Aug. 1, 1933. G. CHEVASSUS 1,920,629

DEVICE FOR MELTING WAX DISKS

Filed May 10, 1930

Fig. 1.

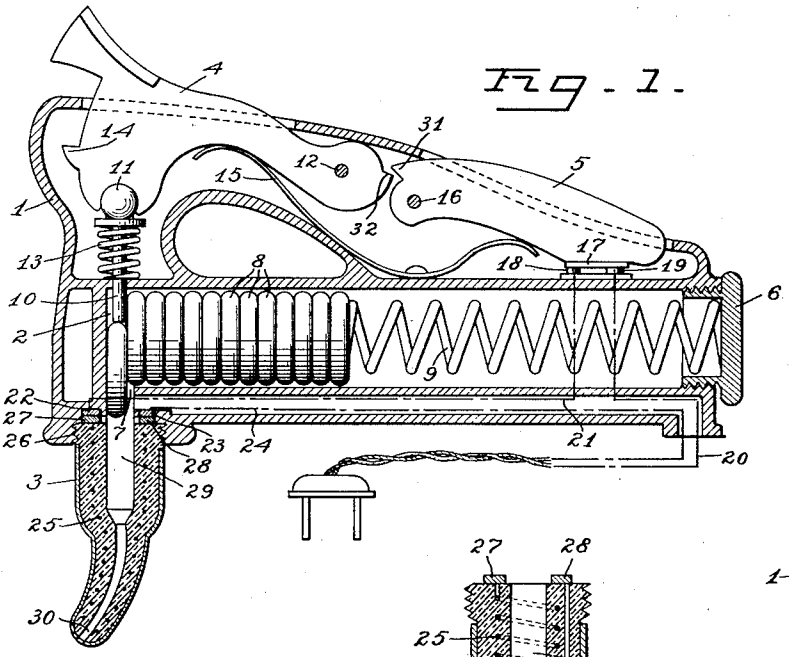


Fig. 4.

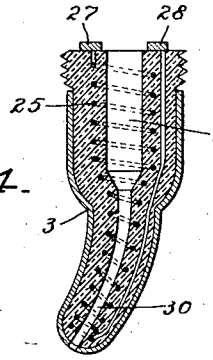


Fig. 3.

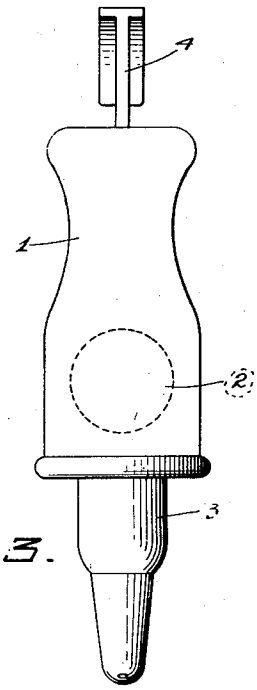
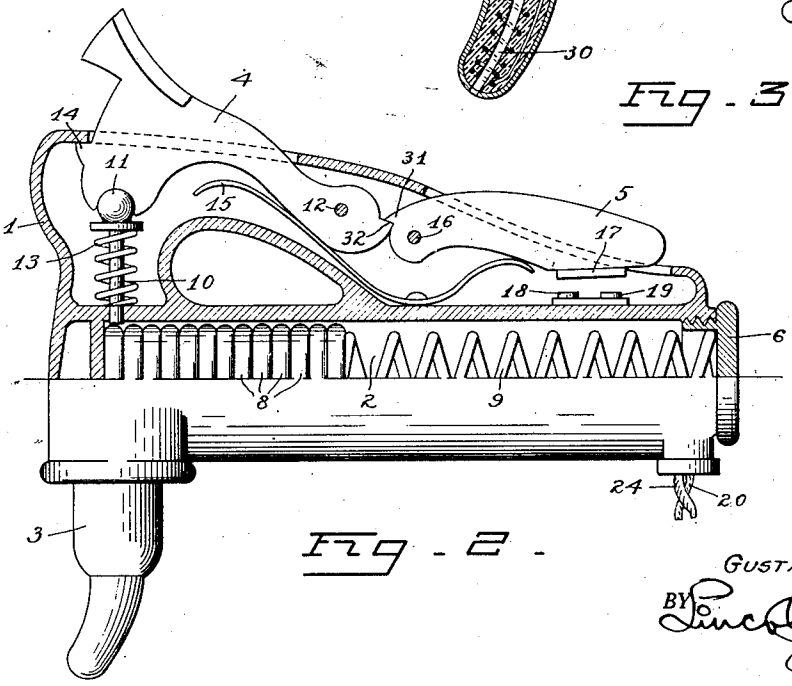


Fig. 2.



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DEVICE FOR MELTING WAX DISKS

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13 Claims. (Cl. 219—21)

This invention relates particularly to an appliance for office and home use to be used for melting sealing wax for sealing letters, packages and the like, in a fraction of the time required by present methods, and without waste, and to deposit clean molten wax free of soot and smoke.

An object of the invention is to provide a readily portable casing adapted to contain a stack of disks of sealing wax, which can be placed, one by one, in a distributing nozzle and there subjected to a melting heat whereby the molten wax can be deposited or poured from the nozzle.

A further object of the invention is to provide an apparatus for melting disks of sealing wax, wherein the disks are fed from a source of supply to a distributing nozzle within which wires are arranged and which are adapted to be heated electrically to melt the wax by electrical heat.

A still further object of the invention is to provide a nozzle on an apparatus for melting wafers of sealing wax, which nozzle has an opening therethru, the entrant area of which is larger than the discharge area, whereby the molten wax can be discharged from the nozzle in a relatively fine stream.

Other objects and advantages are to provide a device for melting wax disks that will be superior in point of simplicity, inexpensiveness of construction, positiveness of operation, and facility and convenience in use and general efficiency.

In this specification and the annexed drawing, the invention is illustrated in the form considered to be the best, but it is to be understood that the invention is not limited to such form, because it may be embodied in other forms; and it is also to be understood that in and by the claims following the description, it is desired to cover the invention in whatsoever form it may be embodied.

In the accompanying one sheet of drawing:

Fig. 1 is a vertical cross section thru a sealing wax melting apparatus constructed in accordance with my invention, showing the switch member in closed circuit position and a sealing wax wafer being discharged into the melting nozzle.

Fig. 2 is a section similar to Fig. 1 showing the switch member and wafer discharger in the inoperative position.

Fig. 3 is an end elevation of Fig. 2.

Fig. 4 is an enlarged vertical section thru the discharge nozzle.

The apparatus, in the form illustrated, consists of a portable casing of a size and shape designed to be readily gripped by the hand, and easily manipulated thereby. The casing would be preferably made in two complementary parts, bolted or otherwise held together, and formed out of metal, bakelite, or any material which is susceptible of being cast.

The casing comprising the device is divided into a handle portion 1, a barrel 2, and a discharge nozzle 3. The handle portion 1 is preferably hollow in order to house a lever 4, to be used in discharging the disks to be melted from the storage chamber, and a switch 5 for connecting the source of electrical energy to the wires in the nozzle for heating the same.

The chamber 2 is preferably cylindrical in form and at its inlet end is closed by a cap 6. An outlet port 7 is arranged adjacent the opposite end of the chamber, the said outlet port registering with the central bore through the distributor nozzle 3. The chamber 2 is preferably made circular in cross section, although it is to be understood that other shapes and contours are within the purview of the invention.

A plurality of disks or wafers made of sealing wax 8 are adapted to be stored in stacked relation within the chamber 2. An expansion spring 9 is mounted in the chamber between the rearmost disk of the stack of wafers and the inlet cap 6, whereby the stack of disks are urged or forced against the end of the chamber 2 contiguous to the discharge port 7. The spring 9 is of sufficient tension to hold the stack of disks 8 tightly against the closed end of the chamber so that the disk directly above the discharge port will not tend to drop down through the outlet port, either because of its own weight or thru any manipulative movement of the apparatus.

An ejector 10 is reciprocatingly mounted in the wall of the chamber 2, one end of said ejector being adapted to pass, laterally across the chamber 2, to engage one of the sealing wax disks and force it into the nozzle 3. The upper end 11 of the ejector 10 is provided with a spherical head thereon, which is confined in a recess on an end of the lever 4. The lever 4 is pivoted on a pin 12 in the handle portion of the casing, a part of said lever 4 projecting outwardly from the casing to form a finger grip which may be engaged by the thumb or fingers

to cause the said lever to be depressed in order to reciprocate the ejector 10. An expansion spring 13 is mounted around the ejector 10 to resist depressing movement of the lever 4. A stop lug 14 is provided on the lever 4 to limit the outward movement of the said lever 4 due to the expanding action of the spring 13. A leaf spring 15 is also provided within the handle portion 1 to urge the lever 4 up into the inoperative position shown in Fig. 2.

The switch lever 5 is pivoted on a pin 16 within the handle portion 1 of the casing. The switch lever 5 is provided with a contactor bar 17 thereon which is adapted to bridge across the contacts 18 and 19 provided on the outside of the chamber 2. The switch lever 5 is preferably made of a non-conducting material such as hard rubber, bakelite, or the like, and is normally maintained in an open circuit position, such as shown in Fig. 2, by an end of the leaf spring 15. A wire 20 leads from a source of electricity to the contact 19. A wire 21 is connected to the other contact 18 and to a contact member 22 adjacent the distributor nozzle 3. A companion contact 23 is provided opposite the contact 22, the contact 23 being connected by a wire 24 back to the source of electricity to complete the circuit.

The distributor nozzle is preferably formed of bakelite or porcelain, and is provided with a heating element 25 consisting of microme wire which encircles the open bore thru the said nozzle. The heating element 25 is adapted to be heated electrically and to throw the heat which it generates entirely around the bore through the nozzle. The exterior of the upper end of the nozzle 3 is threaded as at 26, to screw into the casing. The upper end of the nozzle 3 is provided with a pair of spaced contacts 27 and 28 respectively, which are connected to the opposite ends of the heating wire in the nozzle 3, and engage the respective contacts 22 and 23 heretofore referred to. The bore thru the nozzle 3 is of a greater area at its entrant end 29 than at the opposite end 30. Disks of the sealing wax that are discharged from the supply chamber 2 into the nozzle 3, fall into the area of the larger bore in the nozzle 3, where the said disk is subjected to the heat generated by the heating element. The disk will melt in the area 29 and flow by gravity thru the smaller area end of the nozzle to the tip of the nozzle, from which it is discharged.

The heating element in the nozzle is connected and disconnected to the source of electricity by bringing the switch lever 5 into engagement with the contacts 18 and 19. When the contactor bar on the switch lever 5 bridges the contacts 18 and 19, then a supply of electrical energy is directed into the heating nozzle, as shown in Fig. 1, whereas, when the switch lever 5 is in the open circuit position as shown in Fig. 2, the supply of energy is disconnected from the heating nozzle. Where the apparatus would be made out of bakelite, or other non-conducting material, the electrical source and contacts would be suitably embedded in the said material, or if the apparatus be made out of metal, the electrical source and contacts would be suitably insulated to prevent short circuiting.

In order to render the apparatus ready for use, the operator would first remove the cap 6 from the chamber 2, and fill it with disks or wafers formed of sealing wax. A plug on the ends of the wires 20 and 24 would be next connected to a standard house lighting socket. The casing would be then held by the hand, with the thumb on the ejector lever 4, and the base of the thumb on the switch lever 5. The switch lever 5 would be depressed from the inoperative position shown in Fig. 2, into the operative position shown in Fig. 1, to connect the source of electrical energy to the heating element in the nozzle. The switch lever 5 is held in the selected inoperative position by means of a tooth 31 on the end of said lever, engaging a shoulder 32 on the end of the ejector lever 4. Thus, when the switch lever 5 is depressed, the lug 31 thereon moves away from engagement with the lever 4, as shown in Fig. 1. After the electrical contact has been made and the nozzle is heated, the lever 4 would be depressed, by the end of the thumb, and the ejector 10 reciprocated to move a disk of sealing wax from the compartment 2 into the nozzle 3, wherein said disk would be melted and kept in a molten state during the entire time the said wax material would be contained within the nozzle. The operation would be repeated each time that a disk of sealing wax would be melted. The heating nozzle 3 is so arranged that it may be unscrewed from the casing for adjustment of contacts, cleansing, or repairs.

Having thus described this invention, what I claim and desire to secure by Letters Patent is:

1. A device of the character described, comprising a casing having a chamber therein to hold a stack of meltable disks, said chamber having a disk outlet port therein; a nozzle separate from the chamber and in registry with the outlet port; means to eject disks, one by one, from the chamber into the nozzle; and means to heat the nozzle to melt the disk ejected thereinto whereby the melted material will flow from the nozzle.

2. A device for melting wax disks, comprising; a chamber to receive a stack of wax disks, said chamber having a disk discharge port therein; means to force the disks toward the discharge port end of the chamber; means to move individual disks one at a time from the chamber thru the outlet; a nozzle to receive the individual disks discharged from the chamber; and means in the nozzle to melt the disks therein, whereby the melted material will flow from the nozzle.

3. A device for melting wax disks, comprising; a chamber to receive a stack of wax disks, said chamber having a disk discharge port on a side and adjacent an end thereof; means to move individual disks from the chamber thru the outlet; a nozzle in registry with the outlet to receive the individual disks discharged from the chamber; and means in the nozzle to melt the disks therein whereby the melted material will flow from the nozzle.

4. A device for melting wax disks, comprising; a chamber to receive a stack of wax disks, said chamber having a disk discharge port on a side thereof; means at the said port at an angle to the chamber to discharge individual disks from the chamber thru the outlet; a nozzle in registry with the outlet port to receive the individual disks discharged from the chamber having a heated bore to melt the wax disks, whereby the melted material will flow out of the nozzle tip.

5. A device to melt disks of sealing wax, consisting of a chamber to hold a plurality of disks in stacked relation; a nozzle, from which the melted disks can flow, arranged adjacent an end and outside of the chamber; means to move an

individual disk from the chamber into the nozzle; heating wires arranged in the nozzle around the bore thereof connected to a source of electricity; and means to connect and disconnect the nozzle wires from the source of electricity.

6. A device to melt disks of sealing wax, consisting of a chamber to hold a plurality of disks in stacked relation; a nozzle, from which the melted disks can flow, arranged adjacent an end and outside of the chamber; a spring-actuated plunger to move an individual disk from the chamber into the nozzle; a handle pivoted to the chamber to move the plunger; wires arranged in the nozzle around the bore thereof being connected to a source of electricity; and means to connect and disconnect the nozzle wires from the source of electricity.

7. A device to melt disks of sealing wax, consisting of a chamber to hold a plurality of disks in stacked relation; a nozzle, from which the melted disks can flow, arranged adjacent an end of the chamber; means to move an individual disk from the chamber into the nozzle; wires arranged in the nozzle around the bore thereof connected to a source of electricity to be heated thereby; and a manually actuated contact member pivoted to the chamber to break and make electric circuit through the nozzle wires.

8. A device to melt disks of sealing wax, consisting of a chamber to hold a plurality of disks in stacked relation; a nozzle, from which the melted disks can flow, arranged adjacent an end of the chamber; a spring actuated plunger to move an individual disk from the chamber into the nozzle; means to urge the disks toward said end of the chamber; a handle pivoted to the chamber to move the plunger; wires arranged in the nozzle around the bore thereof connected to a source of electricity to be heated thereby; and a manually actuated contact member pivoted to the chamber to break and make the electric circuit through the nozzle wires.

9. In combination a casing, having a hollow chamber therein to hold a stack of sealing wax disks, said chamber having inlet and outlet ports at its opposite ends; a hollow bore nozzle, having heating wires therein, detachably connected to the casing adjacent the chamber outlet port; an ejector at the outlet port to move one disk from said post into the nozzle; electrical contact members on the casing connected to a source of electricity and engaging contact members on the nozzle connected to the heating wires therein; and a manually operated switch member interposed between the source of electricity and contacts.

10. In a device of the character described, a casing having a chamber therein to accommodate a stack of meltable disks, said chamber having an outlet on a side thereof, a heated nozzle on the casing in registry with the said outlet, and an ejector movable into the outlet end of the chamber to eject the endmost disk through said outlet and into said heated nozzle.

11. In combination a casing having a chamber therein, a stack of meltable disks in the chamber, means to urge the stack toward an end of the chamber, said chamber having an outlet on its side and at the said end of the chamber for the emission of one disk only, an ejector opposite said outlet arranged to engage te endmost disk, said ejector being manually operable to move said endmost disk out through the said outlet; and a heated nozzle on the casing aligned with the outlet to receive and melt the ejected disk.

12. In a device of the character described a casing having a chamber therein to accommodate a stack of disks therein, means in the chamber to urge the stack toward an end of the chamber, said chamber having a side outlet at said end, an ejector plunger above said outlet, a heated nozzle below the outlet; a manually actuated member to move the plunger into the chamber to urge a disk out through said outlet and into said nozzle.

13. In a device of the character described a casing having a chamber therein to accommodate a stack of disks therein, means in the chamber to urge the stack toward an end of the chamber, said chamber having a side outlet at said end, an ejector plunger above said outlet, an electrically heated nozzle below the outlet; a manually actuated member to move the plunger into the chamber to urge a disk out through said outlet and into said nozzle; and a switch on the casing to control the heating of the nozzle, said switch coacting with said member to close a heating circuit when a disk is ejected from the chamber.

GUSTAVE CHEVASSUS.