April 14, 1925. 1,533,452

P. H. PAULEN

ELECTRICAL SEAL

Filed Nov. 18, 1922

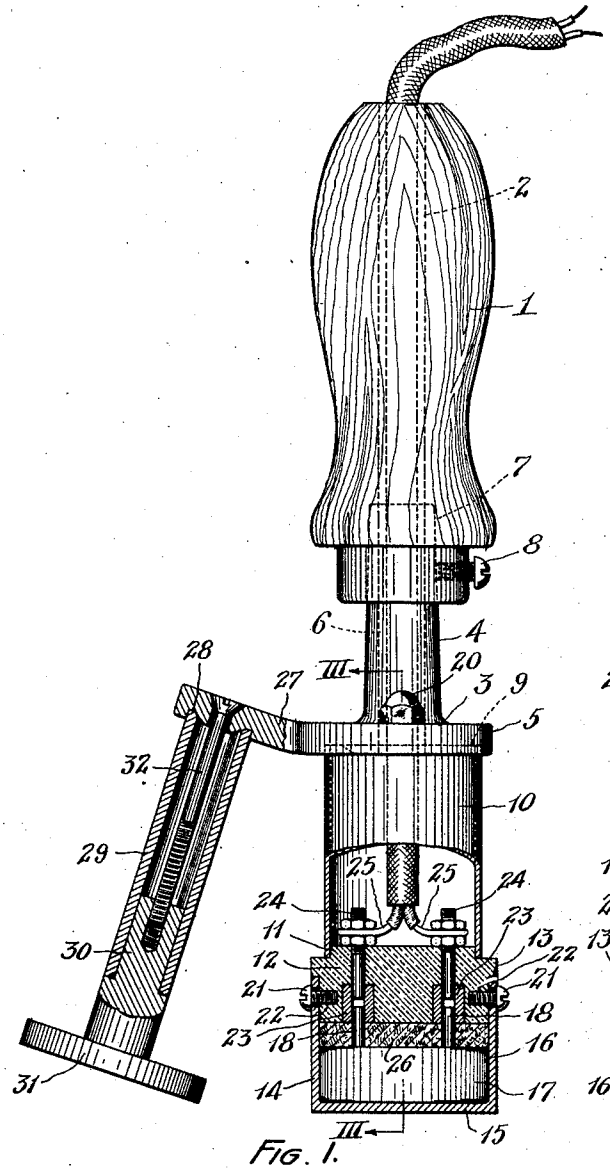


FIG. 1.

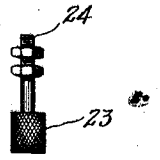


FIG. 4

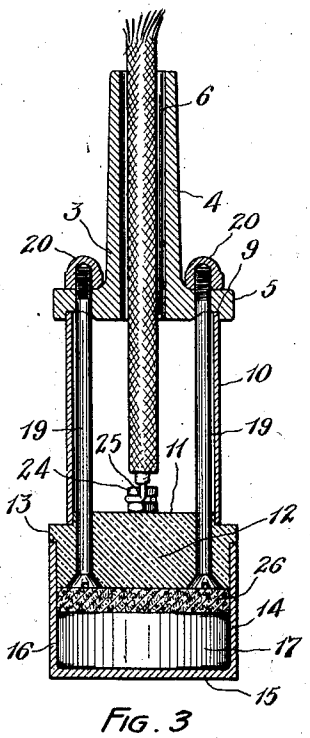


FIG. 3

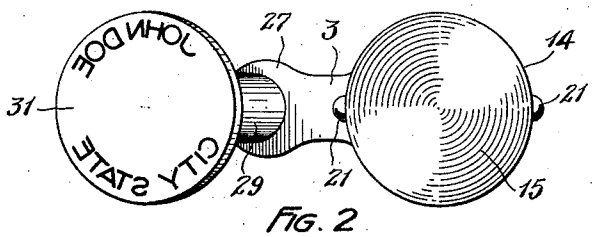


FIG. 2

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UNITED STATES PATENT OFFICE.

PERCY H. PAULEN, OF CLEVELAND, OHIO, ASSIGNOR TO THE ELECTRICAL SEAL COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

ELECTRICAL SEAL.

Application filed November 18, 1922. Serial No. 601,687.

To all whom it may concern:

Be it known that I, PERCY H. PAULEN, a citizen of the United States, resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented new and useful Improvements in Electrical Seals, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to devices for heating and impressing sealing wax for sealing purposes, its object being to provide a sealing device which is simple of construction, efficient in its operation and which may be operated electrically.

The said invention consists of certain improvements on and modifications of the structure shown, described and claimed in application Serial No. 511,457, filed October 29, 1921, by Millard Fallis, which improvements and modifications are hereinafter fully described and particularly set forth in the claims.

The annexed drawing and the following description set forth in detail certain means embodying my invention, the disclosed means, however, constituting but one of the various mechanical forms in which the principle of the invention may be employed.

In said annexed drawing:

Fig. 1 represents a side elevation, partly in axial section, of a sealing device embodying my invention.

Fig. 2 represents a bottom plan of said device.

Fig. 3 represents a section of part of the device and taken upon the plane indicated by line III—III in Fig. 1.

Fig. 4 represents a side elevation of one of the terminal connections employed.

The illustrated embodiment of my invention includes a wooden handle 1 formed with a central longitudinal bore 2 passing therethrough. To this handle is secured an intermediate cap-piece 3 formed with a central tapered boss 4 and a flange 5, a central bore 6 passing through both boss and flange, Fig. 3. The boss 4 fits in an enlarged tapered recess 7 in the bottom of the handle and is secured therein by means of a set screw 8. The two bores 2 and 6 are in alinement.

The bottom surface of the flange 5 is provided with an annular groove 9 in which is fitted the upper end of a cylindrical shell 10, the lower end of which receives a circular boss 11 of a cylindrical insulating member 12. This latter member is made of any suitable insulating material such as clay, porcelain or the like.

The said member 12 is provided with an annular shoulder 13 against which is seated the upper open end of a cylindrical heating cap 14 having a closed flat and circular bottom 15. The dimensions of said cap are such that a space 16 is left between the bottom of member 12 and the bottom of the inside of the cap. In this space is placed an electrical heating element 17 of any suitable construction, provided with two projecting cylindrical terminals 18—18 which are connected with the resistance wire (not shown) which is embedded in and forms part of the element. The outer contour of the element 17 is made to conform to the inner space 16 so that it will lie against the inner surfaces of the sides and bottom of the cap 14.

The members 12, 10 and 3 are held together by means of two bolts 19—19 which pass through the flange 5, the interior of the shell 10 and the member 12, and nuts 20—20 for said bolts, as clearly shown in Fig. 3.

The cap 14 is secured in place by means of screws 21—21 threaded in its shell and passing into recesses 22—22 formed in member 12, as shown in Fig. 1.

Embedded in the lower end of said member 12, are two sockets 23—23 adapted to detachably receive the terminals 18—18 and make electrical contact therewith. These sockets are connected with the binding posts 24—24 which are also embedded in member 12 and extend up into the shell 10, Fig. 1.

To these posts are connected two wires 25—25 which pass upwardly through bores 6 and 2 and which may be connected with a source of electricity in any suitable manner, as will be understood.

Asbestos insulation 26 is interposed between the lower end of the member 12 and the upper end of the heating element 17.

The cap-piece 5 is provided with a lateral extension 27 which forms an angle with the axis of previously described structure and its bottom surface is formed with an annular groove 28 in which is seated the upper end of a tubular member 29, the lower end

of which receives the cylindrical shank 30 of a seal 31. The seal is detachably held in place by means of a screw 32 passing through the extension 27 and threaded into the upper end of the shank 30, as shown in Fig. 1.

In utilizing the above device, a flat wafer of sealing wax is laid upon the place where it is desired to form the seal. The current is then turned on and the element 17 becomes heated. Such heat is conducted to the cap 14 which becomes heated to the required temperature. The instrument is then carried over the wafer and the lower surface 15 of the cap 14 pressed thereon, whereby the wax is softened. When the wax reaches the proper consistency the instrument is shifted and the seal 31 brought to bear upon the soft wax thereby imparting the desired impression upon the latter and causing it to stick in place, as will be understood.

What I claim is:

1. In a sealing device, the combination with a handle; of a heating device mounted upon said handle and including a cylindrical shell, a cap-piece intermediate of said shell and handle and closing the inner end of said shell, an insulating member secured to the bottom end of said shell, bolts passing through said cap-piece, interior of said shell and insulating member, nuts for said bolts, whereby said cap-piece, shell and insulating member are secured to each other, a hollow heating cap detachably secured to said insulating member, an electrical heating element within said heating cap and detachably mounted upon said insulating member, electrical terminals embedded in said insulating member and terminating in sockets adapted to receive the terminals of said heating element, and electrical conductors connected with said terminals; said handle and cap-piece being formed with central alined passages through which said conductors pass.

2. In a sealing device, the combination of an electrical heating member, including an end cap provided with a circular heating surface and a handle co-axial with such surface; a lateral extension rigidly connected with said heating member; and a seal mounted upon such extension and having its axis angularly related to the axis of the heating member.

3. In a sealing device, the combination with an electrical heating member, including a handle at one end, a circular heating surface at the other end, and an intermediate structure to which said handle and heating surface are detachably connected, said intermediate structure including an element having a lateral extension angularly related to the axis of the heating member; of a seal mounted upon said extension and having its axis at right angles to the latter, the end of the seal being in proximity to said circular heating surface.

Signed by me this 15th day of November, 1922.

PERCY H. PAULEN.