

M. FOURNIER & G. H. JACKSON.  
 WAX MELTING AND SEALING DEVICE.  
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1,075,775.

Patented Oct. 14, 1913.

Fig. 3.

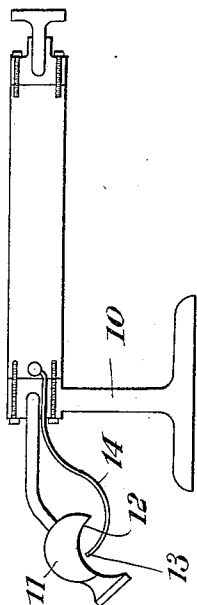


Fig. 4.

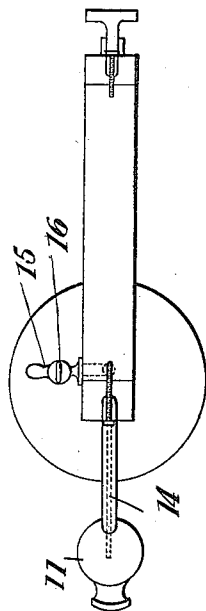


Fig. 6.

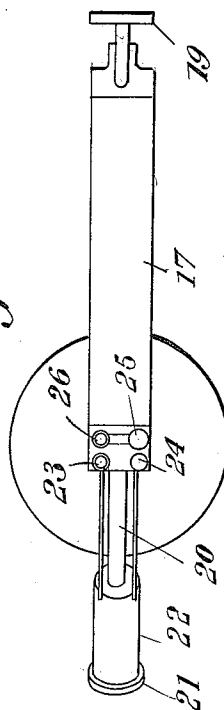


Fig. 1.

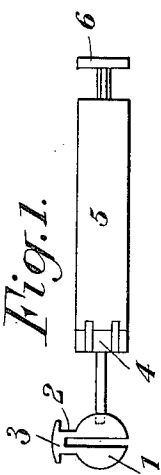


Fig. 2.

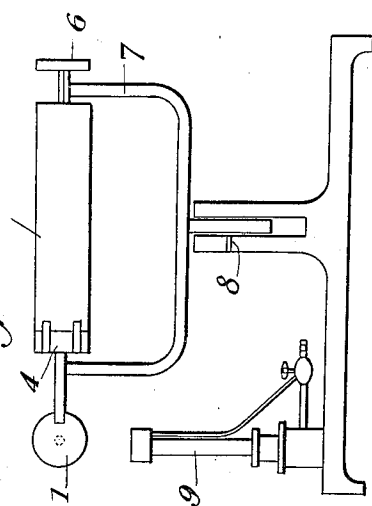
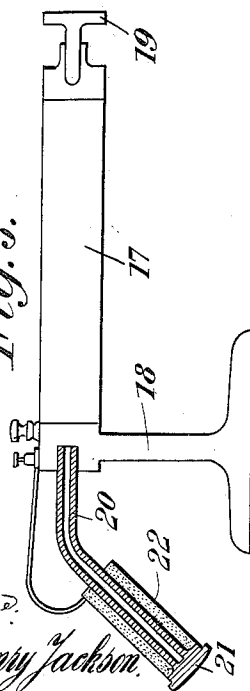


Fig. 5.



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# UNITED STATES PATENT OFFICE.

MACAIRE FOURNIER AND GEORGE HENRY JACKSON, OF LA ROCHELLE, FRANCE.

WAX-MELTING AND SEALING DEVICE.

1,075,775.

Specification of Letters Patent.

Patented Oct. 14, 1913.

Application filed November 1, 1912. Serial No. 729,043.

*To all whom it may concern:*

Be it known that we, MACAIRE FOURNIER, a citizen of the French Republic, and resident of La Rochelle, France, and GEORGE HENRY JACKSON, a citizen of the United States, and resident of La Rochelle, France, have invented certain new and useful Improvements in and Relating to Wax-Melting and Sealing Devices, of which the following is a specification.

This invention relates to a wax melting and sealing device the object being to provide a device of this kind which may be adapted to melt on the spot the fragments of wax intended to serve for sealing purposes by a more rapid, more economical, more hygienic and cleaner operation than when the previously melted wax is applied to the spot to be sealed.

The accompanying drawings show several forms of embodiment of this invention and in these drawings: Figure 1 shows a simple form of embodiment of the device. Fig. 2 is a side elevation view of a device heated by a Bunsen burner. Figs. 3 and 4 are respectively a sectional and a top plan view of a device in which the heating appliance is made integral with the melting device. Figs. 5 and 6 show respectively a sectional and top plan view of an electrically heated device.

The dimensions of the different devices vary in accordance with the dimensions of the seals and the number of seals which it is desired to apply one after the other.

In the embodiment shown by Fig. 1 the device comprises a mass or body 1 made of metal adapted to efficiently conduct the heat, such as copper, aluminium, alloys of these metals and similar good heat conductors, this body 1 being intended to be directly heated by a small flame and also to play the part of a heat storage device. The diameter of body 1 varies between 1 and 4 centimeters according to the space of time during which it is desired to keep it warm without applying heat to it. This mass or body 1 carries a lateral extension 2 which is partly hollowed out and 1 to 2 centimeters long. It carries at its end a flared out part 3 the surface of which may be slightly curved and which is heated only by the heat arriving thereto from the mass through the extension 2. As this flared out part is that part of the apparatus which is applied on the wax in order to melt it, one thus avoids the decomposition

of the wax with the products of which the wax is inevitably covered and which decomposition would be brought about by the direct contact with the flame.

The heat conducting body 1 is provided with an extension 2, which can be heated quickly when it is not desired to use the device continuously, thus necessitating the heating of the entire conducting body. The body is further provided with a hollowed out portion to increase the radiating surface of the heat conducting body 1. This part of the apparatus is secured as a whole to the end of any suitable metallic rod carrying a flange or flared out portion 4 which is intended to favor its cooling so as not to heat the handle 5 which serves to hold it. The other end of the handle carries the seal 6 in which the design is engraved which it is desired to press into the molten wax.

Fig. 2 shows a melting device heated by a Bunsen burner 9 provided with a by-pass. The melting device is placed upon a metallic carrier 7.7 the height of which can be adjusted by means of an ordinary set screw passing through the opening 8. The melting device can be slightly shifted lengthwise in the carrier so as to bring the mass 1 either over the burner or over the by-pass. The latter which is continuously burning keeps the melting device at the desired temperature during the time it is not in use. The device is thus always ready for use. In case the said temperature has not yet been reached, one can bring the device to that temperature more rapidly by opening the gas cock thus lighting the main burner which can then be used for heating either the mass 1 or the extension 2.

The Bunsen burner can be replaced by an alcohol, petrol or the like lamp comprising a large burner for rapid heating and a small burner of 2 to 5 millimeters replacing the by-pass. One may also place side by side on the same carrier several melting appliances. In this case a single Bunsen burner provided with as many by-passes as there are melting devices, will be sufficient as a rule. It is similar with the lamps where one may employ only one reservoir and one large burner, provided there be as many small burners as there are melting appliances.

The above described device is used in the following manner: The hot device being on its carrier, is removed by grasping the han-

dle with the whole hand, the part 3 is applied upon the wax which is thus melted; thereafter one turns the device around, and presses the stamp provided with the seal on the molten wax.

The sealing and melting device can be made integral with the heating device so as to be heated in a continuous manner even during the time during which it is in use. Thus the loss of time is avoided which is experienced by the reheating of the melting appliance after each operation during which it has cooled down. In order to attain this the metallic carrier 7 shown by Fig. 2, is replaced by a simple foot 10 (Figs. 3 and 4). The mass 11 which plays the part of a heat storing device is hollowed out laterally at 12 and is heated by the flame of a by-pass which burns at 13 at the end of a metal pipe 14 having a diameter of 1 to 3 millimeters and serving to supply the gas. This flame spreading out on the surface in front of it burns blue and as a consequence does not soil the apparatus. A connecting extension 15 provided with a cock 16 and positioned on the side of the apparatus is connected by an india-rubber tube with the gas supply (not shown).

The apparatus constructed in the manner just described does not cool down, not even during the application of the seals. However, if the melting device is cold and it is desired to use it immediately, one can bring it rapidly to the required temperature by holding the device vertically, the mass 11 turned upward, and by opening widely the gas cock 16. Under these conditions, the small flame is considerably lengthened and licks the extension 2 and the end part 3 and as the mass of these is very small, the required temperature is very rapidly reached.

As shown by Figs. 5 and 6 of the drawings, the melting and sealing device can also be constructed in such a manner that it be heated, not by a flame, but by an electric current. In this case too, the apparatus comprises a handle 17 carried by a foot 18, carrying also at one of its ends the sealing stamp 19 and at the other one the heating device. This heating device is formed by a tube 20 made of metal adapted to efficiently conduct heat, such as copper, aluminium etc., the thickness of the walls of this tube varying from 1/10 to 2 millimeters. The tube 20 carries on its free end the slightly convexly curved surface 21 which is from 1 to 3 millimeters thick and by the contact with which it is intended to bring about the melting of the wax. Wound around this

tube is a wire having a high electrical resistance and made of German silver, managanine, etc., the diameter and the length of which vary with the voltage of the source of electricity at one's disposal. However, in order to allow of the utilization of the current furnished by town supplies the voltage of which is generally superior to 100 volts and in order to avoid to have to wind on the tube a too thin and too long a wire end, or, in order to avoid to cause the private wires already established in apartments where it is desired to make use of the melting device to have to sustain a too high an amperage compared with the one for which they were originally intended, the apparatus is connected in series with an incandescent lamp which serves as a rheostat so that the branch connection only receives a current of about 1 ampere; under these conditions the winding can be made of a wire having a diameter of only a few tenths of a millimeter and a length which is less than 5 meters.

One of the ends of the wire 22 is connected with the lamp by means of a binding post 23 while the other terminates at an insulated contact 24 mounted on the handle. A switch 25 which by its binding post 26 is connected with the pole of the supply which is not connected with the lamp, can be shifted on the contact 24 so as to cause the current to pass through the wire 22. The windings of the wire 22 are insulated from each other either by sheets of asbestos paper or by any suitable insulating enamel.

Having now fully described our said invention, what we claim and desire to secure by Letters Patent, is:

A device of the kind described comprising in combination a handle, a heat conducting body carried by one end of the handle, another heat conducting body carried by the first named heat conducting body and connected therewith by heat conducting means, the heat conducting body named in the second place being intended to be applied upon the wax to be melted, a sealing stamp carried by the opposite end of said handle, and means for heating the said first named heat conducting body, substantially as and for the purpose set forth.

In testimony whereof we have hereunto set our hands in presence of two witnesses.

MACAIRE FOURNIER.  
GEORGE HENRY JACKSON.

Witnesses:

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BORDALFE FERNAND.