

(Model.)

2 Sheets—Sheet 1.

W. NEHRING.
SOLDERING IRON HEATER.

No. 419,058.

Patented Jan. 7, 1890.

Fig. I.

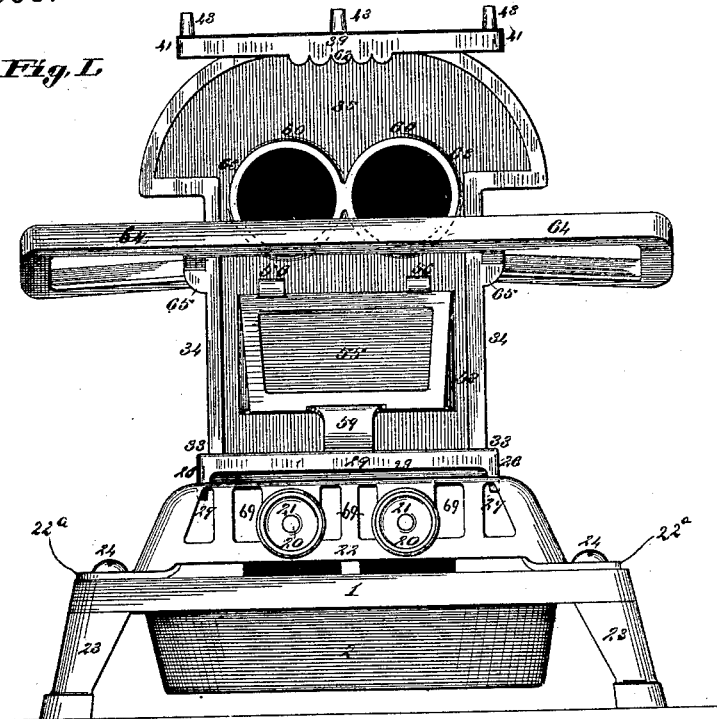
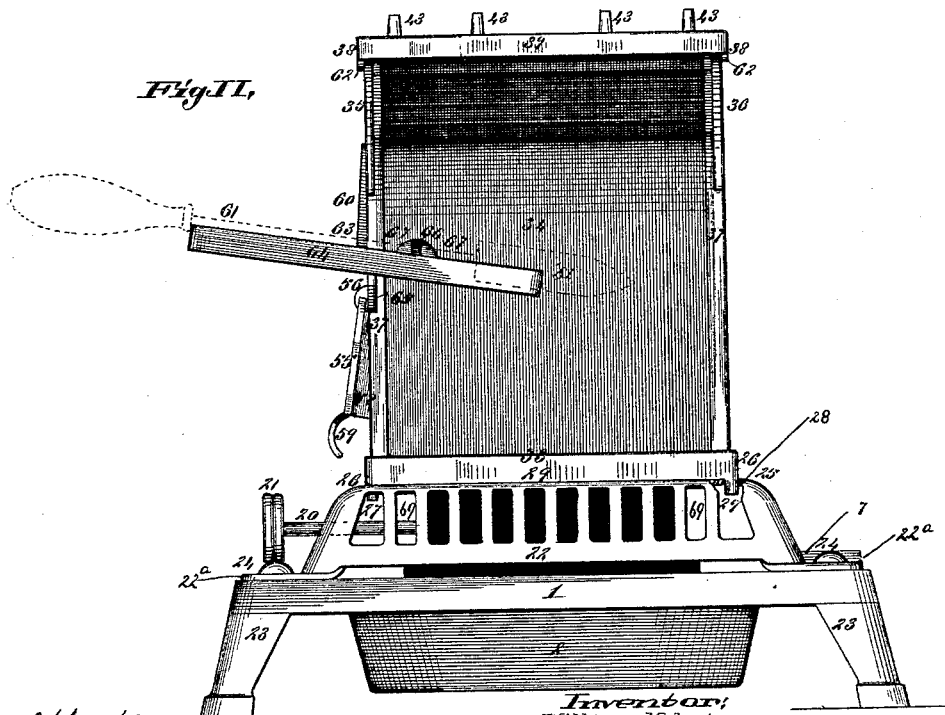


Fig. II.



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To Knight Bros.
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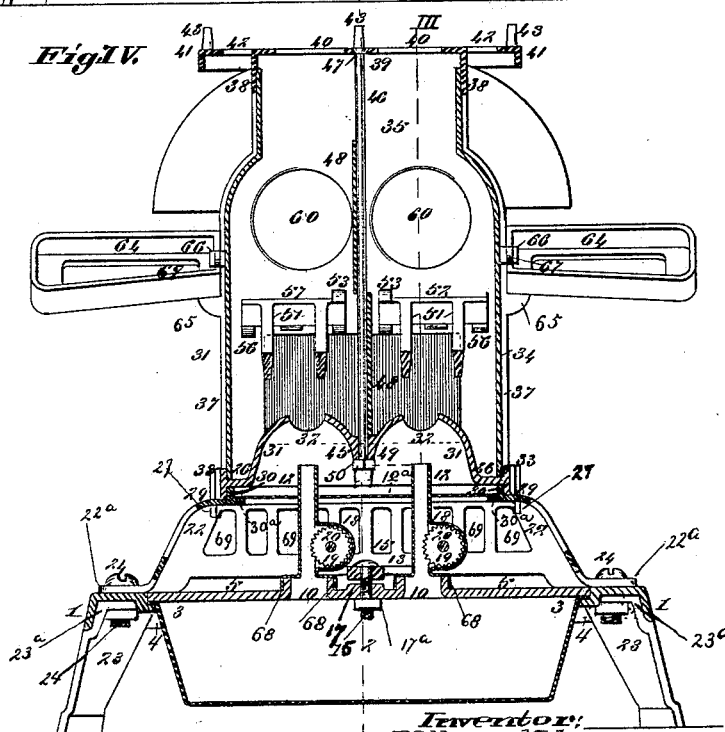
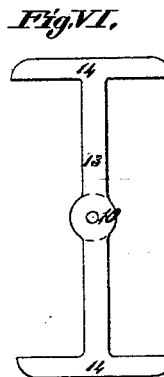
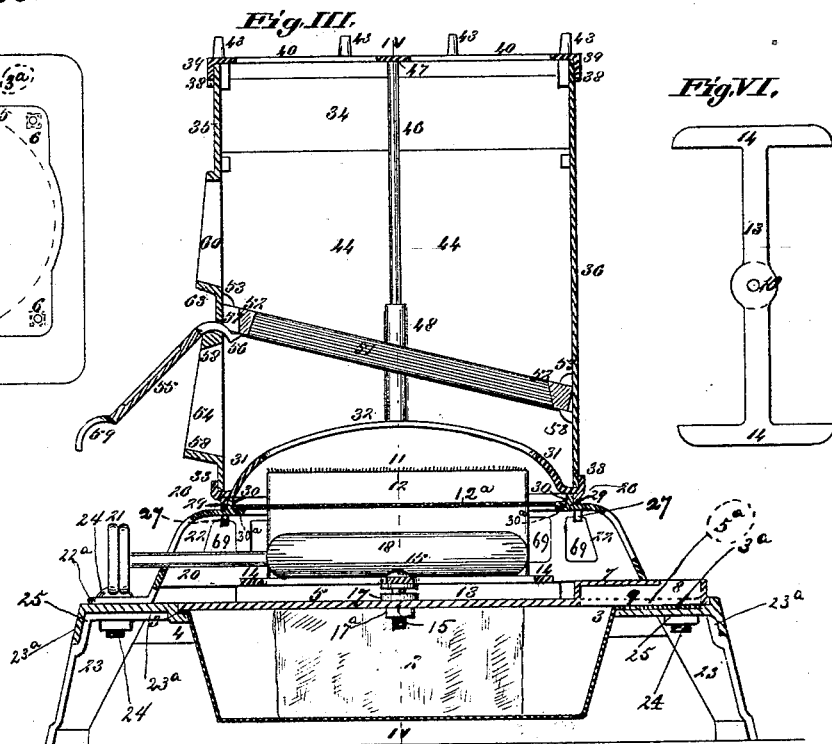
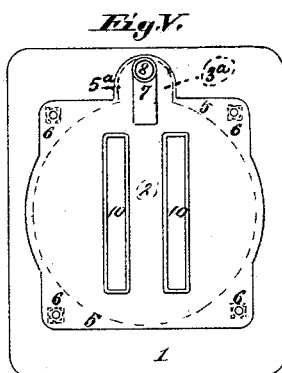
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SOLDERING IRON HEATER.

No. 419,058.

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Attest:
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S. Arthur.

Inventor:
William Nehring.
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UNITED STATES PATENT OFFICE.

WILLIAM NEHRING, OF EVANSVILLE, INDIANA, ASSIGNOR OF ONE-HALF TO
GEORGE W. WARREN, OF SAME PLACE.

SOLDERING-IRON HEATER.

SPECIFICATION forming part of Letters Patent No. 419,058, dated January 7, 1890.

Application filed November 10, 1888. Serial No. 290,433. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM NEHRING, of Evansville, in the county of Vanderburg and State of Indiana, have invented a certain new and useful Improvement in Soldering-Iron Heaters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

10 This invention relates to an oil-stove for the heating of soldering-irons for the use of tinners, plumbers, &c.; and it consists in features of novelty hereinafter fully described, and pointed out in the claims.

15 Figure I is a front elevation of the stove, and shows the openings for the insertion of the heads of the soldering-irons and the projecting shelf for supporting their handles. Fig. II is an end elevation of the same with 20 part of the air-chamber frame broken away to show one of the feet of the body of the stove inserted in said frame. Fig. III is a vertical section taken on the jogged line III III, Fig. IV, and shows the interior of the stove with 25 the damper-door sustained in its elevated position by its hinge-hooks that engage with the front transverse end bars of the grates which support the heads of the soldering-irons. Fig. IV is a vertical section taken on 30 line IV IV, Fig. III, and shows the oil-tank, the twin burners above the tank, and the burner-caps for the exit of the flames. Fig. V is a top view of the platform of the stove, and shows the opening to the feed-duct 35 through which the oil is supplied to the tank, and the flanged wick-openings, over which openings the twin wick-tubes are seated; and Fig. VI is an enlarged top view of the clip that clamps down the twin wick-tubes on the 40 cover around the flanged openings.

Referring to the drawings, in which similar figures of reference indicate like parts in all the views, 1 represents the platform of the stove, which, with all the other parts of the 45 stove, except where specified, is preferably made of cast-iron.

2 is the pendent oil-tank, whose peripheral flange 3, having a projection 3^a, forms a supporting-rim that is seated on the pendent flange 4 around the inside of the platform. 50 The said oil-tank is preferably made of tin or

galvanized iron, but may be of cast metal or any other suitable material. Coal-oil is preferably used in the feed for said tank; but any other suitable oil may be used.

55 5 represents the cover of the oil-tank, whose peripheral edge has an extension 5^a and rests on the supporting-flange of said oil-tank above the flange of the platform that supports both the tank and its cover, to which flanges, 60 through perforations therein, the cover is secured by the screw-bolts and nuts 6.

7 represents an elevation at one side formed on and extending over the extension 5^a of the cover, having a feed-opening 8, through 65 which the oil is fed to said tank, thus forming a feed-duct 9, between the projection 3^a and the extension 5^a, for replenishing the tank.

10 represents two vertical flanges surrounding elongated openings in the cover of the 70 tank for the insertion of the wicks 11 to the oil-tank, and said flanges also seat the flanged feet 68 of the twin wick-tubes 12, which are fitted around and securely held thereto by 75 the double T-plate 13, whose transverse arms 14 at each end surmount the flanged feet of said wick-tubes, and which plate is itself firmly held down by the key-screw 15, that passes through the perforation 16 therein and 80 through a perforated boss 17 in the center of the cover of the oil-tank and is secured by a nut 17^a.

In each wick-tube one side thereof is curved round at 18 to form chambers within said 85 tubes, in which work the ratchet-wheels 19, that elevate the wick, and the shafts 20, on which they are mounted, which shafts are operated by the finger-disks 21. The twin burners, comprising all their constituent parts, are 90 preferably constructed of brass.

22 represents the skeleton frame of the air-chamber that supports the body of the stove. The said frame is secured to the platform and to the feet 23 by screw-bolts 24, 95 that pass through perforations in the lugs 22^a at the four corners of said frame, through the platform, and through the top flanges 23^a of said feet, and are secured beneath by screw-nuts 25. Perforations 69 allow the pas- 100 sage of air.

26 represents the base-plate of the body,

which rests on and is provided with pendent pin-feet 27, that are seated in perforations 28 at the upper corners of the skeleton frame 22, and the pendent flange 29, surrounding said base-plate, fits around the surmounting flange 30 of said frame, on which it sits.

31 are the burner-caps that rise from the base-plate and constitute draft-flues over the twin burners, the superheated air from which passes through openings 32.

12^a is a perforated air-distributing plate supported on a horizontal flange 30^a on the skeleton frame and surrounding the wick-tubes.

The base-plate of the body 26 has a surmounting flange 33, within which are seated the lower edges of the side plates 34, the front plate 35, and the rear plate 36 of the body. The vertical flanges 37 of the front and rear plates lap over the edges of the side plates and clamp them together, and all four plates are clamped together at top by the pendent flanges 38 of the perforated top plate 39, which top plate has inner openings 40 for the exit from the stove of the superheated air, and wings 41, that project beyond the sides of the stove, which wings are also surrounded by the pendent flanges 38 and have outer openings 42 to allow the radiant heated air from the outside of the stove to ascend therethrough as the superheated air from the interior of the stove ascends and finds exit through the perforations or openings in the main section of the top plate. Scallop extensions 62 of the pendent flanges at front and rear of the top plate re-enforce its hold of the front and rear plates. Vertical studs 43, that surmount the top plate and are integral therewith, provide an elevated seat for a glue-pot, kettle, or any other receptacle desired, with which can be utilized the exhaust heat from the stove. The studs elevate the receptacle sufficiently to preserve the free outlet of the hot air from the stove.

44 represents a middle partition-plate that ascends vertically from the base-plate and surmounts the pendent junction 45 of said burner-caps to within a short distance of the top of the stove. The said partition-plate is kept in place and the whole superstructure of the stove firmly compacted and secured together by the vertical tie-bolt 46, which passes through a perforation 47 in the center of the top plate, around which its head rests. The bolt then passes down and is seated within curved projections 48 on the sides of said partition-plate that alternately project about half-way from one side and the other half from the other, and the lower end of the bolt passes through the perforation 49 in the pendent junction of the burner-caps, and a screw-nut 50 engages on the screw-threaded end of said tie-bolt. The top and base plate of the superstructure, with the side, front, and rear plates that are clamped within the flanges of said top and base plates, are thus firmly held together.

51 represents grates, each composed of a pair of bars with cross ends 52, which are held in their positions (the bars inclining downward from the front to the rear plate) by lugs 53, that project from the inside of said plates.

54 represent the draft-openings in the front plate, the draft through which is regulated by the damper-door 55, which is hung by hook-hinges 56, that pass through perforations 57 in the front plate above the draft-openings, and when it is desired to provide a draft the points of the angle-hooks engage against the under side of the ends of the grates, and thereby the door remains elevated in inclined position, as shown in Fig. III. If, on the other hand, it is desired to close the openings, the hinge-hooks are disengaged from their hold of the grates and the door is then lowered and rests on the inclined flange projection 58, that surrounds the openings, as shown in Figs. I and II, thus closing the same. 59 is the catch-handle for lifting the damper-door.

60 represent openings for the insertion and withdrawal of the soldering-irons 61, whose heads rest on the grates inside the stove, each relatively above the flame emitted from that one of the burners over which it is placed. Inclined inwardly-flaring flanges 63 surround these openings.

64 represents a skeleton supporting-frame, which is clamped in its inclined position on the one hand by the lugs 65, that project from the front plate beneath it, and on the other hand by similar lugs 66, that project from the side plates above it.

67 are lugs that surmount the supporting-frame and fit on each side of the lugs 66 to prevent said frame from sliding down on its incline.

It will be seen that the inclination of the frame outside the stove approximates to that of the grates inside, and consequently that it makes a convenient rest for the handles of the soldering-irons, as the grates do for the support of the heads of the irons, which are held directly over the flame from the burners.

It will be seen that the partition separates the two compartments of the heating-chamber in the stove, so that either one alone or both compartments can be run at a time, according to the amount of soldering work to be done, and to accommodate either one or two operatives.

I claim as my invention—

1. The combination of the platform, the oil-tank suspended therefrom, the cover to the tank, formed with flanged wick-openings, and an elevation having a feed-opening and providing a duct leading to the tank, the wick-tubes seated on the cover around the flanged openings, and the double T-plate and screw-bolt by which the wick-tubes are secured, substantially as described.

2. The combination of the platform, the oil-tank having the projection and suspended

therefrom, the cover to the tank, formed with flanged wick-openings, and with the extension having an elevation formed with a feed-opening and providing a duct between the projection and extension leading to the tank, and the wick-tubes fitting around the flanged openings and seated on the cover, substantially as described.

3. The combination of the platform 1, having the pendent flange 4, the tank 2, having peripheral flange 3, seated on the pendent flange, the cover 5, seated on the peripheral flange of the tank and having flanged wick-tubes 10 and elevation 7, formed with a feed-opening 8, and bolts and nuts by which the cover is secured to the platform, substantially as described.

4. The combination of the platform, the oil-tank suspended therefrom, the cover to the tank, formed with wick-openings, the wick-tubes seated on the cover, the skeleton frame supported on the platform, having surmounting flanges 33 and corner perforations 28, and the base-plate formed with burner-caps, with pendent flanges 29, surrounding the surmounting flanges, and with pin-feet 27, occupying the corner perforations, substantially as described.

5. The combination of the platform, the oil-tank suspended therefrom, the cover to the tank, having wick-openings, the wick-tubes, the skeleton frame supported on the platform, having surmounting flanges 33 and horizontal flanges 30^a, the perforated plate 12^a, resting on the horizontal flanges and surrounding the wick-tubes, and the base-plate formed with burner-caps and with pendent flanges surrounding the surmounting flanges, substantially as described.

6. The combination of the platform, the skeleton frame having surmounting flanges, the base-plate having pendent and surmounting flanges, the side plates, the front and rear plates having vertical flanges lapping the side plates, the top plate having pendent flanges lapping the body-plates, and the tie-bolt

extending from the top plate to the base-plate for securing the body together, substantially as described.

7. The combination of the platform, the skeleton frame having surmounting flanges, the base-plate having pendent and surmounting flanges, the side plates, the front and rear plates having vertical flanges lapping the side plates, the top plate having pendent flanges lapping the body-plates, the partition-plate having curved projections extending on opposite sides, and the tie-bolt passed through the top plate between the projections on the partition-plate and through the base-plate, substantially as described.

8. The combination of the platform, the skeleton frame, the base-plate, the side plates, the front plate having door-opening and tool-openings, the rear plate, the top plate, the partition-plate, the inclined grates for supporting the heads of the irons, and the inclined frame having wings for supporting either straight or bent handles of the irons, substantially as described.

9. The combination of the platform, the skeleton frame, the base-plate, the side plates, the front plate having door-opening and tool-openings, the rear plate, the top plate, the partition-plate, the inclined grates for supporting the heads of the irons, having cross ends, and the door having hinge-hooks adapted to engage the outer cross ends of the grates, substantially as described.

10. The combination of the platform, the skeleton frame, the twin burners, the base-plate, the front and rear plates, the side plates, the partition-plate, and the top plate formed with pendent flanges 38, with openings 40, with wings 41, having pendent flanges and openings 42, and with studs 43 and the tie-bolt, substantially as described.

WILLIAM NEHRING.

In presence of—
TOM B. ROSS,
R. N. ROSS.