E. MORRIS & W. H. KIMBALL.

Soldering-Machines.

No. 136,748. Patented March 11, 1873.

FIG. 1

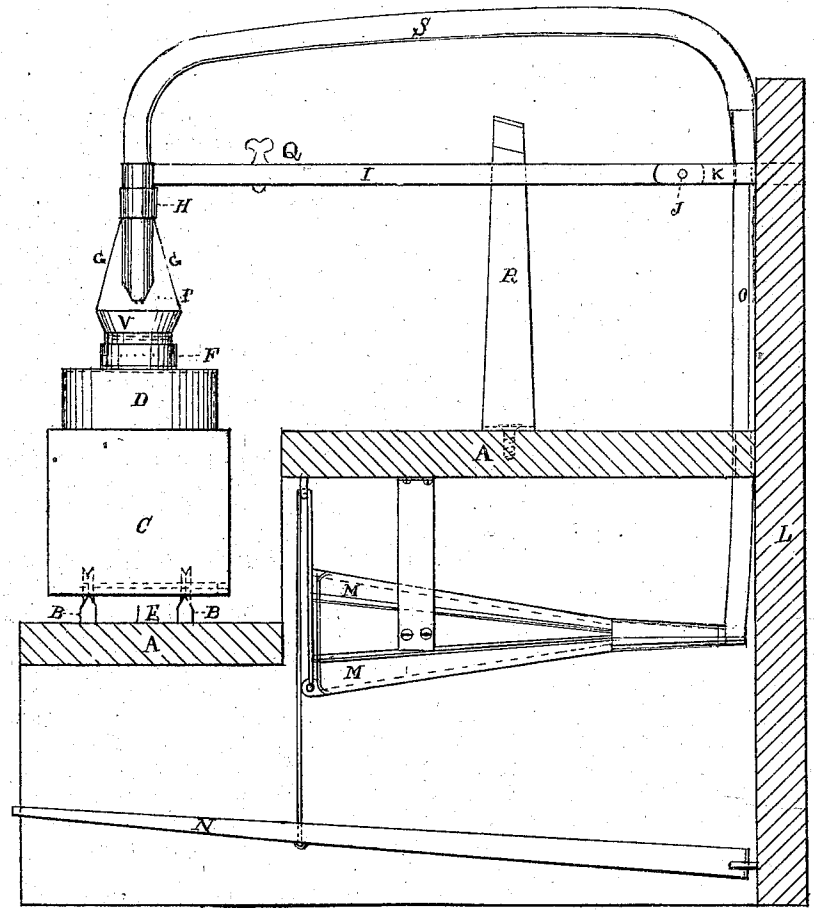


FIG. 2

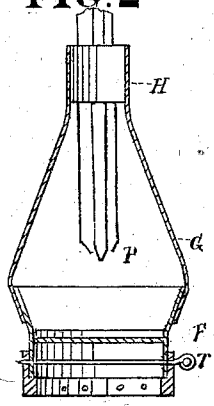
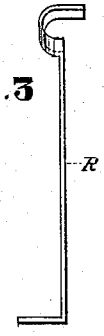


FIG. 3



Witnesses.

H. Watson Miller

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UNITED STATES PATENT OFFICE.

EDMUND MORRIS AND WILLIAM H. KIMBALL, OF BURLINGTON, NEW JERSEY; SAID KIMBALL ASSIGNOR TO SAID MORRIS.

IMPROVEMENT IN SOLDERING-MACHINES.

Specification forming part of Letters Patent No. **136,748**, dated March 11, 1873.

To all whom it may concern:

Be it known that we, EDMUND MORRIS and WM. H. KIMBALL, of Burlington, New Jersey, have invented certain Improvements in the Mode of Capping Tin Cans, of which the following is a specification:

Our invention relates to an improved method of capping tin cans for fruit, oysters, &c., so as to dispense with the ordinary portable soldering-iron and charcoal fire, as well as to expedite and cheapen the process by substituting machinery for the hand labor of experts, at the same time producing neater work than can be done by hand.

In Figure 1, A A represent the top of a table, one part being lower than the other. On the lower part are two rails, B B. On these is placed a car, C, containing a can, D, which is to be closed by soldering a circular cap over the hole in the top of the can. The upper end of the can is shown above the car, which is provided with wheels, shown by dotted lines, so as to run to and fro on the rails. On running it to the left hand the car encounters the stop E, and thus brings the cap on the can directly under the annular soldering-iron V of like diameter with that of the cap to be soldered on. The soldering-iron is tubular. Inside, a short distance above its base, is placed a metal disk, F, shown by a dotted line, and in section in Fig. 2. By means of two straps, G G, terminating in the collar H, the iron is attached to the lower end of the gas-pipe I, which is connected at the joint J to the supply-pipe K in the wall of the house L. The joint at J permits the soldering-iron to raise or lower at pleasure. Under the table is a bellows, M, operated by the treadle N. From the bellows up through the pipe O an air-blast is forced out at the gas-burner P. The pipe I enters the upper part of the burner above the collar H; but inside of the burner, which is tubular, is a pipe, being a metal continuation of the air-pipe S. It extends down to the outlet of the burner, and a trifle beyond it. Being of less diameter than the burner, a chamber is thus formed all round it, into which the gas will flow from the pipe I. This interior arrangement is shown in Fig. 2. Thus the gas and the air-blast both meet and escape at P.

The gas being turned on by the key Q and lighted, and the air-blast applied, a blow-pipe flame is produced at P, and is projected downward on the metal plate or disk F, Fig. 2, before mentioned as being secured in and across the interior of the soldering-iron just above its lower edge.

The upper portion S of the air-pipe O being of flexible material, the soldering-iron and burner may be thrown up or down at pleasure. When the former is not actually doing the work of soldering it is raised up a few inches out of the way and is kept suspended by the spring-catch R secured to the table, and shown in Fig. 3.

When the iron is sufficiently heated, the car is brought to its exact position by the stop E, and the iron is lowered on the solder previously supplied where it may be required on the top of the can by using a resin-coated solder-ring, or otherwise, as may be most convenient; and without any lateral motion of the soldering-iron being required, the whole circle of solder is almost instantly melted, and the can is capped in about one-sixth the time time required when done by hand, as well as with surpassing neatness of finish.

A car containing twelve to twenty cans may be used; and if as many soldering-irons are provided as there are cans it will expedite the work, and cheap unskilled labor may be substituted for that of experts.

Rapid work is of primary value to all canners, especially on fruits and esculents in warm weather.

The lower part of the soldering-iron is made movable, so that, when worn out or needing repair on its face or edge, may be taken off, repaired, and replaced, or a new part substituted. This is provided for by means of the pin T, Fig. 2, which holds the movable part in position. The lower part is also perforated by a number of small holes near the edge to allow the escape of steam from the vent-hole in the center of the cap. These holes are shown in Fig. 2 just below F.

I claim as my invention—

1. The annular soldering-iron V, in combination with a blow-pipe, substantially in the manner and for the purpose above described.

2. The combination of the collar H with the soldering-iron V and pipe S, when detachable from the pipe and soldering-iron, substantially as and for the purpose set forth.

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Witnesses:
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