

(No Model.)

V. H. BALLARD.  
SOLDERING BLOCK.

No. 567,674.

Patented Sept. 15, 1896

Fig. 1.

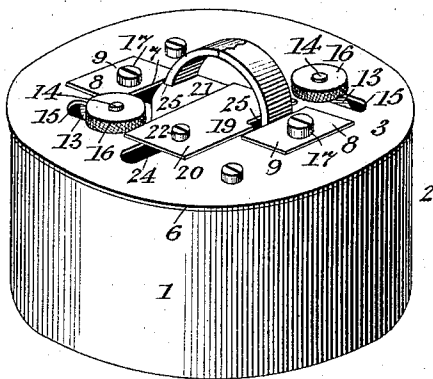


Fig. 2.

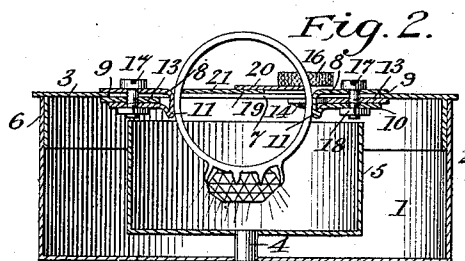


Fig. 3.

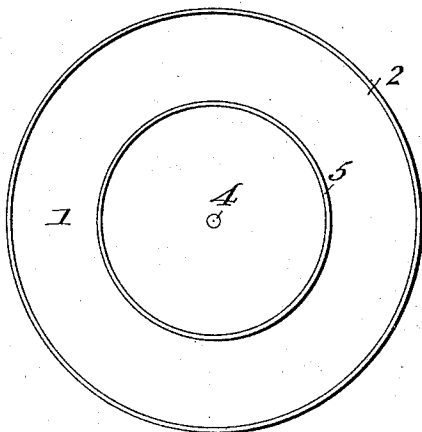


Fig. 4.

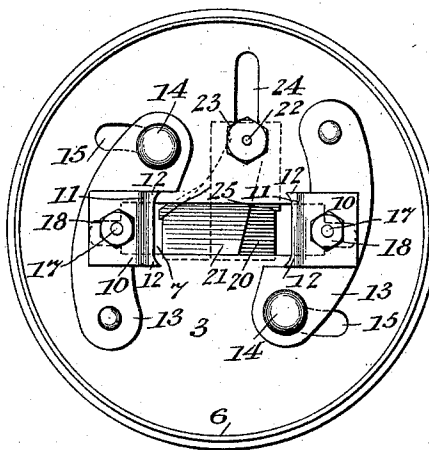
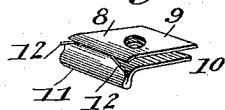


Fig. 5.



Witnesses.

Harold H. Simms.

Frederic Dalton

By his Attorneys,

Inventor.

Vernon H. Ballard.

*[Signature]*

# UNITED STATES PATENT OFFICE.

VERNON H. BALLARD, OF CHIPPEWA FALLS, WISCONSIN, ASSIGNOR OF  
ONE-HALF TO HARRY A. COOK, OF SAME PLACE.

## SOLDERING-BLOCK.

SPECIFICATION forming part of Letters Patent No. 567,674, dated September 15, 1896.

Application filed April 7, 1896. Serial No. 586,599. (No model.)

*To all whom it may concern:*

Be it known that I, VERNON HENRY BALLARD, a citizen of the United States, residing at Chippewa Falls, in the county of Chippewa and State of Wisconsin, have invented a new and useful Soldering-Block, of which the following is a specification.

This invention relates to improvements in soldering-blocks of that class adapted for use by jewelers; and it has for its object to provide improved means whereby rings having sets of different characters, especially pearls, may be soldered without the necessity of the removal of such sets or liability of the same burning, and also by the use of which tarnishing of the head of the ring will be prevented, and whereby the ring may be easily soldered with great rapidity.

To this end the invention consists substantially in the construction, combination, and arrangement of parts, as will be hereinafter fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a soldering-block constructed in accordance with the present invention. Fig. 2 is a transverse sectional view thereof. Fig. 3 is a top plan view of the block with the cover removed. Fig. 4 is a bottom plan view of the cover of the block. Fig. 5 is a detail perspective view of one of the clamping-plates.

Similar numerals of reference indicate corresponding parts throughout the different figures.

Referring to the drawings, 1 designates a block formed of any suitable material and having a bottom section 2 and a cover 3 therefor. Supported within the bottom 2 by means of a standard 4 is a cup 5, adapted to receive and hold any suitable cooling medium, for a purpose to be hereinafter described. The cover 3 is provided with an annular flange 6, which passes into the bottom section 2. As clearly shown, said cover 3 is also provided substantially at its center with a slot 7, through which the ring to be soldered is passed, and at each end of the slot 7 is located a clamping-plate 8. Each of these clamping-plates is formed of a single piece, and the upper end 9 thereof is bent so as to slide along the sides of the slot 7. The lower

end 10 of said clamping-plate is bent upwardly and lies in a plane substantially parallel to the upper end 9, but on the under side of the cover 3, and the portion of the plate intermediate the upper and lower ends thereof is bent at approximately right angles to such ends, thereby forming a downwardly-extending lip 11, adapted to contact with the ring being soldered. It will be seen that the lip 11 is provided at its sides with notches 12, such notches receiving the edges of the slot 7, which form a guide for the clamping-plates 8. Pivoted to the under side of the cover 3, and at each end of the slot 7, is a segmental shifting-bar 13. The diagonally opposite ends of the shifting-bars are provided with screws 14, which project upwardly through segmental slots 15, formed in the cover 3, and mounted upon these screws 14 are thumb-nuts 16, adapted to be screwed down upon the cover 3 and bind the shifting-bars 13 at any desired point in the slots 15. As clearly illustrated, the upper and lower ends of the clamping-plates 8 embrace the shifting-bars, and are secured thereon by means of a screw or its equivalent 17, provided with a nut 18. Thus it will be seen that when the shifting-bars 13 are moved the clamping-plates are carried thereby and the lips 11 are forced against the ring in the slot 7.

Mounted upon the outside of the cover is a sliding plate 19, composed of a substantially rectangular section 20 and a triangular section 21. These sections are loosely connected together by means of a screw 22, provided with a nut 23. This screw passes through a guide-slot 24, which is approximately at right angles to the slot 7, and by means of such guide-slot the sliding plate 19 may be placed into a position and the sections thereof spread apart, so as to cover the slot 7. It will be noted that the edges of the sliding plate 19 immediately adjacent to the clamping-plates 8 are cut away, as at 25, such cut-away edges being designed to receive the ring and hold the same.

From the foregoing the operation and advantages of the herein-described soldering-block will be readily understood by those skilled in the art. When it is desired to sol-

der a ring, the same is placed within the slot 7. The shifting-bars 13 are then moved toward each other until the seam in the ring is closed, the sliding plate 19 moved to a position so as to completely cover the said slot, and by means of the screw 22 such plate is held in said position. When the thumb-nuts 16 are screwed upon the screws 14, the same bind the bars 13 in the position described, thereby holding the ring within the slot without the aid of binding-wires or similar devices heretofore used. The sections of the sliding plate 19 are then forced apart longitudinally of the slot 7, the cut-away portions 25 receiving the ring. Charcoal, asbestos, or equivalent material is placed upon the sliding plate 19, and when the cup 5 in the bottom section 2 of the block has been filled with a cooling medium, preferably water, the cover 3 is placed upon the section 2, the set of the ring entering the cup 5 and being immersed in the water of the said cup. The function of the charcoal, asbestos, or equivalent material is to reflect the heat, since in the soldering operation it is necessary to employ means for this purpose, so as to cause the flame blown upon the article being soldered to melt the solder, and to accomplish this end a lump or wedge of the charcoal, asbestos, or equivalent material is passed through the ring under the seam for the purpose stated, said seam being soldered from the outside of the ring. The seam of the ring may be easily soldered with great rapidity, and by reason of the set being disposed in the cooling medium contained in the cup 5 it will be obvious that all liability of burning such set or tarnishing of the ring will be entirely overcome. By reason of the construction of the sliding plate 19 the same will prevent the charcoal or asbestos passing through the slot 7 or the water in the cup 5 boiling through such slot and over the cover 3. While I term the part 3 a "cover," it is obvious that it need not be a complete cover for the bottom section, as its sole purpose is to receive and support the clamping devices for the ring or other article being operated upon.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. A soldering-block, comprising a bottom section, a cover therefor, and means carried by the cover for holding the article to be soldered on the block, substantially as set forth.

2. A soldering-block, comprising a bottom section, a cover therefor, clamping-plates for holding the article to be soldered, and means for cooling such article while being soldered, substantially as set forth.

3. A soldering-block, comprising a bottom section, a cover therefor, clamping-plates carried by the cover for holding the article to

be soldered, and means for binding the clamping-plates against such article, substantially as set forth.

4. A soldering-block, comprising a bottom section, a cover therefor having a slot formed therein, clamping-plates working in such slot, and means for closing said slot, substantially as set forth.

5. A soldering-block, comprising a bottom section, a cover therefor having a slot formed therein and adapted to receive the article to be soldered, clamping-plates working in said slot, a sliding plate for closing the slot, and bars for shifting the clamping-plates, substantially as set forth.

6. A soldering-block, comprising a bottom section, a cup mounted therein and adapted to receive a cooling medium, a cover for the bottom section having a slot formed therein and adapted to receive the article to be soldered, clamping-plates working in such slot, and bars for shifting said clamping-plates, substantially as set forth.

7. A soldering-block, comprising a bottom section, a cover therefor having a slot formed therein and adapted to receive the article to be soldered, clamping-plates working in such slot and provided with guides for receiving the edges thereof, and a sliding plate adapted to cover the slot, substantially as set forth.

8. A soldering-block, comprising a bottom section, a cover therefor having a slot formed therein and adapted to receive the article to be soldered, clamping-plates working in such slot, and a sectional slide-plate adapted to close said slot, substantially as set forth.

9. A soldering-block, comprising a bottom section, a cover therefor having a slot formed therein, clamping-plates working in said slot, shifting-bars secured to said clamping-plates, screws secured to such shifting-bars and passing through slots formed in the cover, and thumb-nuts mounted upon said screws and adapted to bind the clamping-plates against the article to be soldered, substantially as set forth.

10. A soldering-block, comprising a bottom section, a cover therefor having a slot formed therein, clamping-plates working in said slot and having each of their ends bent into a substantially parallel plane to receive the edges of the slot, shifting-bars connected to said clamping-plates, binding-screws for holding the clamping-plates at any desired point in the slot, and a sectional sliding plate adapted to close said slot, substantially as set forth.

11. A soldering-block, comprising a bottom section, a cup mounted therein and adapted to receive a cooling medium, a cover for the bottom section having a slot formed therein and adapted to receive a ring or similar article to be soldered, clamping-plates working in such slot and having their ends bent into a substantially parallel plane and provided with a lip, shifting-bars pivoted to the cover and connected to the clamping-plates, said shifting-bars being provided at diagonally

opposite points with screws having thumb-nuts mounted thereon, and a sectional sliding plate adapted to close the slot and provided at its edges with cut-away portions for  
5 receiving the ring or similar article, substantially as set forth.

In testimony that I claim the foregoing as

my own I have hereto affixed my signature in the presence of two witnesses.

VERNON H. BALLARD.

Witnesses:

HARRY A. COOK,

FRED. J. FREDERICKSON.