

No. 876,997.

PATENTED JAN. 21, 1908.

H. F. PRESSEY.

ELECTRICAL, DENTAL, AND SURGICAL APPLIANCE.

APPLICATION FILED APR. 24, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

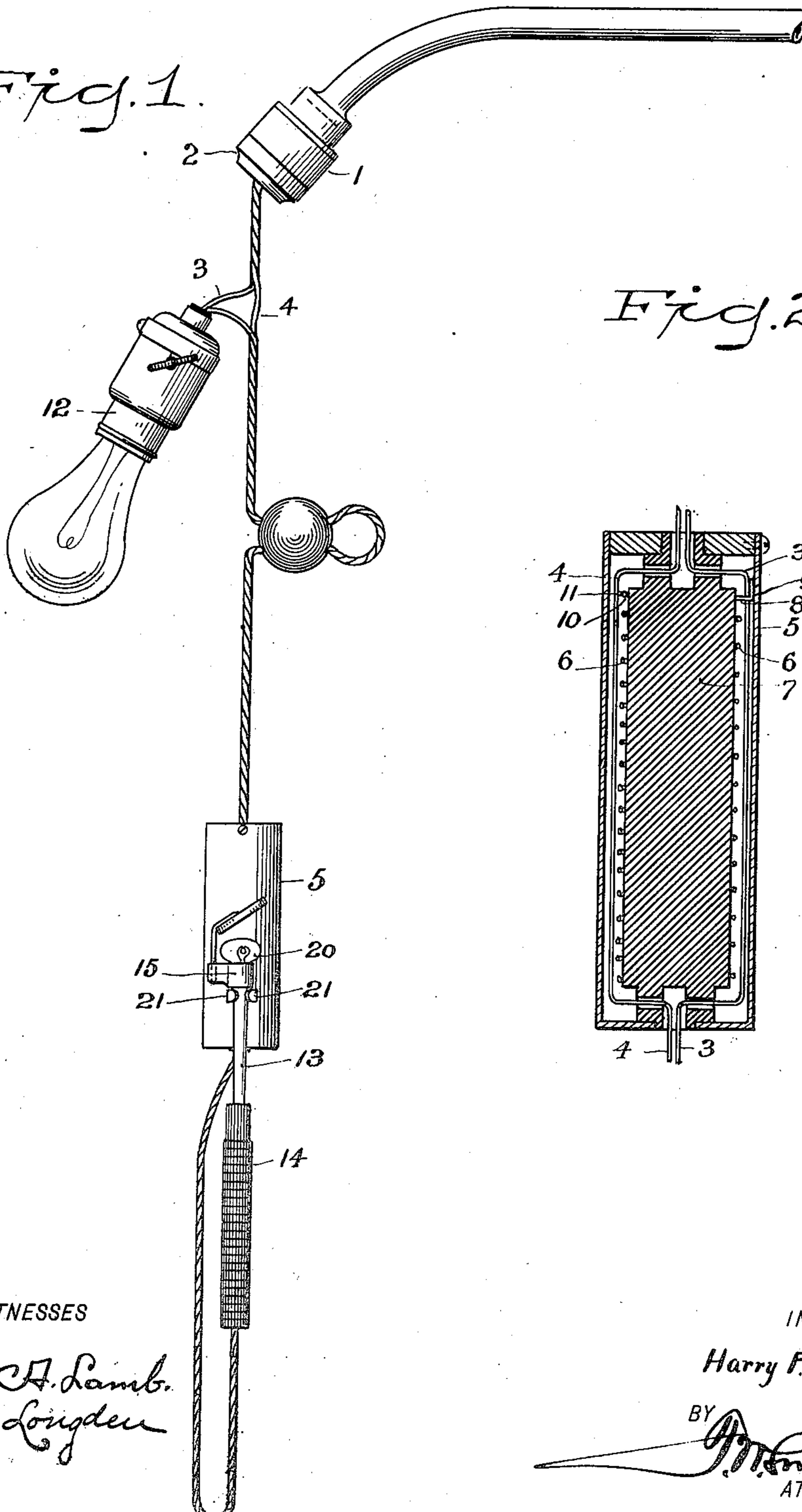
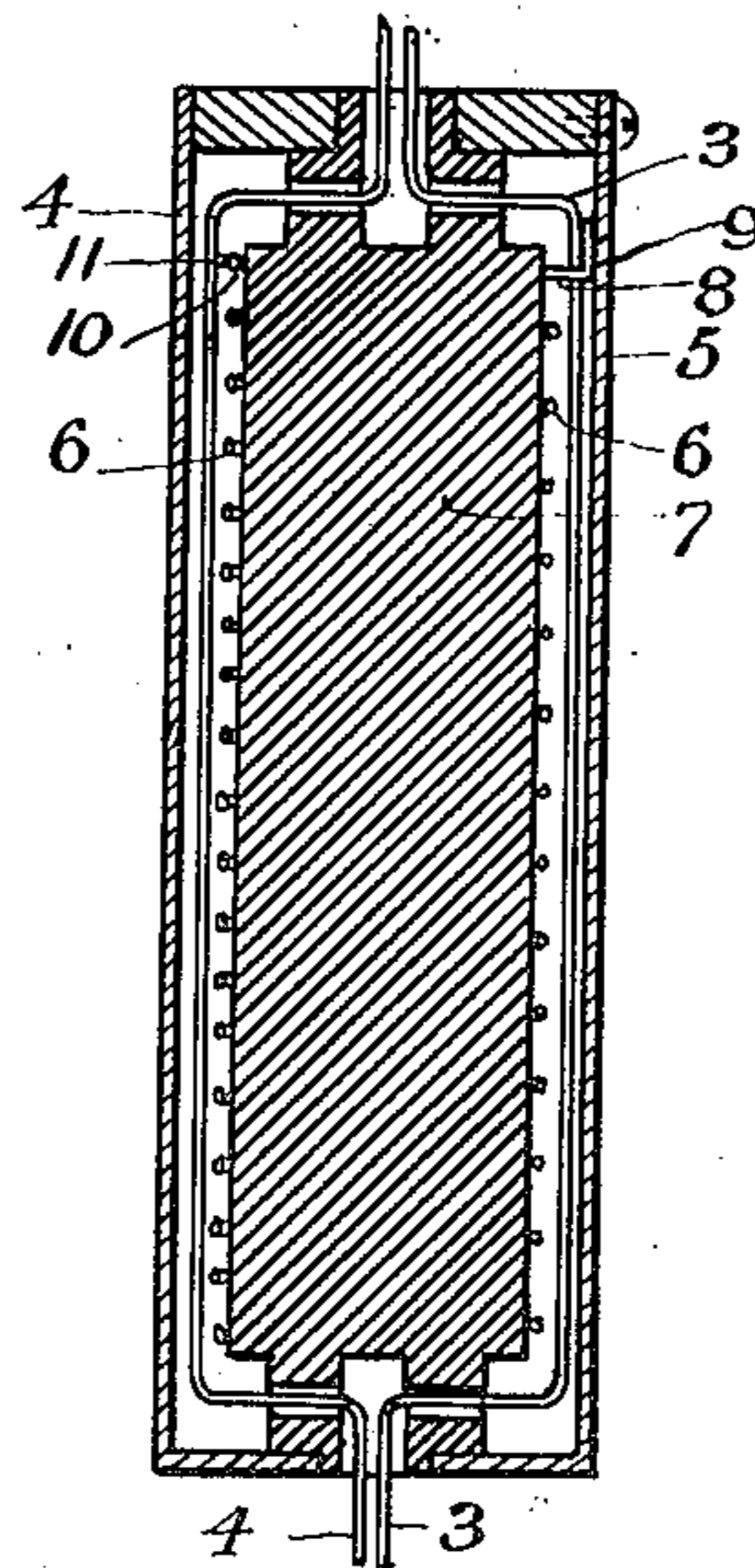


Fig. 2.



WITNESSES

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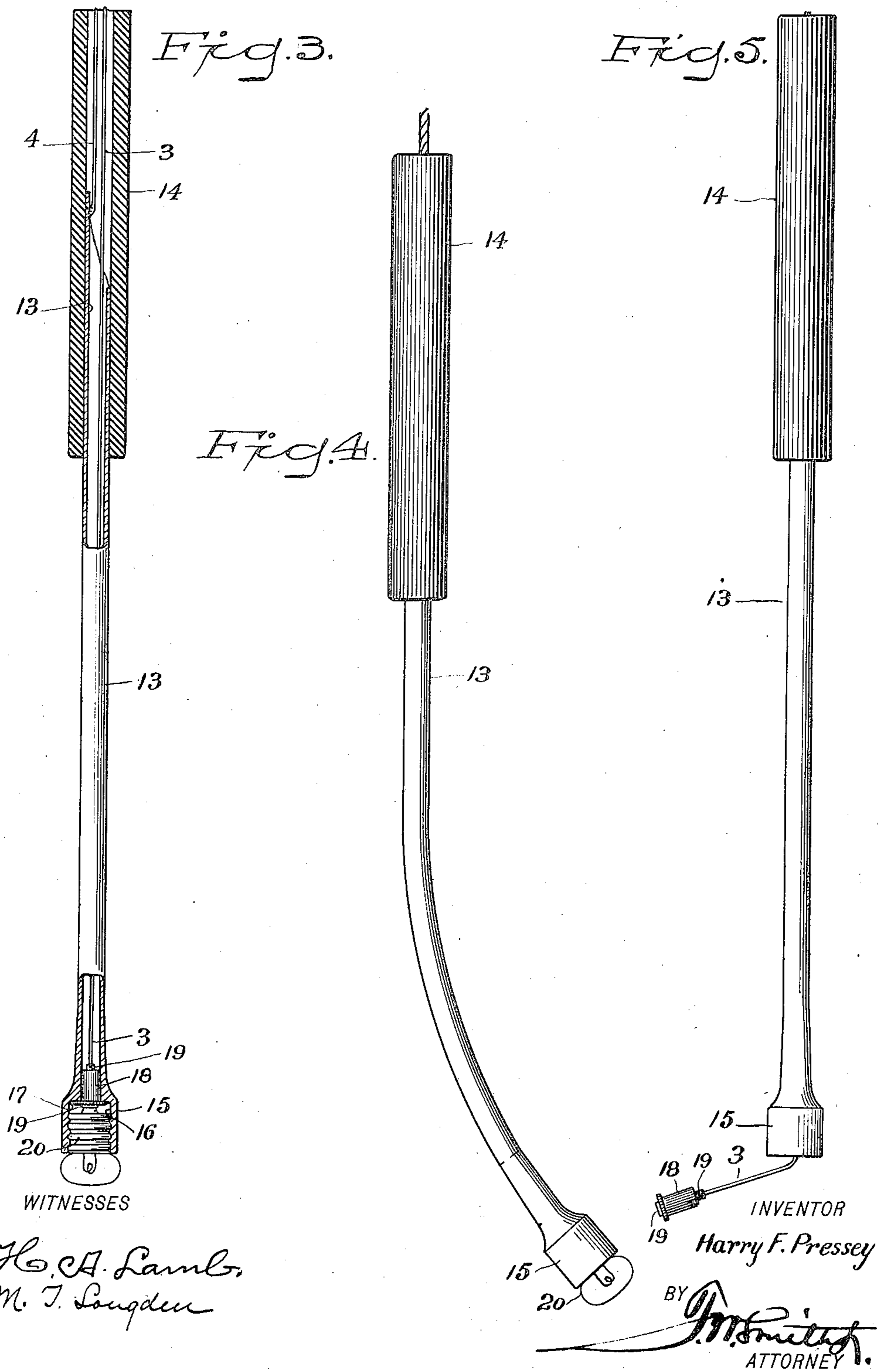
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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

HARRY F. PRESSEY, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR OF ONE-THIRD TO WILLIS F. CHAMBERLAIN, OF BRIDGEPORT, CONNECTICUT.

ELECTRICAL DENTAL AND SURGICAL APPLIANCE.

No. 876,997.

Specification of Letters Patent.

Patented Jan. 21, 1908.

Application filed April 24, 1907. Serial No. 370,082.

To all whom it may concern:

Be it known that I, HARRY F. PRESSEY, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Electrical Dental and Surgical Appliances; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain improvements in electrical dental and surgical appliances, the main object being to provide a lamp for the examination of the mouth, throat, teeth, and other portions of the human body, as well as wounds.

With these ends in view my invention consists in the combination of parts and arrangement of parts hereinafter fully described and then particularly pointed out in the claims which conclude this application.

Heretofore various appliances of this sort have been contrived, but in using the same it usually becomes necessary that the operator shall depress some resilient portion for the purpose of making a proper electrical connection, or, sometimes, the lamp has been constructed in sections which are forced together to establish such connection. Constructions of this sort are used to a disadvantage because sometimes the electrical connection becomes accidentally broken, and also, particularly in the performance of operations, it is quite inconvenient for the operator to keep a connection established by depressing a resilient element.

In my improvement the electric connections are permanent, and there is no break whatsoever of the electric circuit at any time. Moreover, my arrangement is such that there is no appreciable heat whatsoever to the lamp, the lamp-holder itself may be made of a flexible material like block tin so that it may be bent for convenient use in certain instances, and the lamp itself may be removed and the electrical connections within the lamp holder withdrawn so that the holder may be readily sterilized.

In the accompanying drawing which forms a part of this application Figure 1 is an elevation of my improvement—Fig. 2 a detail

sectional elevation of the ohmic resistance coil—Fig. 3 a detail sectional elevation of the lamp holder proper—Fig. 4 a detail elevation showing the lamp holder bent into a convenient shape for use in certain instances, and Fig. 5 a detail elevation of the lamp holder with the lamp withdrawn from the end and the electrical connections pulled out preparatory to the sterilization of the holder.

Similar numbers of reference denote like parts in the several figures of the drawing.

1 is an ordinary electric light socket and 2 a suitable plug therein from which latter depend the insulated conductors 3, 4.

5 is a metal casing which incloses an ohmic resistance coil 6 which is wound around a spool 7 of insulating material, one extremity 8 of this coil being in electrical contact with said casing, as shown at 9, while the other end 10 of said coil is in electrical contact with the conductor 4, as shown at 11.

The conductor 3 first passes into any suitable and ordinary lamp 12 and thence down into electrical contact with the casing 5 and the end of the coil 8.

13 is the lamp holder proper which is tubular and made of any suitable conducting material but preferably from a flexible material like block tin. 14 is a hollow handle made of any suitable insulating material into which the inner end of the holder is forced. The outer extremity of the holder 13 is enlarged as seen at 15 and within this enlarged portion is formed a threaded socket 16 beyond the inner end of which is formed a recess 17 within which latter is forced a plug 18 made of insulating material and surrounding a metal contact pin 19 which projects at both ends beyond the plug, to the inner end of which pin is secured the end of the conductor 3 while against the outer end impinges any suitable lamp 20 that is screwed within the socket 16 in the usual manner.

The conductor 4, after its connection with the extremity 10 of the ohmic resistance coil extends beyond the casing 5 and has its extremity secured in electrical contact with the inner end of the holder 13, the outer extremity of this holder being electrically connected with one end of the filament of the lamp 20, in the usual manner.

When the electric current is turned on it

will light the lamp 12, completing the circuit therefor by passing down through the coil 6 and back through the connection 11 directly to the plug 2, but there will be a residuum 5 current which will pass downwardly through the conductor 3 beyond the ohmic resistance coil into the lamp 20, thereby lighting the same, and back through the holder 13 and conductor 4 to the plug 2. This residuum 10 current has only a fraction of an ampere and is sufficient merely to light the lamp 20 and therefore will give out no sensible heat whatsoever, so that there can be no burning or 15 touches the flesh of the patient. Of course this residuum current will be determined by the winding of the ohmic resistance coil, which winding is of course dependent upon the amount of voltage in the primary current 20 as it passes through the lamp 12.

When not in use the holder 13 is hung between spring clips 21, that are secured in electrical contact with the outside of the casing 5 and this will cause the lamp 20 to be extinguished since the current will short circuit.

In my improvement the holder is not sectional but is solid, and therefore it can be bent in any direction, as, for instance, in the 30 manner shown at Fig. 4, and this is a great advantage since in many instances a straight holder cannot be used.

By removing the lamp 20 the plug 18 may be readily withdrawn from the holder, as 35 shown at Fig. 5, and the holder may then be completely sterilized inside and outside.

From the foregoing it will be readily understood that the small lamp 20 will remain permanently lighted without any manipulation on the part of the operator, until the 40 holder is hung on the clips, as above set forth.

While I have described a preferred form of ohmic resistance coil, it will nevertheless be 45 readily understood that any suitable resistance coil may be utilized so long as the extremities of the coil are connected as hereinbefore described, or, in other words, so long as any suitable resistance is employed which 50 is in series with the large lamp and in multiple with the small lamp, and therefore I do not wish to be limited in this respect.

Of course it will be readily understood that the use of the large lamp is merely incidental in order that said lamp may be available for the purposes of illumination in instances where electric lighting has been already installed, and I have illustrated such lamp merely to show that my improvement 60 need not interfere with the use of the same.

In instances where electricity has not already been installed I provide any suitable battery, which may be arranged in a portable

case, if desired, and make the connections precisely in the manner as hereinbefore described with the exception of course that the 65 large lamp is not included in the circuit.

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

1. In a device of the character described, the combination of the hollow, integral, flexible, metallic holder, the insulator plug seated within said holder near its outer end and surrounding a contact pin which projects at 75 both ends beyond said plug, the small lamp in the outer end of said holder and in contact with one end of said pin, the two insulated electrical conductors extending from a source of electricity and having their free ends secured in electrical contact respectively with 80 the other end of said pin and with the inner end of said holder, one of said conductors being connected comparatively near the source of electricity with a lamp of high 85 candle power, an ohmic resistance coil interposed in the circuit in series with the last mentioned lamp and in multiple with the first mentioned lamp, whereby the small lamp is lighted by a residuum current, a 90 metal casing surrounding said resistance coil and in electrical contact with one end of the resistance coil and also with the insulated conductor which is secured in contact with said pin, and the metallic spring clips secured to the outside of said casing, whereby, 95 when the holder is hung between said clips and contact made therewith, the current will make a short circuit and will not pass through the small lamp. 100

2. In a device of the character described, the combination of the hollow, integral, flexible, metallic holder, the insulator plug seated within said holder near its outer end and surrounding a contact pin which projects at 105 both ends beyond said plug, the small lamp in the outer end of said holder and in contact with one end of said pin, the two insulated electrical conductors extending from a source of electricity and having their free ends secured in electrical contact respectively with 110 the other end of said pin and with the inner end of said holder, and a predetermined resistance interposed in shunt between said source and lamp to establish a short circuit. 115

3. In a device of the character described, the combination of the hollow, integral, flexible, metallic holder, the insulator plug seated within said holder near its outer end and surrounding a contact pin which projects at 120 both ends beyond said plug, the small lamp in the outer end of said holder and in contact with one end of said pin, the two insulated electrical conductors extending from a source of electricity and having their free ends secured in electrical contact respectively with 125

the other end of said pin and with the inner
end of said holder, an ohmic resistance coil
having its extremities in connection with
said conductors at a point intermediate of
5 said source and lamp whereby a short cir-
cuit is formed, and a casing surrounding said
coil and in electrical contact with one end of
said coils and provided with contact clips

whereby contact between said holder and
clips will cause said lamp to be extinguished. 10

In testimony whereof I affix my signature
in presence of two witnesses.

HARRY F. PRESSEY.

Witnesses:

F. W. SMITH, Jr.,

M. T. LONGDEN.