

(No Model.)

J. S. HULL.  
SOLDERING IRON HEATER.

No. 409,357.

Patented Aug. 20, 1889.

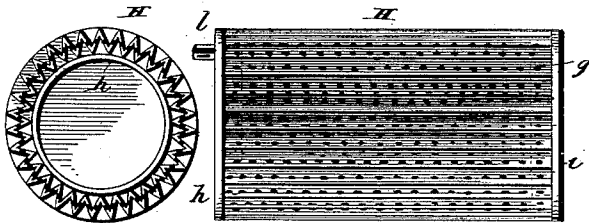
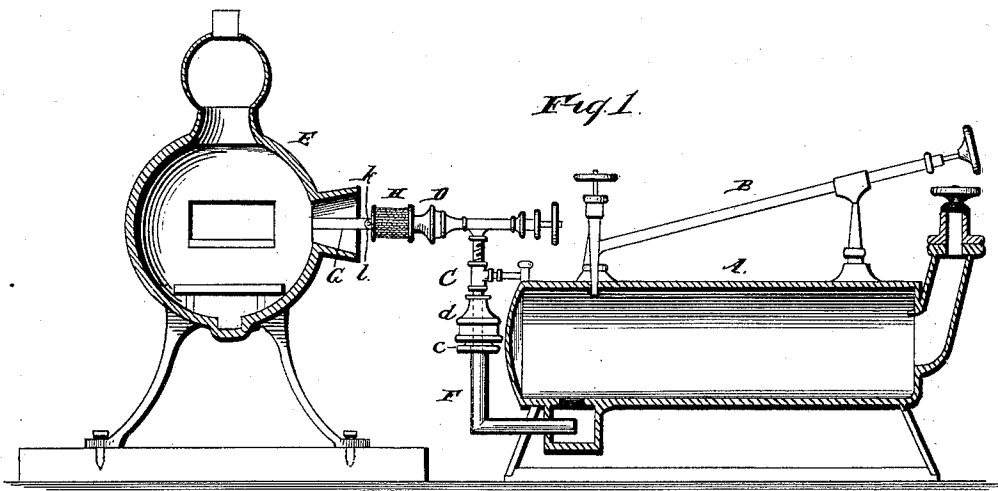


Fig. 4.

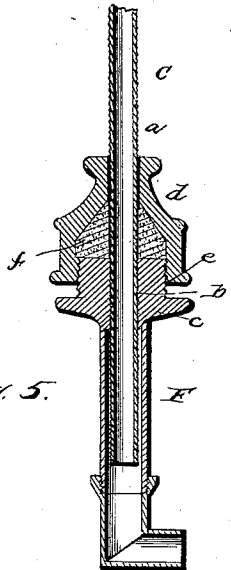


Fig. 5.

Fig. 3

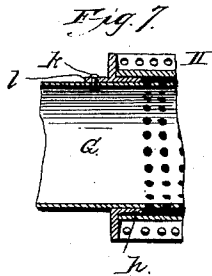


Fig. 7.

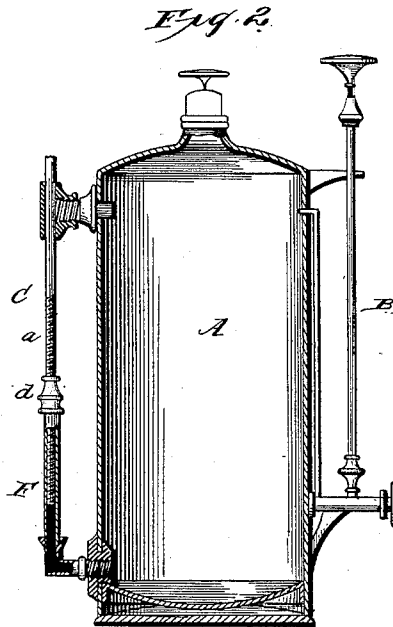
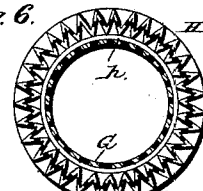


Fig. 2.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN S. HULL, OF BALTIMORE, MARYLAND.

## SOLDERING-IRON HEATER.

SPECIFICATION forming part of Letters Patent No. 409,357, dated August 20, 1889.

Application filed March 22, 1889. Serial No. 304,251. (No model.)

### *To all whom it may concern:*

Be it known that I, JOHN S. HULL, a citizen of the United States, residing at Baltimore, and State of Maryland, have invented certain new and useful Improvements in Soldering-Iron Heaters; 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 appertains to make and use the same.

My invention relates to means for heating soldering-irons, and has for its object improvements in the devices shown in my patent of December 26, 1882, No. 269,577.

In the application of my system of soldering-iron heaters to factories it has been necessary to adapt them to benches of different heights for the accommodation of employes, and this adaptation of the heaters has been attended by considerable expense to change the connections, and it has also been found that the burners have been materially affected by strong currents of wind from any source. To overcome these disadvantages in my former constructions I have invented the devices which will be hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, which form part of this specification, Figure 1 represents a side elevation, partly in section, of my invention as applied to a reservoir used upon a bench; Fig. 2, a similar view of a reservoir to be placed upon the floor near or alongside of a bench. Fig. 3 is an enlarged view showing the shield for the burner in side elevation; Fig. 4, a similar end view. Fig. 5 is an enlarged section of the extensible supply-pipe; Fig. 6, a transverse section through the shield and the retort-tube, and Fig. 7 a longitudinal section thereof.

Reference being had to the drawings and the letters thereon, A indicates a reservoir for containing hydrocarbon fluid—such as gasoline; B, a pump for supplying air to the reservoir; C, the supply-tube communicating with the reservoir and conducting liquid to the burner D, and E a fire-pot.

To adjust the burner to fire-pots and benches of different heights, the supply-tube

C is made extensible by an external screw-thread *a*, which engages with an internal thread *b* in the head *c* of the well F, and the tube is packed by means of a gland *g*, which engages with the external thread *e* on the head *c*, and compresses the packing *f*. By this construction the burner D may be raised or lowered by revolving it and running the supply-tube C up or down in the well F to suit the conditions under which it is to be used, and the liquid from the reservoir will be supplied through the well and the supply-tube to the burner under pneumatic pressure.

Around the perforated portion of the retort-tube G, I place a shield H, which is made of corrugated sheet metal, having the walls forming the corrugations provided with numerous perforations *g*. The guard is secured to rings *h* *i* in its ends, and is attached to the tube G by means of a screw *k*, passing through a lug *l* and bearing upon the tube. By corrugating the shield and forming the perforations in the angular walls of the corrugations, the currents of air are crossed and neutralized, so that no direct currents can enter the retort-tube and extinguish the burning fluid or interfere with it in any appreciable degree. The shield is of especial service when the heater is being used for outdoor purposes, such as soldering roofs of buildings.

Having thus fully described my invention, what I claim is—

1. In a soldering-iron heater, the combination of a reservoir, a well at one end of and communicating with the reservoir and having an internal screw-thread at its upper end, a supply-tube externally screw-threaded and extending into the well, a gland and a suitable packing, and a burner, substantially as described.

2. In a soldering-iron heater, a cylindrical corrugated and perforated shield or guard, in combination with a perforated retort-tube, the shield being secured to the tube around the perforations, substantially as described.

3. In a soldering-iron heater, a corrugated shield or guard provided with perforations in the angular walls of the corrugations and arranged to cross the currents of air, in com-

bination with a perforated retort-tube, substantially as described.

4. In a soldering-iron heater, a perforated retort-tube, in combination with a detach-  
5 able corrugated sheet-metal shield or guard having perforations in its angular walls and secured to the tube around the perforations, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN S. HULL.

Witnesses:

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D. C. REINOHLE.