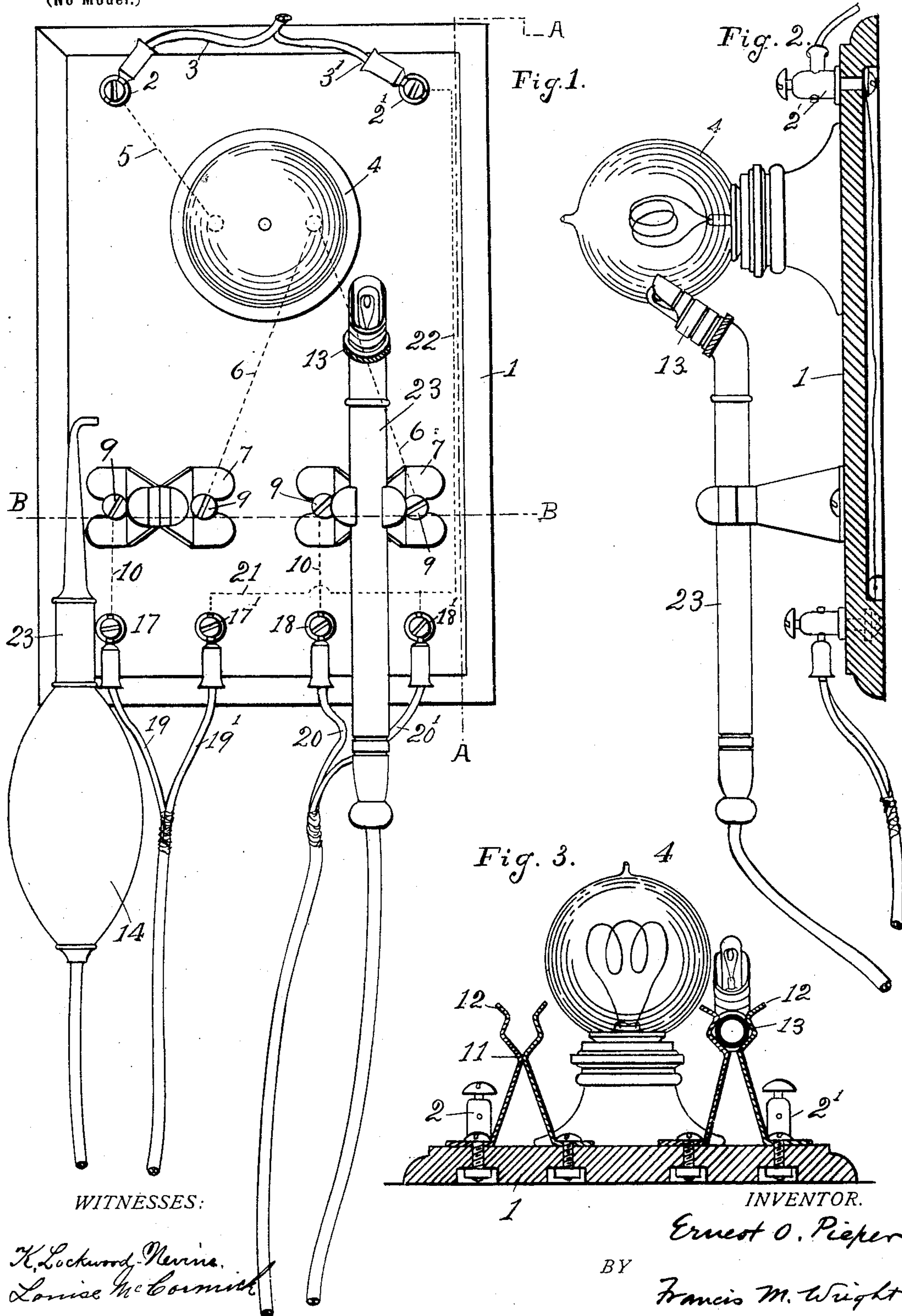


E. O. PIEPER.

SUPPORT AND SWITCH FOR ELECTRIC DENTAL INSTRUMENTS.

(Application filed Jan. 2, 1902.)

(No Model.)





# UNITED STATES - PATENT OFFICE.

ERNEST O. PIEPER, OF SAN JOSE, CALIFORNIA.

SUPPORT AND SWITCH FOR ELECTRIC DENTAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 702,073, dated June 10, 1902.

Application filed January 2, 1902. Serial No. 88,010. (No model.)

*To all whom it may concern:*

Be it known that I, ERNEST O. PIEPER, a citizen of the United States, residing at San Jose, in the county of Santa Clara and State of California, have invented certain new and useful Improvements in Supports and Switches for Electric Dental Instruments, of which the following is a specification.

My invention relates to a combined support and electric switch for dental instruments, the object of my invention being to provide a device by means of which certain classes of dental instruments—such as mouth-lamps, hot-air syringes, cauterizers, and the like—which require an electric current for their operation can be supported in a convenient position and so that the electric circuit is broken when so supported, while upon removal of the device from its support to use the same the electric circuit shall be closed.

A special object of my invention is to provide a device of this character which shall be cheap and simple in construction and at the same time neat and attractive in appearance.

I have herein shown my invention in use with an electric mouth-lamp and an electric hot-air syringe; but the same may also be used with other instruments employing electric currents.

In the accompanying drawings, Figure 1 is a front elevation of my improved device. Fig. 2 is a vertical section on the line A A of Fig. 1, and Fig. 3 is a cross-section on the line B B of Fig. 1.

Referring to the drawings, 1 represents a switchboard, which is preferably secured in a vertical position against a wall or other suitable support.

2 2' are the upper binding-posts, to which are connected the supply-wires 3 3' from the source of electricity.

4 represents a resistance-lamp interposed in the circuit to reduce the strength of the current, which as ordinarily supplied would be too powerful for the instruments used in connection with the present invention. From the positive binding-post 2 the current passes to one of the terminals of the lamp 4 by means of a wire in the under side of the switchboard. (Shown in dotted lines at 5.) The current passes through the lamp and then travels

from the other terminal of the lamp by two wires in the under side of the switchboard and shown in dotted lines at 6 to the right-hand members of two switches 7. Said switches 7 are also clamps for holding the dental instruments. They are each formed of strips of spring metal, their lower bent and forked ends being secured to the switchboard by means of screws 9, to which on one side are attached the ends of the wires 6 and on the other side are attached the ends of wires 10, conducting the current from said switch. From their ends thus secured upon the switchboard the strips extend upward and converge toward each other and make contact at their upper ends, as shown at 11, when the instrument is not clamped therein. From said points of contact the strips are bent or curved outward to conform to the curved sides of the instrument, and their extreme upper ends are flared outward, as shown at 12, to facilitate the entrance of the instrument into the clamp. I have herein shown two such instruments, the one on the right (represented by 13) being an electric mouth-lamp and the one on the left (represented at 14) being an electric hot-air syringe.

The wires 10 in the under side of the switchboard lead from the left-hand members of the clamp to the left-hand members 17 18 of two pairs of binding-posts near the lower edge of the switchboard, which members are connected to the positive wires 19 20 of the hot-air syringe and electric mouth-lamp, respectively, while the negative wires 19' 20' of the latter are connected with the right-hand members 17' 18' of the two pairs of binding-posts. The binding-post 17' is connected by a wire 21 in the under side of the switchboard with the binding-post 18', while the latter is similarly connected by a wire 22 with the negative binding-post 2' at the top of the switchboard.

It will now be seen that when both of the instruments are in position in their clamps the circuit is broken; but when either of them is removed from its clamp the spring members of said clamp immediately come in contact and the circuit is closed through said clamp. Thus either instrument is immediately ready for use upon removing it from its support, and the replacing of the instru-



ment in its support automatically breaks the circuit and prevents the passage of the current.

It is of the essence of my invention that the dental instruments used in connection therewith should each have at the point where it is supported in the clamp a casing or stem 23 of hard rubber or other insulating material, so that when the instrument is hung up in place said stem will break the contact through the clamp or switch.

I claim—

1. A support and switch for an electric dental instrument comprising a switchboard, an electric circuit, and a clamp comprising two strips of spring metal, the lower ends of which are supported upon the switchboard, and are connected with said circuit, and the upper ends converge and contact with each other when free to do so, said upper ends being shaped to receive an electric dental instrument, and thereby break said contact, in combination with such an instrument having a stem of insulating material arranged to be interposed between said strips and thus break the circuit between them, the wires of said instrument being in said circuit, substantially as described.

2. A support and switch for electric dental instruments comprising a switchboard, a plurality of switches thereon, each comprising two strips of spring metal secured at their lower ends to said switchboard, their upper ends converging toward each other and contacting when free to do so, said upper ends being suitably bent to receive the stem of an electric dental instrument and thereby break said contact, in combination with a corresponding plurality of electric dental instruments, the wires of which are connected in parallel with the members of the switches, and the members of the switches being connected in parallel with the source of supply of electricity, and each instrument having a stem of insulating material arranged to be interposed between the switch members when the instrument is hung up, substantially as described.

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

ERNEST O. PIEPER.

Witnesses:

WILLIAM BINDER,  
JULIAN H. BIDDLE.