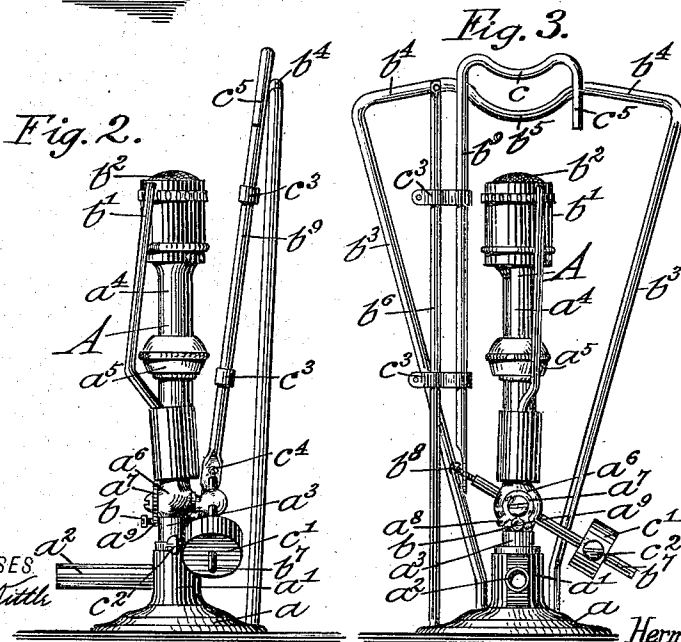
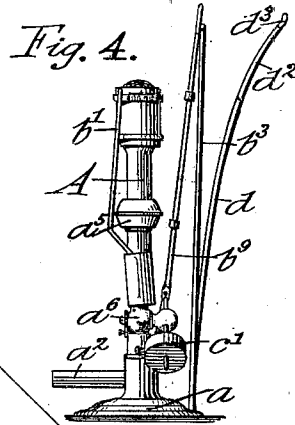
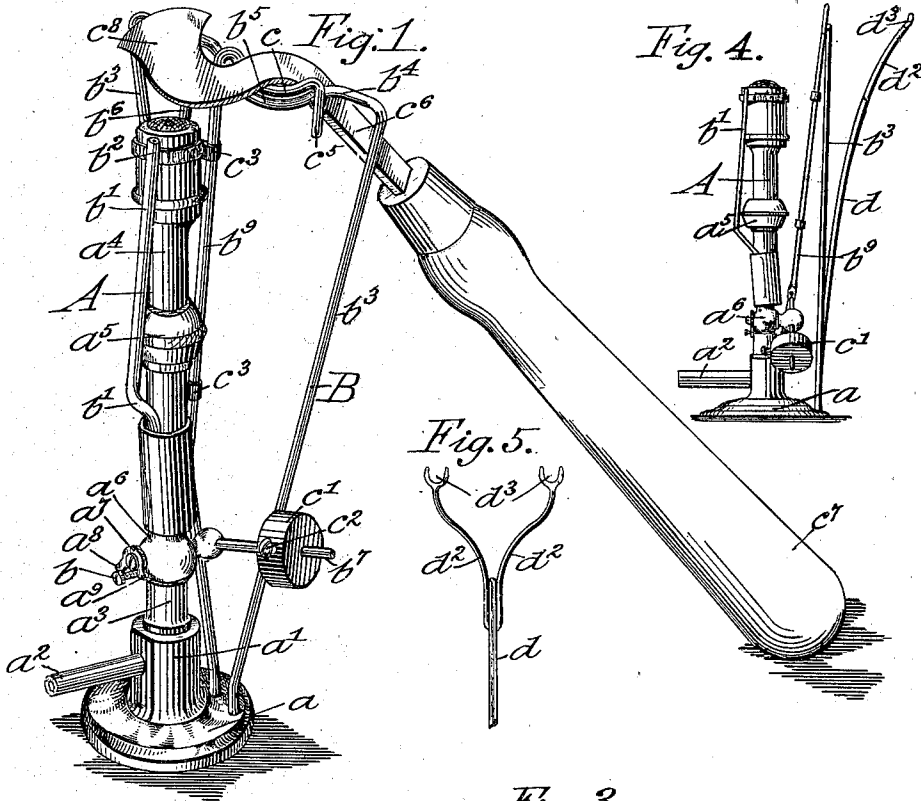


H. WALTHER.
TOOL HEATER.

APPLICATION FILED MAR. 26, 1903.

NO MODEL.



WITNESSES
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TOOL-HEATER.

SPECIFICATION forming part of Letters Patent No. 736,321, dated August 11, 1903.

Application filed March 26, 1903. Serial No. 149,703. (No model.)

To all whom it may concern:

Be it known that I, HERMANN WALTHER, a citizen of the United States, residing in New York, borough of Brooklyn, in the State of New York, have invented certain new and useful Improvements in Tool-Heaters, of which the following is a specification.

The object of this invention is to provide a tool-heater in which the supply of heating medium is cut off automatically upon the removal of the tool after heating and automatically reinstated upon the replacing of the tool for heating.

For this purpose the invention consists of a tool-heater comprising a heating device, a rest for the tool to be heated, mechanism controlling said heating device, and means connecting said rest with said controlling mechanism.

The invention consists, further, in certain details of construction and combinations of parts, which will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a tool-heater embodying my invention. Fig. 2 is a side elevation, on a somewhat smaller scale, of the heater shown in Fig. 1. Fig. 3 is a front elevation of said heater. Fig. 4 is a side view, on a smaller scale, showing a modified form of the tool-rest; and Fig. 5 is an elevation of a portion of the tool-rest shown in Fig. 4.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A indicates a heating device in the form of a Bunsen burner. The Bunsen burner is mounted upon a suitable base or stand *a*, having a tubular vertical shank *a'*, with which communicates a gas-supply tube *a²*. A connecting-tube *a³* rises from the standard or shank *a'* and extends in upward direction into connection with the lower portion of the burner-tube *a⁴*. The burner-tube is provided, beneath the regulating-cap *a⁵*, with the usual entrance-slots for air. By turning the regulating shell or cap *a⁵* upon the tube *a⁴* the respective slots of the tube and of said cap are caused to register or are placed out of register with the slots of the burner-tube, and thereby the admission of air regulated and the flame controlled as to quantity in the well-known manner. The conducting-tube *a⁶* is provided in

its length with a valve *a⁶*. On the exterior rear portion of said valve is secured a stop device *a⁷*, which is provided with two lugs *a⁸* *a⁹*, adapted to abut against a stop-screw *b*, located on the valve-casing and extending into the path of said lugs, between the same. The parts are so formed that when the valve is turned, so that the lug *a⁸* abuts with the screw *b*, gas passes to the burner-tube. From the valve-casing extends a pilot-tube or bypass *b'*, adapted to conduct only an extremely small quantity of gas. Said pilot-tube *b'* communicates at its lower end with the valve. At its upper end it terminates adjacent a burner-cap *b²* at the upper end of the burner-tube *a⁴*. When the valve is in the position shown in Fig. 3, gas is conducted by the same to the pilot-tube and shut off from the burner-tube. When in opposite position, as in Fig. 1, gas is permitted to enter the burner-tube.

B indicates a rest for the tool to be heated, which is formed, when constructed as in Figs. 1, 2, and 3, of uprights *b³* and a cross-bar *b⁴* between the upper ends of said uprights. Said cross-bar is provided with a concave portion for receiving the tool to be heated. The standards *b³* are secured at their lower ends to the base *a* by any suitable means, as by being inserted in openings of the base and retained therein by friction. The standards *b³* and cross-bar *b⁴* are braced by means of a brace-rod or third standard *b⁶*, which is connected at its upper end with the cross-bar *b⁴* and at its lower end with the base *a* at a point out of the plane of the connection of the standards *b³* with said base. The valve *a⁶* is provided with an operating-lever *b⁷*. Said bar *b⁷* is pivotally connected, by means of a screw *b⁸* or other suitable means, with a connecting-rod *b⁹*, which extends in upward direction and is bent laterally at its upper end or portion into the form of a seat *c*, located adjacent and in vertical line with the seat *b⁵* of the rest B. On the valve-operating lever *b⁷* is arranged a weight *c'*, which is shiftable on said rod and may be fixed at any point in the length of the same by means of a set-screw *c²*, passing through the weight and engaging said rod. Said weight is of sufficient gravity to operate the valve-rod and connected parts into the position shown in Fig. 3, thereby raising the movable seat *c*

simultaneously and reducing the supply of gas to the minimum. This is the normal position of the parts when a tool is not undergoing heating. Said weight c' returns the parts to this position after each removal of the tool and retains them normally in said position. For guiding the connecting-rod b^9 two guides or keepers c^8 are provided, said keepers being mounted, preferably, upon the brace-rod b^6 . Said keepers thereby act to retain the movable seat c in position adjacent the vertical plane of the seat b^5 . Upward movement of said seat c under actuation of the weight c' is limited by abutment of the lug a^9 with the stop-screw b . Rotary turning of said seat relatively to the rod b^9 , which forms its axis of support, is prevented partly by means of the screw b^8 , which passes through an opening c^4 in the lower end of the connecting-rod, which opening is but slightly larger than sufficient to accommodate the screw, and partly by means of a depending nose c^5 at the outer end of the seat c . Said nose c^5 is of such length that when the seat c is raised to its highest extent said nose extends still below the cross-bar b^4 and prevents, by its engagement with said cross-bar, the rotary displacement in outward direction of said seat. A gas-supply pipe (not shown) is connected with the stem or gas-supply tube a^2 .

The parts being in the position shown in Fig. 3, gas flows through the valve a^6 and issues from the upper end of the pilot-tube b^7 . It is lighted. When it is desired to heat a tool—as, for example, a leather ornamenting or creasing tool—the shank c^6 of said tool is rested upon the seat c . The opposite end c^7 of said tool is permitted to rest upon the table or other support upon which the base a is rested. The upper end or working face c^8 of the tool is thereby extended into position above the burner-cap b^2 . The weight of the tool, and more especially the weight of the shank and heavy metal upper portions, overcomes the gravity of the weight c' . The seat c and connecting-rod a^9 descend, thereby operating the valve-rod b^7 , whereby the valve is turned and the gas permitted to pass into the burner-tube. The gas is mixed in the usual manner in the burner-tube with air entering through the slots beneath the cap a^5 . The mixture issues from the cap b^2 and is immediately ignited by the pilot-flame burning from the tube b^2 . The flame from the burner-cap b^2 plays about the tool and heats the same. When sufficiently heated, it is removed. The weight c' immediately returns the parts to the position shown in Fig. 3, thereby cutting off

the supply of gas from the burner-tube. The pilot-light continues to burn until the supply of gas is entirely shut off from the supply-tube a^2 or until otherwise put out.

In the modification shown in Fig. 4 a brace d is provided for the rear portion of the tool, so that the same does not of necessity rest upon an exterior object. Said brace d is connected with and rises from the base a . It is provided at its upper end with a fork, each member d' d^2 of which is provided with a seat d^2 , preferably in the same horizontal plane as the seat b^5 and approximately in line with said seat and the burner b^2 . This additional brace forms a part of the rest for the tool and is more especially desirable in the case of smaller tools, such as curling-irons. It acts in any case to raise the center of gravity of the tool above that of the position shown in Fig. 1, so that the tool exerts a greater weight upon the seat c .

It is obvious that the base a may be made larger than that shown in the drawings and may be provided with a plurality of upright shanks or sockets a' , arranged at suitable distances apart and each provided with a burner and having opposite the same a tool-rest, such as shown and described, so that a large number of tools may be independently heated.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A tool-heater, consisting of a base, a burner mounted on said base, a stationary tool-rest mounted on said base at one side of said burner, a brace-rod between said burner and rest, a valve-operating connecting-rod carrying at its upper end a seat for the tool, and guides on the base-rod for guiding said connecting-rod, substantially as set forth.

2. A tool-heater, consisting of a base, a burner mounted on said base, a stationary tool-rest mounted on said base at one side of said burner, an inclined brace-rod between said burner and rest, an inclined valve-operating connecting-rod carrying at its upper end a seat for the tool, guides on said brace-rod for guiding said connecting-rod, and a downwardly-projecting nose on said seat adapted to bear against said tool-rest for guiding said seat, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

HERMANN WALTHER.

Witnesses:

HENRY J. SUHRBIER,
PAUL GOEPEL.