

P. & F. LUX.
ELECTRIC HEATER FOR WATCHMAKERS.
APPLICATION FILED APR. 8, 1912.

1,037,030.

Patented Aug. 27, 1912.

Fig. 5.

Fig. 1.

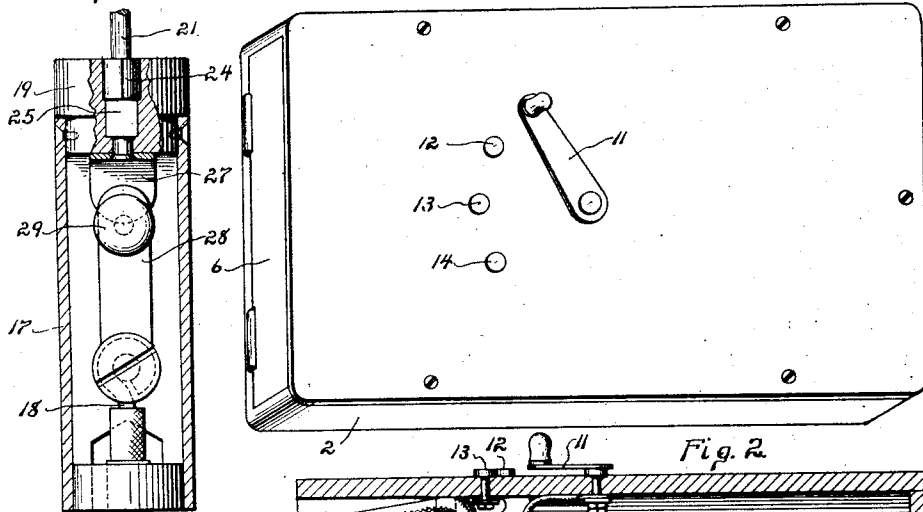


Fig. 2.

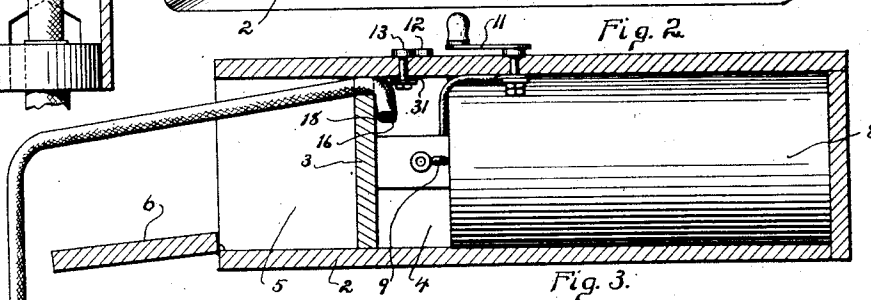


Fig. 3.

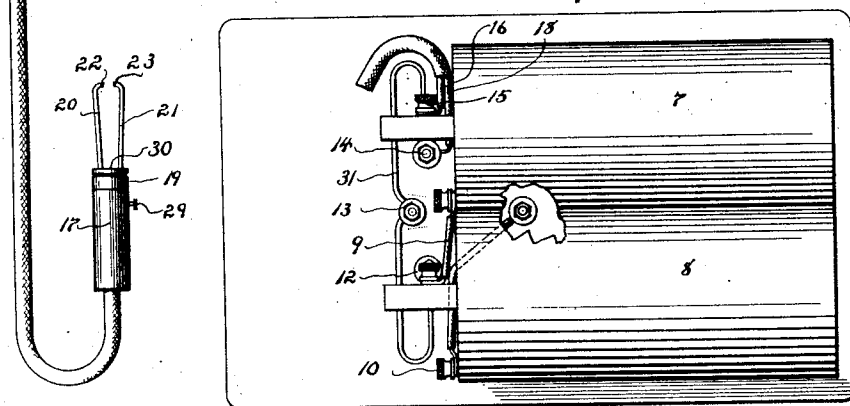
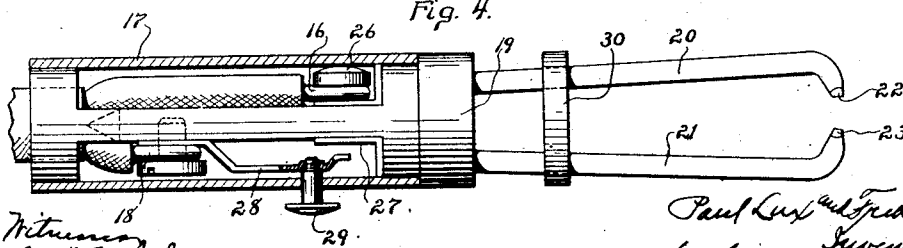


Fig. 4.



Witness
M. P. Nichols
C. L. Mead

Paul Lux and Frederick Lux
Inventors
By Seymour T. Carey
Attorney

UNITED STATES PATENT OFFICE.

PAUL LUX AND FRED LUX, OF WATERBURY, CONNECTICUT.

ELECTRIC HEATER FOR WATCHMAKERS.

1,037,030.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, PAUL LUX and FRED LUX, citizens of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Electric Heaters for Watchmakers; and we do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this application, and represent, in—

Figure 1 a perspective view of an electric heating device for watch makers constructed in accordance with our invention. Fig. 2 a longitudinal sectional view with the hinged door of the receptacle open. Fig. 3 an underside view of the top of the casing showing batteries and wires connected therewith. Fig. 4 a side view partly in section of the handle and fingers carried thereby. Fig. 5 a broken sectional view showing the handle at right angles, and showing means for holding the fingers.

This invention relates to an improvement in electric heaters for watch makers. Watch makers and repairers have frequently occasion to heat certain parts of watch mechanisms, such, for instance, as annealing balance staffs, preparing for drilling for new pivots, heating table for setting roller jewels, heating levers for setting pallet jewels and for many other purposes.

The object of this invention is to provide simple and convenient means whereby small parts may be heated by electricity, and the invention consists in the construction hereinafter described and particularly recited in the claims.

In carrying out our invention, we employ a casing 2 divided by a partition 3 to form a battery chamber 4 and a container 5 which is closed by a hinged cover 6. Within the battery chamber are located two dry-cell batteries 7 and 8 which are sufficient to produce an energy necessary for heating small articles like watch parts. Opposite poles of the batteries are connected together by a coupling 9, while the pole 10 of the battery 8 is connected with a switch arm 11 extending through the top of the case and adapted to be moved into contact with contact buttons 12, 13 or 14. The pole 15 of the

battery 7 is connected with a wire 16 which extends to the handle 17, the return wire 18 being connected with the contact button 14. The contact buttons 14, 13 and 12 are connected by resistances 31—32. Mounted in the head or plug 19 located in the outer end of the handle are two fingers 20 and 21 the ends of which are turned toward each other and provided with platinum tips 22 and 23 which are adapted to be brought together against opposite sides of the article to be heated. Crowded onto the fingers 20 and 21 and so as to fit tightly thereon are round collars 24 with angular ends 25. The handle and plug are formed from insulating material and the angular portions 25 lock the fingers in the plug against turning. The inner end of the finger 20 is connected with a binding post 26 with which the wire 16 is connected, while the inner end of the finger 21 is attached to the contact plate 27 with which a spring-finger 28 connected with the wire 18 may be moved into contact through a push button 29 extending through the side of the handle. The fingers 20 and 21 extend through a clamp 30 which, when moved outward on the fingers, will move the points 22 and 23 toward each other and into contact with the device to be heated.

When the device to be heated which must be an electric conductor is clamped between the points 22 and 23, it connects the points 22, 23, and then the switch arm 11 is turned into contact with one of the buttons 12, 13 or 14 according to the amount of heat required. The greatest heat will be derived by having the contact arm 11 engage with the button 14 in which case the current is direct through the batteries. If the contact is made through the button 13, a portion of the energy will be conducted by the resistance 31 connecting the buttons 13 and 14, and if made through the button 12 a portion of the energy will be conducted by the resistances 31 and 32. As herein shown the resistances are formed from a piece of German silver wire of suitable gage. The wires 16 and 18 extend through an opening in the partition 3, and the chamber 5 provides a convenient receptacle for the wire and heating device carried thereby so that when not in use it may be entirely housed. After the switch arm 11 has been turned into contact with the button desired and the article to be heated clamped between the points 22

and 23, the article may be heated by forcing the button 29 inward so as to close the circuit. As soon as the necessary heat is required, the push button 29 is released and the circuit is immediately broken.

It will thus be seen that a convenient device is provided whereby a watch maker may apply heat at any particular point of any piece of watch mechanism; and in addition to accomplishing the objects above mentioned, jewels may be set independently without disturbing the setting of other jewels.

We claim;—

1. A work holder for an electric heating device comprising a handle, a plug mounted in the outer end of said handle, spring fingers mounted in said plug and held against rotation therein, electric connections with said fingers, and a switch mounted in said handle whereby the electric circuit may

be closed through said fingers, and the conductive material held between them.

2. A work holder for electric heating devices comprising a handle, a plug mounted in the outer end of said handle, spring fingers mounted in said plug in which they are held against rotation, said fingers provided with platinum tips, a switch in said handle, and means extending through the handle whereby the switch may be operated whereby the electric circuit may be closed through the said fingers and the conductive article held between them.

In testimony whereof, we have signed this specification in the presence of two subscribing witnesses.

PAUL LUX.
FRED LUX.

Witnesses:

C. LESTER SCHLIER,
FLORENT GASSER.