May 17, 1955 W. B. STARK 2,708,706

HEATING DEVICE

Filed May 21, 1953

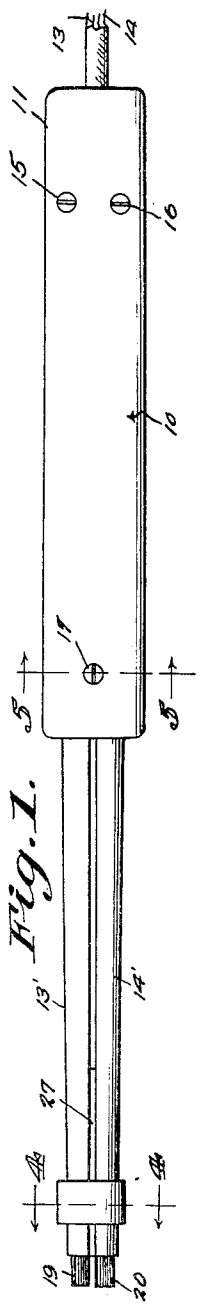


Fig. 1.

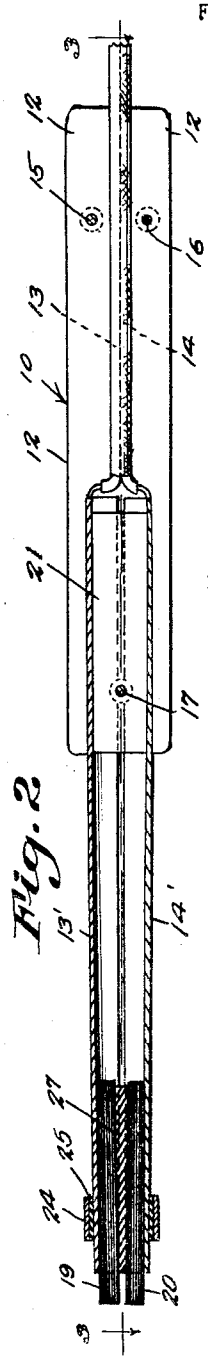


Fig. 2.

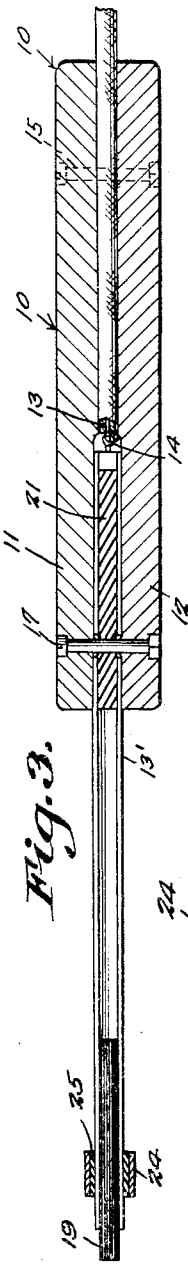


Fig. 3.

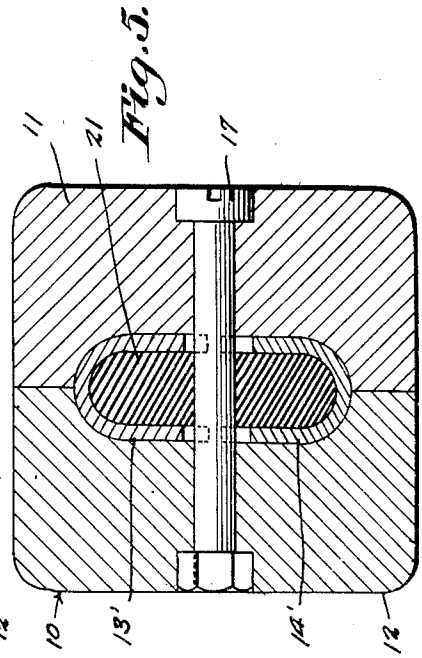


Fig. 5.

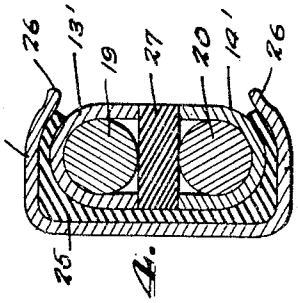


Fig. 4.

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HEATING DEVICE

Willis B. Stark, Tuscaloosa, Ala.

Application May 21, 1953, Serial No. 356,510

2 Claims. (Cl. 219—26)

This application relates to a heating device, and more particularly to a preheating device for soldering light work, such as electrical connections, toys etc. A primary object of the invention is the provision of an improved preheating device which is adapted to heat work to be soldered with a minimum of difficulty and effort.

A further object of the invention is the provision of such a device which is extremely light in weight, readily portable, and which may be manufactured with a minimum of difficulty.

Still another object of the invention is the provision of such a device which is adapted to be connected to a source of current running from three to fifteen volts, either to a step down transformer or a battery.

A further object of the invention is the provision of a device employing two carbons which are adapted to be brought into contact with the work to be soldered. The voltage is so low that it will not sustain an arc to burn the work, but the resistance of both points of contact, the resistance of the work and the resistance of the carbons quickly bring the work to a soldering heat.

Still another object of the invention is the provision of such device which may be constructed at a maximum of simplicity, and a minimum of cost and effort.

Still other objects will impart the obvious, and in part be pointed out as the description of the invention proceeds, and is shown in the accompanying drawing wherein there are shown a preferred embodiment of this inventive concept.

In the drawing:

Fig. 1 is a side elevational view of the device of the instant inventive concept.

Fig. 2 is a longitudinal sectional view taken substantially along the center line of Fig. 1.

Fig. 3 is a sectional view taken substantially along the line 3—3 of Fig. 2 as viewed in the direction indicated by the arrows.

Fig. 4 is a sectional view taken substantially along the line 4—4 of Fig. 1 as viewed from the direction indicated by the arrows on a large scale, and

Fig. 5 is an enlarged sectional view taken substantially on the line 5—5 of Fig. 1.

Similar reference characters refer to similar parts throughout the several views of the drawings.

Having reference now to the drawings in detail there is generally disclosed at 10 a handle portion, which is comprised of two opposite portions of wood or similar insulating material generally indicated at 11 and 12, each portion of which is routed to provide channels for connecting cords 13 and 14 which extend through a suitable aperture in the end of the handle, and which handle portions are held in related assembly by screws 15 and

16 and 17 respectively. The foremost screw 17 passes through the forward portion of the handle and extends between the two elongated copper jaws 13' and 14' which extend respectively from the handle to two carbon electrodes 19 and 20 respectively spaced apart, the jaws being curved to grip said electrodes as best shown in Fig. 2. A wood panel or similar panel of insulating material is positioned as indicated at 21 between the jaws in the forward bore 22 of the handle member. The forward ends of the jaws 13' and 14' are connected by a clamp 24 which is further lined with asbestos paper 25 or the like, the clamp 24 being provided with inwardly turned ends 26, which serve to contain and retain the electrodes 19 and 20 (see Fig. 4). These electrodes are further separated by an insulating block 27.

It will thus be seen that the present device, when electric current is supplied through cords 13 and 14 and jaws 13' and 14', and the circuit is completed by applying both carbon electrodes to an object to be soldered, heat will be generated in the carbon electrodes, which heat in turn will be transmitted to the surface to be soldered.

The insulating material will preclude the possible short circuiting of the apparatus, and will further serve to maintain the carbon electrodes in spaced relation in order to provide heat to the surface.

From the foregoing it will now be seen that there is herein provided an improved preheating device for light soldering, which accomplishes all of the objects of this invention, and others, including many advantages of great practical utility and commercial importance.

As various embodiments may be made of this inventive concept, and as various modifications may be made in the embodiment hereinbefore shown and set forth, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

1. In a heating device for soldering, the combination of a handle of insulating material, a pair of conductor jaws extending from the handle, cords for electrical connection with said jaws, extending through said handle, a pair of spaced carbon electrodes clamped between said jaws, in circuit therewith, connections between said cords and said jaws, insulating material between said electrodes, an insulating block holding said electrodes in spaced related assembly, and a spring U-shaped clamp clamped over the conductor jaws holding said conductor jaws clamped to said electrodes.

2. In a heating device for soldering, the combination of a handle of insulating material, cords for electrical connection extending into said handle, yieldable conductor jaws having one of their respective ends secured to said handle in circuit with said cords, a pair of spaced carbon electrodes clamped between the other ends of said jaws, and said jaws providing a circuit between said cords and said electrodes, insulating material between said electrodes, and a removable spring clamp fitted over the jaws directly over said carbon electrodes, holding said electrodes in related assembly.

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