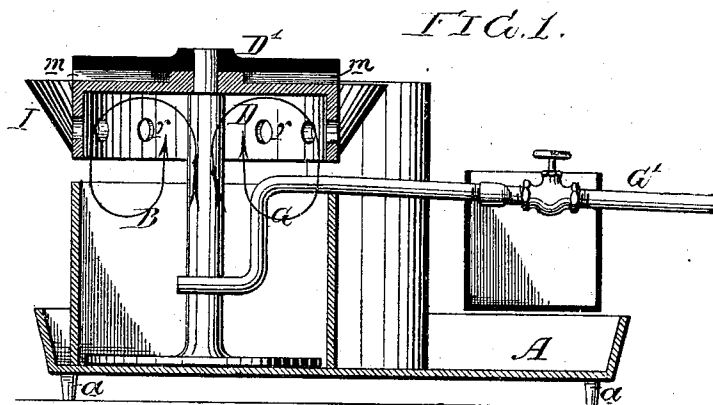
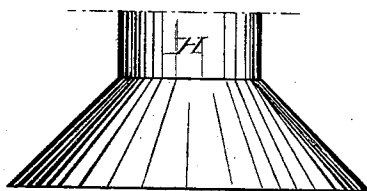
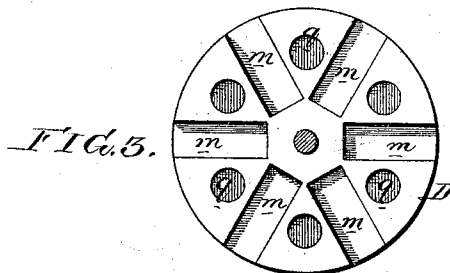
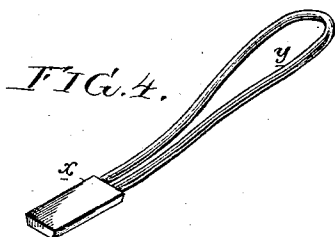
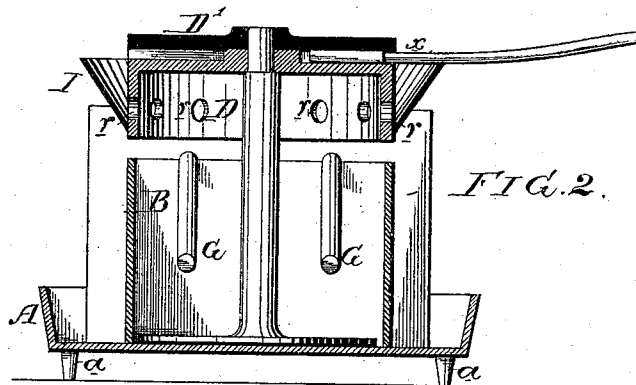
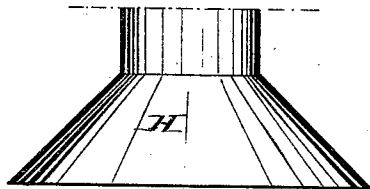


G. H. PERKINS.
Apparatus for Heating Soldering-Irons.
 No. 151,619. Patented June 2, 1874.



Witnesses Hubert Howson
 Harry Smith

George H. Perkins
 by his atty.
 Howson and Son.

UNITED STATES PATENT OFFICE.

GEORGE H. PERKINS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF, JOSEPH LE COMTE, OF NEW YORK CITY, AND ATLANTIC REFINING COMPANY, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN APPARATUS FOR HEATING SOLDERING-IRONS.

Specification forming part of Letters Patent No. **151,619**, dated June 2, 1874; application filed February 21, 1874.

To all whom it may concern:

Be it known that I, GEORGE H. PERKINS, of Philadelphia, Pennsylvania, have invented an Improvement in Apparatus for Heating Soldering-Irons, of which the following is a specification:

The object of my invention is to quickly, economically, and uniformly heat soldering-irons; and this I accomplish in the improved furnace shown in the vertical sections, Figures 1 and 2, of the accompanying drawing.

In a trough, A, supported on legs *a*, is placed a casing, B, and within the latter is a central stationary spindle, supporting an inverted circular cup, D, between the lower end of which and the casing B there is an open space. On the top of the inverted cup there is a plate, D', and between the latter and the cup are formed radial chambers *m*, (best observed in the plan view, Fig. 3,) each chamber being, in the present instance, of a proper size for receiving a soldering-iron, *x*, which is provided with a handle, *y*, as shown in the perspective view, Fig. 4. In the inverted cup D and its plate D' there are openings *q*, (shown in Fig. 3,) through which the gases and heated air can pass upward into a hood, H, whence they are conveyed, through suitable pipes, to the external air. The side of the inverted cup is also perforated with holes *r* at intervals, and the heated air and gases passing through these holes are directed upward to the hood by a beveled casing, I, on which the handles *y* of the irons may rest, and which prevents the undue heating of said handles by the flames, which would otherwise be projected outward. The two burners consist of bent tubes G, contained within the casing B, and forming continuations of supply-pipes G', which communicate with an elevated tank containing benzine, each bent tube having, near its closed end, a small hole, through which the vaporized benzine escapes in the form of a flame, which impinges against the under side of the inverted cup.

One of the irons *x* is placed in each radial chamber *m*, and, when all are sufficiently heated, one may be removed for use, and then returned prior to the removal of the next iron, the inverted cup admitting of being turned freely on the stationary spindle, so as

to permit the removal of one iron after another by the operative, who retains one position near the furnace, and so as to insure the thorough heating of any iron which has been replaced after being used before it is again required.

One of the most important features of my invention is the inverted cup D, when viewed in connection with the burner or burners G. The flames impinge against the bottom of the said cup, and, in seeking an outlet, are directed downward and inward by the sides of the same, and again rise before escaping through the outlets *q* and *r*, as indicated by the arrows in Fig. 1.

This I have ascertained to be the course of the flame from thorough practical tests, to which I have submitted the apparatus, and the result is not only a nearly perfect combustion and an extended flame, of intense heat, from a comparatively small quantity of benzine, but the thorough heating of the cup D and its cover D', and, consequently, of the irons *x* contained within the recesses *m*, the said irons being heated uniformly throughout their entire extent.

I claim as my invention—

1. The inverted cup D, arranged above the burners of a heating apparatus, and having radial chambers *m* and vents *q* and *r*, all substantially as and for the purpose specified.

2. A soldering-iron furnace, in which are combined a casing, B, a burner or burners, G, and an inverted cup, D, having receptacles *m* for the object to be heated, and supported at a point directly over the said casing and burners by a central spindle, upon which the said cup can be rotated, all substantially as specified.

3. The combination, in a furnace for heating soldering-irons, of the inverted cup D, vents *r*, and inclined annular casing I, for supporting the tools and deflecting the heated gases, as specified.

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

GEORGE H. PERKINS.

Witnesses:

WM. A. STEEL,
HARRY SMITH.