

A. TOSCO.
HAND SOLDERING MACHINE.
APPLICATION FILED AUG. 24, 1909.

957,636.

Patented May 10, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

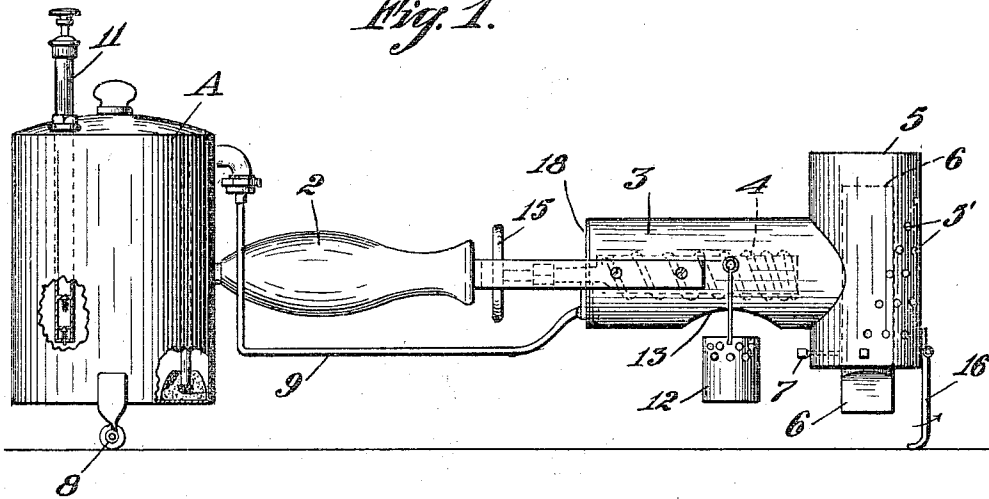


Fig. 2.

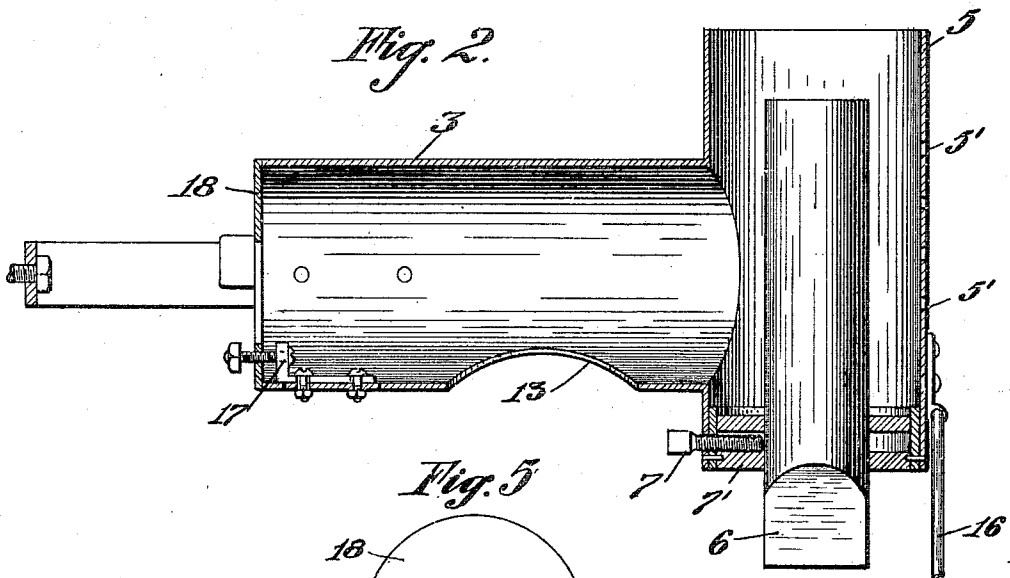
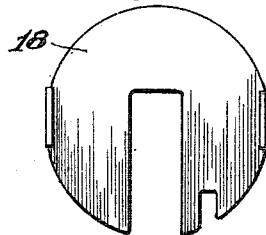


Fig. 3.



WITNESSES;
Chas. B. Bunn
Calvin

INVENTOR
AGOSTINO TOSCO
BY *Geo. H. Strong*
HIS ATTORNEY.

A. TOSCO.
HAND SOLDERING MACHINE.
APPLICATION FILED AUG. 24, 1909.

957,636.

Patented May 10, 1910.

2 SHEETS—SHEET 2.

Fig. 3.

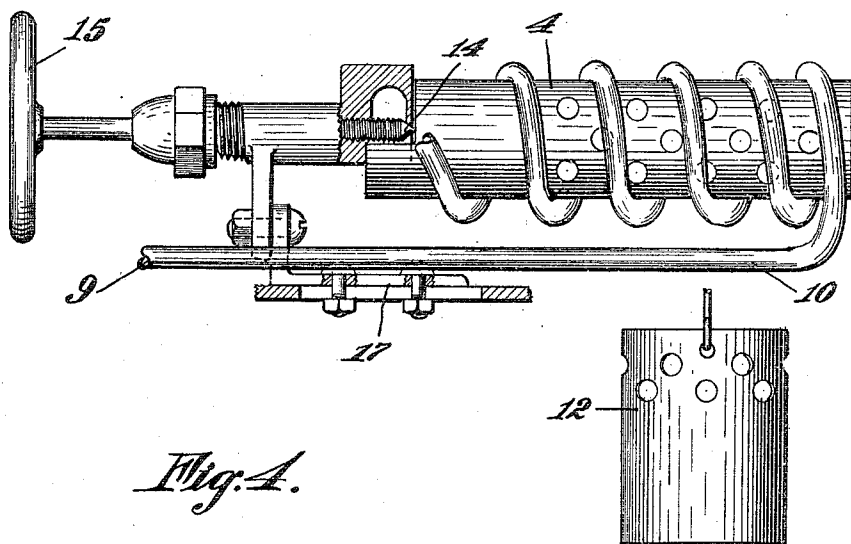
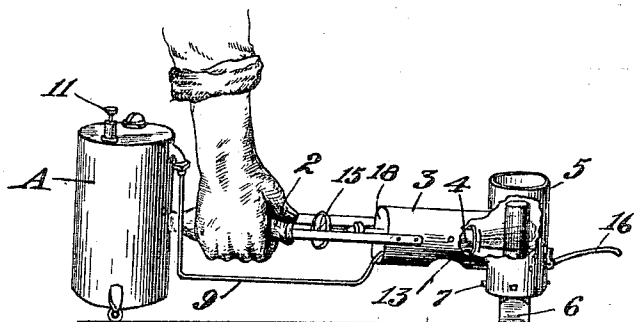


Fig. 4.



WITNESSES;

R. S. Barry,
Witness

INVENTOR
AGOSTINO TOSCO

BY *Geo. H. Strong,*
HIS ATTORNEY.

UNITED STATES PATENT OFFICE.

AGOSTINO TOSCO, OF SAN FRANCISCO, CALIFORNIA.

HAND SOLDERING-MACHINE.

957,636.

Specification of Letters Patent.

Patented May 10, 1910.

Application filed August 24, 1909. Serial No. 514,386.

To all whom it may concern:

Be it known that I, AGOSTINO Tosco, citizen of Italy, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Hand Soldering-Machines, of which the following is a specification.

My invention relates to soldering tools or soldering-irons particularly designed for use in soldering the seams of tin roofs, but it will be manifest that the invention is applicable under other conditions.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a side elevation of the tool with the gasolene tank in partial section. Fig. 2 is a section of the soldering-iron case and burner case, with the burner omitted. Fig. 3 is an elevation of the burner showing the means of supporting it in its case, showing the valve casing and the burner support in section. Fig. 4 is a perspective view showing the manner of using the tool. Fig. 5 is a detail of the slide damper at the back of the burner casing.

A is a gasolene tank or other suitable fuel container of suitable size and shape so as to be conveniently handled.

2 is the handle for grasping and managing the tool, and one end of this handle is connected rigidly to the fuel tank A, and the other end is connected to the sides of the burner casing 3. The burner casing 3 is of any suitable size, shape and material, preferably, as here shown, cylindrical and inclosing the burner 4. The front end of the burner casing 3 opens into the vertical perforated shell 5 in which the soldering-iron 6 is adjustably held by suitable means, as the clamp screws 7 and the bottom plate 7', which latter forms a guide and brace to keep the iron upright. The soldering-iron 6 is of copper, or other suitable conductive material, and is disposed so as to get the full effect of the blast from the burner 4. The cylinder 5 is perforated at 5' to admit of sufficient air to commingle with the burning gases and produce a hot flame around the soldering-iron.

If desired, the fuel tank A may be mounted on rollers 8 which are adapted to straddle the seam or joint to be soldered; and after the solder has been spread over the

joint the latter is closed by placing the heated point of the soldering-iron 6 on the seam and then running the tool along the entire length of the seam or joint to be closed.

The fuel, as gasolene or other suitable hydrocarbon, is fed to the burner by appropriate means, as a pipe 9 leading from within the tank A into the burner casing, and thence coiling around the perforated burner tip 4, and discharging centrally thereinto; the supply of gasolene in vaporized form to the burner being effected by air pressure in tank A provided by the usual pump 11.

In starting the burner to heat up the iron, a little cup 12 is hung from the burner casing, and a small amount of gasolene put into this cup 12 and lighted; the flame and heat from the burning oil in the cup 12 passing up through an opening 13 in the under side of the burner casing 3 and impinging on the vaporizing portion 10 of the oil pipe. The control of the flame is effected by means of a suitable needle valve 14 controlled from the hand-wheel 15.

16 is a foldable leg hinged to the front of the apparatus and adapted to be folded downward and support the hot iron out of contact with the underneath surface when the tool is not in use. When in use, the leg 16 is folded up out of the way, as shown in Fig. 4.

The burner is adjustably supported in the burner casing, as shown at 17, and the rear end of the burner casing is closed by a suitably slotted plate 18. It is thus a simple matter to move the burner and adjust it so that the flame will strike the soldering-iron most advantageously.

In operation, the pump 11 is manipulated to create a sufficient air pressure in the top of the closed fuel tank A, and then the wheel 15 is turned to open the needle valve 14 and allow a small amount of oil to flow into the burner. Some oil is put in the cup 12 and lighted, and as soon as the burner 4 is heated enough to ignite the oil flowing through the needle valve 14, the operation of the drip cup 12 is suspended, and very shortly a hot flame is being projected against the soldering-iron 6.

When it is desired to solder a seam, the leg 16 is kicked up into the position shown in Fig. 4, and then the tool is run along the roof, with the front end supported on the iron 6 and the rear end supported on the rollers 8.

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

1. A soldering tool comprising a burner casing, a burner in said casing, a shell at one end of the casing and communicating therewith and into which shell the burner discharges its heat, a soldering iron fixed within said shell, and foldable means for supporting the soldering iron end of the tool independently of said iron when the latter is not in use.

2. A soldering tool having a fuel tank at one end, a soldering iron at the opposite end, an operating handle intermediate of the tank and soldering iron, and a foldable leg for supporting the soldering iron end of the tool independently of the iron when the latter is not in use, and a roller on the tank forming a freely movable support therefor.

3. In a soldering tool, the combination with a handle member, of a fuel tank on one end thereof, a freely movable support for the tank a burner supported at the other end of the handle member, connections between the fuel tank and burner, and an adjustably supported soldering-iron connected and movable with the handle and arranged in the path of discharge from the burner, said burner and soldering-iron having inclosing casings arranged one at right angles to the other and communicating with each other.

4. A soldering tool comprising the combination with a handle member, of a roller-bearing fuel tank carried thereby, a burner supported by the handle and communicating with the fuel tank, a soldering-iron supported in the path of the burner and movable with the handle, and means for supporting the soldering-iron end of the device independently of the soldering-iron when the device is not in use.

5. A soldering tool consisting in the combination with a suitable handle member, of a fuel tank carried by the handle, a substantially horizontal burner casing supported on the opposite end of the handle, said burner casing communicating at the front end with a vertical casing in which is adjustably supported a vertically arranged sol-

dering-iron, a burner in the burner casing, and a fuel feed pipe connecting the tank and burner.

6. In a soldering tool, the combination of a handle, a fuel tank carried thereby, a horizontally arranged burner casing supported on the handle, said burner casing communicating with a vertically arranged soldering-iron casing, a soldering-iron vertically supported in the bottom of said soldering-iron casing and out of communication with the walls thereof, and a fuel burner communicating with the fuel tank and discharging against the soldering-iron.

7. In a soldering tool, the combination of a handle, a fuel tank carried thereby, a burner casing supported on the handle, said burner casing communicating with a vertical soldering-iron casing, a soldering-iron vertically supported in said soldering-iron casing and out of communication with the walls thereof, a fuel burner communicating with the fuel tank and discharging against the soldering-iron, said soldering-iron casing being perforated, and a foldable leg on the soldering-iron casing for supporting the front end of the tool independently of the soldering-iron.

8. In a soldering tool, the combination of a handle, a fuel tank carried thereby, a burner casing supported on the handle, said burner casing communicating with a vertical soldering-iron casing, a soldering iron vertically supported in said soldering-iron casing and out of communication with the walls thereof, a fuel burner communicating with the fuel tank and discharging against the soldering-iron, said soldering-iron casing being perforated and having a bottom which is closed except for an opening to pass the soldering-iron, set screws for adjusting the position of the soldering-iron, and a foldable leg on the soldering iron casing for supporting the front end of the tool independently of the soldering iron.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

AGOSTINO TOSCO.

Witnesses:

DAN VUCETICH,
F. CAVALLI.