

M. N. CALLENDER.  
DENTAL SWITCHBOARD.

APPLICATION FILED JAN. 30, 1905.

Fig. 1.

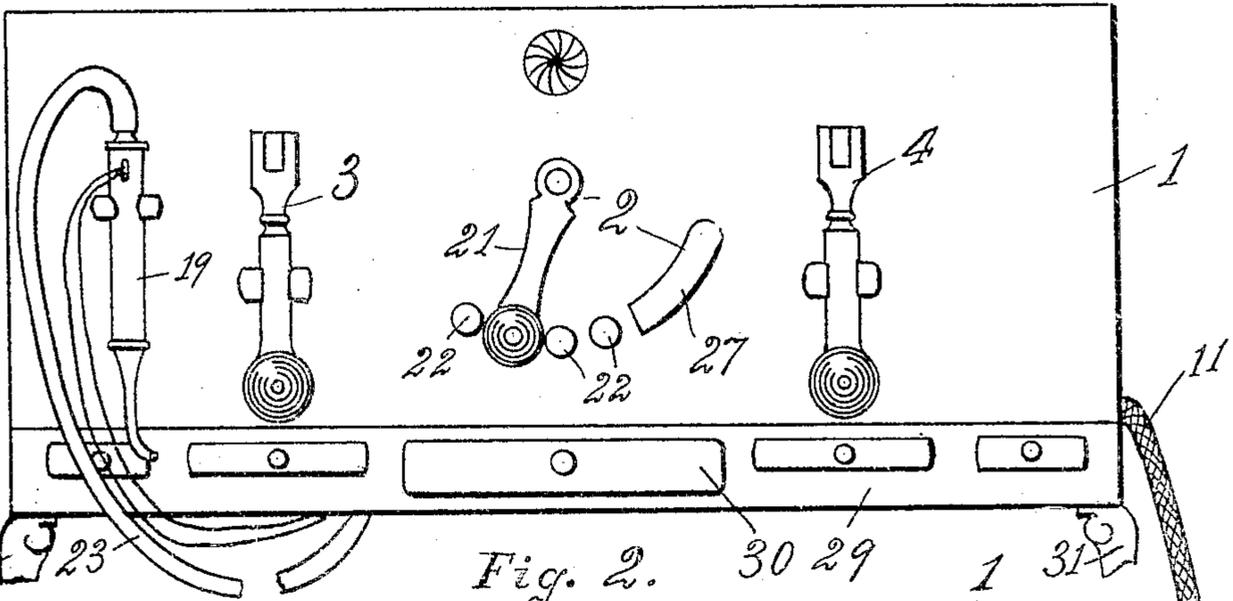


Fig. 2.

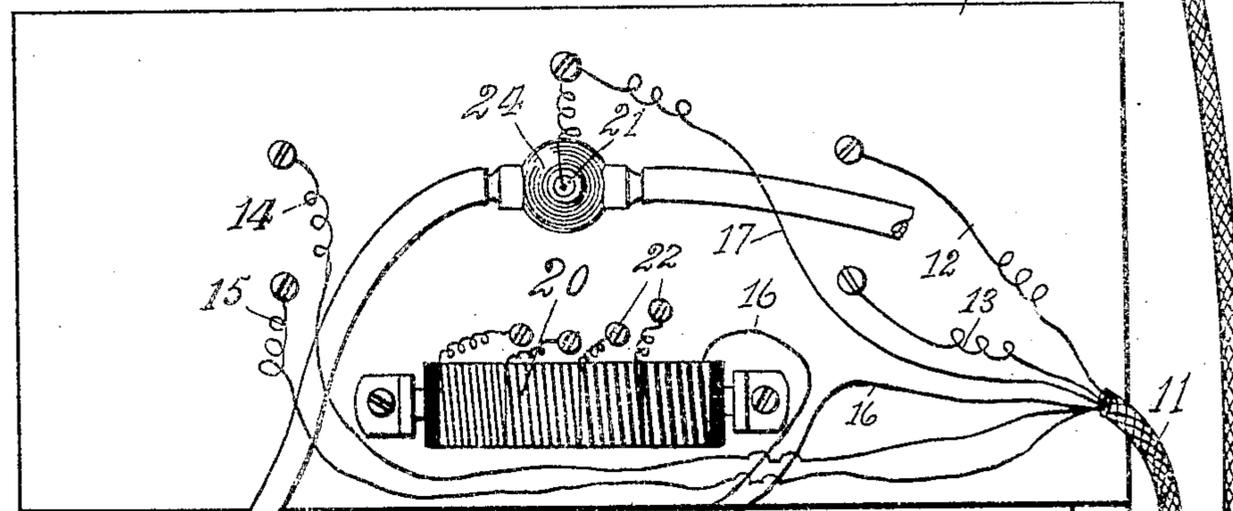


Fig. 4.

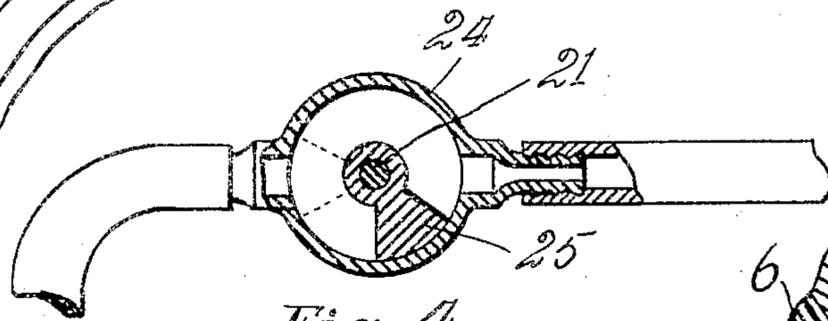
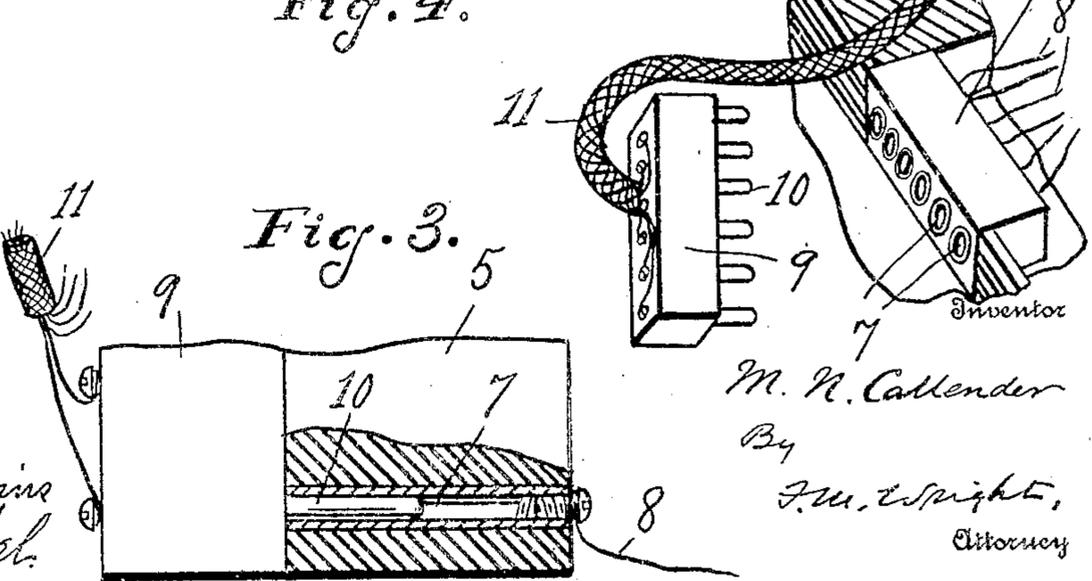


Fig. 3.



Witnesses  
*K. Lockwood Nevins*  
*Basia Lofinkol*

Inventor  
*M. N. Callender*  
 By  
*J. W. Smith,*  
 Attorney

# UNITED STATES PATENT OFFICE.

MONROE N. CALLENDER, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO  
J. W. ROOCH, OF SAN FRANCISCO, CALIFORNIA.

## DENTAL SWITCHBOARD.

No. 804,211.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed January 30, 1905. Serial No. 243,225.

*To all whom it may concern:*

Be it known that I, MONROE N. CALLENDER, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Dental Switchboards, of which the following is a specification.

This invention relates to dental switchboards, the object of the invention being to provide a switchboard of this character which will be more convenient than those heretofore provided both in regard to space occupied, ease of manipulation, and facility of connection with and disconnection from the source of electricity.

My invention therefore resides in the novel construction, combination, and arrangement of parts for the above ends hereinafter fully specified, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a front view of the switchboard and connections, the two parts of the multiple plug being separated. Fig. 2 is a rear view of the switchboard. Fig. 3 is a transverse section through the plug when both contact-holders are connected. Fig. 4 is an enlarged detail section of the valve.

Referring to the drawings, 1 represents a board of any suitable insulating material, as marble, upon which are mounted a number of switches for the several instruments in dentistry which require an electric current. For the purpose of illustration there are here shown switches for only three such instruments, although in practice more would be used in general. The central switch 2 here shown is that for controlling the hot-air tube.

The other switches 3 4 may be used for any desired purpose, as for controlling a dental engine, a compressed-air pump, or the like.

In constructing a switchboard of this character it is important to provide connections which will enable the switchboard to be readily moved from its ordinary position in the room and in doing so to enable the electrical connections to be made and broken quickly and easily. This is accomplished as follows:

A contact-holder 5 is secured stationarily in the room—as, for instance, in a recess in a molding 6—and has a number of metallic sockets 7 therein, each connected with a wire, said wires 8 leading either directly to the

source of electricity or indirectly through the instruments which are to be controlled by the respective switches. The former construction is used where the instrument is movable with the switchboard, the latter when the instrument is stationary—as, for instance, with a compressed-air pump. However, the nature of this part of the circuit is immaterial to my present invention. Another contact member 9 is formed with six plugs 10, entering the corresponding sockets 7, said plugs being connected with wires which are formed into a cable 11, said cable leading to the back of the switchboard. Of these wires four of them, 12 13 14 15, lead in pairs to the contacts of the outer switches, so that by closing said switches the circuits through the wires are closed. The wires 16 17, leading to the middle portion of the switchboard, are connected one to the heating-coil 18 in a hot-air tube 19 and thence to the end of a rheostat 20, perfectly secured upon the back of the switchboard, and the other to a switch-handle 21, which moves over the contacts 22 of said rheostat, said contacts being severally connected to the wire of the rheostat at successive points thereof at suitable intervals apart.

The hot-air tube 19 is supplied from a tube 23 through a valve 24 on the back of the switchboard, the gate 25 of said valve being attached to the handle 21 of the switch and rotating therewith.

27 represents a plate upon the front of the switchboard, upon which the end of said handle travels. As said end travels over said plate it first opens the valve to admit air to the heating-tube and then upon passing over the first contact it closes the circuit, heating the coil 18 by the electric current. Upon further movement of the handle over the successive contact-points a higher voltage is used and a greater heat obtained. The object of opening the valve before closing the electric circuit is to prevent unduly heating the coil without having a current of air to carry off the excess heat. It will thus be seen that this contrivance permits of the air being admitted with the hot-air tube and heat applied thereto in a single operation, whereas heretofore this has been accomplished by two operations—turning a valve and moving an electric switch.

It will be understood that this switchboard is movable, being attached to a dentist's cabi-

net 29, having drawers 30 and mounted upon lugs 31. The arrangement of the wires in a cable permits the switchboard to be arranged on a cabinet movable about the room.

5 I claim—

1. In combination with a dental switchboard having a plurality of switches thereon, a multiple contact therefor comprising a contact-holder having a plurality of contact-sockets  
10 and a contact-holder having contact-plugs entering the respective sockets, wires leading from the contacts of one of said holders and formed into a cable and leading to the respective switches of the switchboard, and  
15 wires leading from the contacts of the other holder, substantially as described.

2. In combination a movable cabinet, a switchboard thereon and wires leading to the switchboard, said wires being formed into a cable, substantially as described. 20

3. A movable dental cabinet with a switchboard secured thereto, and wires connected at one end to said switchboard, and contacts connected to the other ends of said wires, substantially as described. 25

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

M. N. CALLENDER.

Witnesses:

FRANCIS M. WRIGHT,  
BESSIE GORFINKEL.