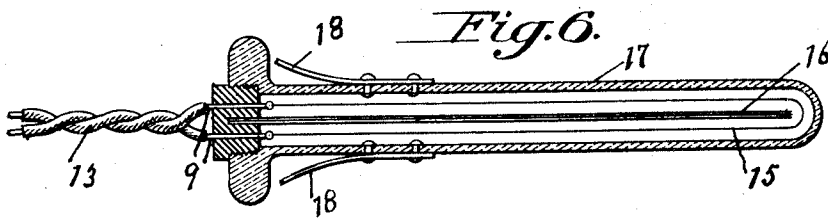
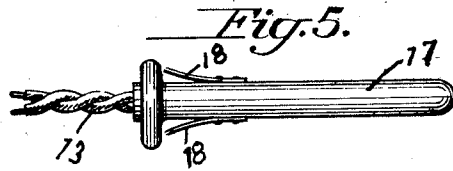
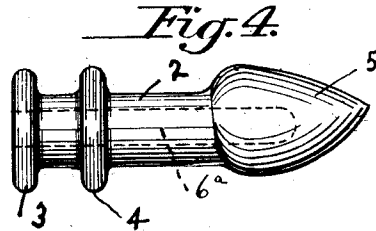
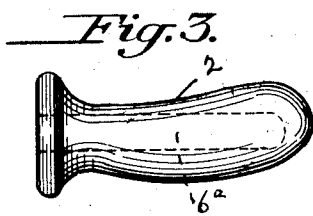
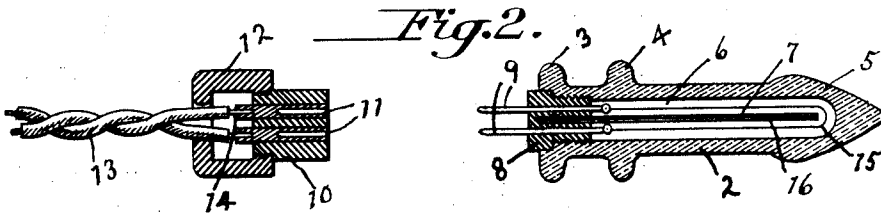
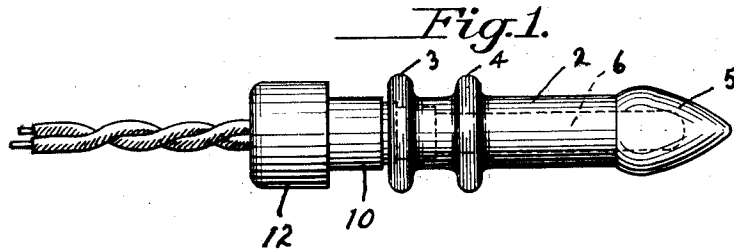


J. G. HOMAN.  
 DILATOR.  
 APPLICATION FILED SEPT. 24, 1917.

1,279,111.

Patented Sept. 17, 1918.



*Witnesses*  
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# UNITED STATES PATENT OFFICE.

JOHN G. HOMAN, OF STEUBENVILLE, OHIO, ASSIGNOR TO THE ELECTROTHERMAL COMPANY, OF STEUBENVILLE, OHIO, A FIRM COMPOSED OF JOHN G. HOMAN AND WILLIAM J. KIRK.

## DILATOR.

1,279,111.

Specification of Letters Patent. Patented Sept. 17, 1918.

Application filed September 24, 1917. Serial No. 192,860.

*To all whom it may concern:*

Be it known that I, JOHN G. HOMAN, a citizen of the United States, and a resident of Steubenville, in the county of Jefferson and State of Ohio, have invented a new and useful Improvement in Dilators; and I do hereby declare the following to be a full, clear, and exact description thereof.

This invention relates to dilators, and more particularly to a dilator having means whereby it is electrically heated to aid its action upon the body.

The object of the invention is to produce a dilator having a heating element associated therewith which will be of compact and unique structure and one that will dilate the muscles and at the same time excite the nerves and stimulate the capillary blood vessels.

If a rectal dilator is used it will furnish a constant heat to the rectal anatomy, causing a gentle stimulation of the capillary blood vessels and the resultant improved local nerve condition. The reflex nerve action also has the effect of stimulating, through the so-called abdominal brain, those centers which have the tendency to bring about normal healthy conditions, thus relieving an aggravating cause of several diseases.

Very little energy is consumed in the use of the dilator, and experiment has determined that four watts is in nearly all cases sufficient to produce all the temperature that can be borne. Inasmuch as this heat can be produced by a very low voltage without cumbersome design, danger from shock is entirely removed. One volt is sufficient for producing the desired heat in most cases.

It will be evident that, while I have described in particular the action of a rectal dilator, the same principle may be applied to vaginal or other dilators and substantially the same effects be obtained.

In the drawings I have shown several preferred forms of my invention, but I wish it expressly understood that I do not wish to be limited to the forms shown, since various changes in design and construction may be made within the scope of the appended

claims without departing from the spirit of the invention.

In the drawings:

Figure 1 is a plan view of the dilator complete;

Fig. 2 is a sectional view thereof with the connector separated;

Figs. 3 and 4 are modified forms of dilator bodies;

Fig. 5 is a plan view of a removable heating element having a casing; and

Fig. 6 is an enlarged sectional view thereof.

Referring more particularly to Figs. 1 and 2 of the drawings, the numeral 2 designates the body of a dilator as a whole, having flanges 3 and 4 adjacent its rear end and an oval or egg-shaped head portion 5 at its opposite or forward end. The body portion 1 is formed of porcelain or other similar material that will not deteriorate in any manner when sterilized, and has a recess 6 formed therein to receive a heating element 7.

The rear end of the recess 6 is screw-threaded to receive a plug 8 of a connector having terminals 9 therein, and being preferably formed of bakelite or other such material which has an insulating property and which will withstand the action of sterilizing. The main body portion 10 of the connector has recesses or sockets 11 in one end adapted to receive the terminals 9 in the plug 8, and a removable cap 12 on the opposite end adapted to permit the attachment of cord conductors 13 to terminals 14 connected to the sockets 11.

The heating element 7 may be of any desired form, but I have shown it as a wire of resistance material separated by a piece of insulating material 16, such as mica, and having its ends secured to the terminals 9.

The device may be operated from a very low current, as a very small amount of energy is used, but in case it is desired to attach it to a higher current, a suitable resistance may be used to control the current, as for instance, a small thermostatic current maker and breaker may be located within the dilator if desired.

The forms of dilator shown in Figs. 3, 4,

5 and 6 embody the same principles as the form previously described, but are of slightly different design, but made of the same material and having a recess 6<sup>a</sup> therein corresponding to the recess 6 before described. The heating element, however, is incased within a tubular casing 17 adapted to slip into the recess 6<sup>a</sup> and having locking springs 18 on its outer surface adapted to hold it in place. With the construction of heating element above described, any one of the several shapes of dilators may be used with the one heating element.

In the operation of my device the portion 10 of the connector is connected with the terminals 9 in the plug 8 and current passes from the cord conductors 13 through terminals 14 to terminals 9 in the plugs 8, and thence to the resistance member 15 which becomes heated. The application of the device and the results obtained are clearly set forth in the objects and explanation at the forward part of the specification and will be clearly understood by those skilled in the art.

Having thus described my invention, what I claim is:

1. A dilator comprising a casing having a longitudinal recess therein, an electric heating element removably mounted within said recess and spaced from the walls thereof, said heating element comprising a mounting member of insulating material secured in said casing, terminals extending through said member, a resistance member secured to said terminals and separated its entire length by an insulating stem secured in said mounting member, and means associated

with said heating element for connecting it with a source of current.

2. A dilator comprising a body portion having a longitudinal recess therein, an electric heating element removably mounted within said recess, said heating element comprising a surrounding casing, a mounting member of insulating material secured in said casing, terminals extending through said member, a resistance member secured to said terminals and separated its entire length by an insulating stem secured in said mounting member, and means associated with said heating element for connecting it with a source of current.

3. A dilator comprising a body portion having a longitudinal recess therein, an electric heating element removably mounted within said recess, said heating element comprising a surrounding casing and mounting member of insulating material having screw-threaded engagement with said casing, terminals extending through said member, a resistance member secured to said terminals and separated its entire length by an insulating stem, spring locking members secured on said casing adapted to grip the walls of said recess in said body portion to lock said heating element in position, and means associated with said heating element for connecting with a source of current.

In testimony whereof I, the said JOHN G. HOMAN, have hereunto set my hand.

JOHN G. HOMAN.

Witnesses:

NORMAN LEWIS,  
HELEN STRINGER.