(No Model.)

G. W. MELOTTE.

SOLDERING APPARATUS.

No. 420,459. Patented Feb. 4, 1890.

FIG. 3.

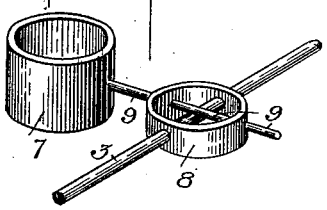


FIG. 1.

FIG. 4.

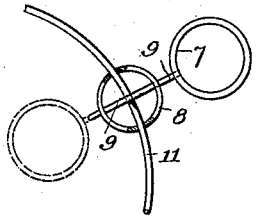
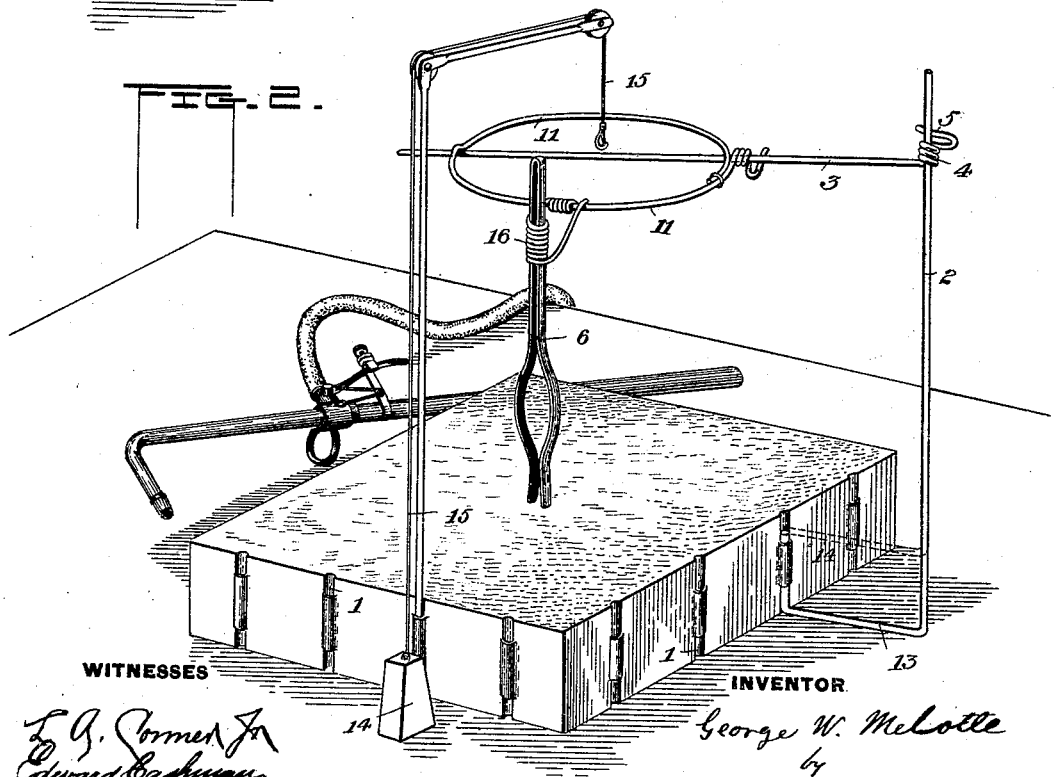


FIG. 2.



WITNESSES

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by

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UNITED STATES PATENT OFFICE.

GEORGE W. MELOTTE, OF ITHACA, NEW YORK.

SOLDERING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 420,459, dated February 4, 1890.

Application filed October 29, 1889. Serial No. 328,575. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MELOTTE, a resident of Ithaca, in the county of Tompkins and State of New York, have invented certain new and useful Improvements in Soldering Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

The object of the invention is to provide means for conveniently holding and manipulating clamps, pinchers, or other devices above and adjacent to a refractory pad such as embraced in my patent granted March 26, 1889, and numbered 400,103; and it consists in the construction hereinafter described and pointed out.

In the accompanying drawings, Figure 1 is a perspective view of a refractory bed and device for holding a tool or tools. Fig. 2 is a similar view of a modified form of bed and holding device, and Fig. 3 is a detail; and Fig. 4 is a plan of the preferred form of tool-holder applied to a section of a supporting-ring.

The refractory bed, made preferably of strips of asbestus fabric, is provided with an exterior band, or in the case of a rectangular bed with plates having sockets 1 to receive the foot of an upright standard or post 2. To this is connected a horizontal arm 3 by means of a coil 4 formed at or near its extremity, the wire of the coil being extended to one side and then bent back, so as to lie in or near the axis of the coil, as represented at 5. The wire standard or post 2, when passed through the coil, comes in contact with the transverse part or tail 5, and is pushed by it, crowding it a little to one side, producing sufficient friction to hold the upright and horizontal parts in any desired relation, the connection being such, however, that the horizontal arm can be moved up or down on the post at pleasure.

A clamp or pincher is denoted by 6. This and similar devices are used to hold articles upon or near the refractory bed, and it is sustained upon the horizontal arm by means of two rings 7 and 8, the latter of which is pierced diametrically to receive the arm, as shown. The ring 8 is connected to 7 by a pin 9, secured in the periphery of the latter and passed diametrically through suitable holes in said ring 8 at right angles to the arm 3 and in close contact therewith, whereby sufficient friction is caused to hold the ring 8 in any desired position on the arm. Said ring can be rotated about the arm 3 or moved along it, and the ring 7, with its pin 9, can be turned in a plane or direction at right angles to said pin whatever the position of the latter. A tool such as the clamp 6, having, preferably, a compressible handle, can be pushed into the ring 7, and will be held by friction or by the pressure due to the elasticity of said handle.

As stated, the horizontal arm can be raised and lowered on the post, the ring 8 can be moved along the arm and also turned about it, and the ring 7 can also be rotated, the pin 9 serving as a journal. This pin can also be drawn or partially drawn through the ring 8. These various adjustments afford very convenient means of directing the jaws of the clamp to any desired point on the pad, and any article—such as a ring—can be held upon the pad by any of my clamping devices, one form of which is shown at 10 having its foot inserted in a socket such as above referred to.

In Fig. 2 is shown a horizontal arm provided with a ring 11. The arm is connected to a post, as in the case above described, and the ring 11 is connected to the former by a similar device, which allows the ring to be moved along the arm or rotated about it. A tool-holder composed of two rings such as already described can be applied to the ring 11, the holes in the periphery of ring 8 being suitably disposed to permit the ring to be moved around on said ring through a half-circle. The ring 11 can, if desired, be turned over and about the arm 3, so as to bring the tool-holder on the opposite side, whereupon it can there be moved through another semi-circle. Various instruments can be supported either on this ring or on its horizontal arm—such, for example, as a blow-pipe; or, if preferred, an independent arm may be employed for a separate tool.

As illustrated at 13 in Fig. 2, the foot of a post is bent to enter the bottom of a socket and the wire then extended horizontally for a short distance and bent upwardly again; or

the foot may be formed to enter from above and the wire bent outwardly, as indicated by the dotted line 14, and then up. In the case of a blow-pipe it may be counterbalanced by a weight 14, a cord 15 being attached to the weight and running over pulleys to the blow-pipe when the same is in use.

The coil 4, provided with an extension 5, as set forth, can be employed with tool-holders of different forms—such, for example, as shown at 16 in Fig. 2. In this holder two coils are arranged substantially as represented, and the extremity of one is extended and bent over the arm 3, as represented at 16, thereby producing sufficient friction to hold the coils in any desired position. In this construction the tool-holding coil or ring, however, cannot be rotated in a plane parallel to a plane passing through the arm, as in the holder first described. The holder herein described, though primarily adapted to be used for a refractory bed, is not in use necessarily limited to such device. Although the post or standard is herein described as vertical and the arm or support as horizontal, these particular arrangements are not essential. Neither is the form of the tool-holder material, so far as the particular means of adjustably connecting the post and arm is concerned, and the latter is not of the gist of the improvement in tool-holders which is adapted to be applied to any wire, rod, ring, or other like support.

A block having an opening adapted to receive a center or supporting rod and to be fastened thereto by a set-screw, and having a transverse opening to receive a pin for supporting a clamp or other device, was known prior to my invention.

Having thus described my invention, what I desire to secure by Letters Patent is—

1. In combination with a soldering-bed, an upright or standard, a horizontal tool-holding arm terminating in a coil having the wire at one end of the coil extended tangentially therefrom and having the free end of said extension bent back and arranged across or near the axis of said coil, said extension having frictional contact with the upright situated axially in the coil, substantially as described.

2. In combination with a suitable arm or support, a tool-holder consisting of two rings connected by a pin or journal secured in the periphery of one and passing diametrically through the other, in contact with the supporting-arm, friction being produced and the holder held at any desired point by the pressure of the pin upon the arm, substantially as described.

3. In combination with a suitable arm or like support, a tool-holder consisting of two rings connected by a pin or journal secured in the periphery of one and passing diametrically through the other ring at right angles to said arm, which arm also passes diametrically through the latter ring and in contact with said pin, substantially as described.

4. In combination with a standard, a horizontal arm provided with a coil having a bent frictional extension and a tool-holder rotatably supported on the arm by a friction device and comprising a ring or socket to receive the tool, substantially as described.

5. In combination with an arm or like support, a ring rotatably held by frictional contact on the arm, in combination with a tool-holder movable around said ring, substantially as described.

6. In combination with a horizontal arm or like support and a ring provided at one side with a coil having a bent frictional extension, the arm passing axially through the coil and diametrically through the ring and in close contact with the extension, and the ring having rotatable connection with the arm, substantially as described.

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

GEO. W. MELOTTE.

Witnesses:
WM. HAZLITT SMITH,
C. H. WHEELER.