T. CONNELLY.
Heating Apparatus.

No. 208,376. **Patented Sept. 24, 1878.**

Fig. 1.

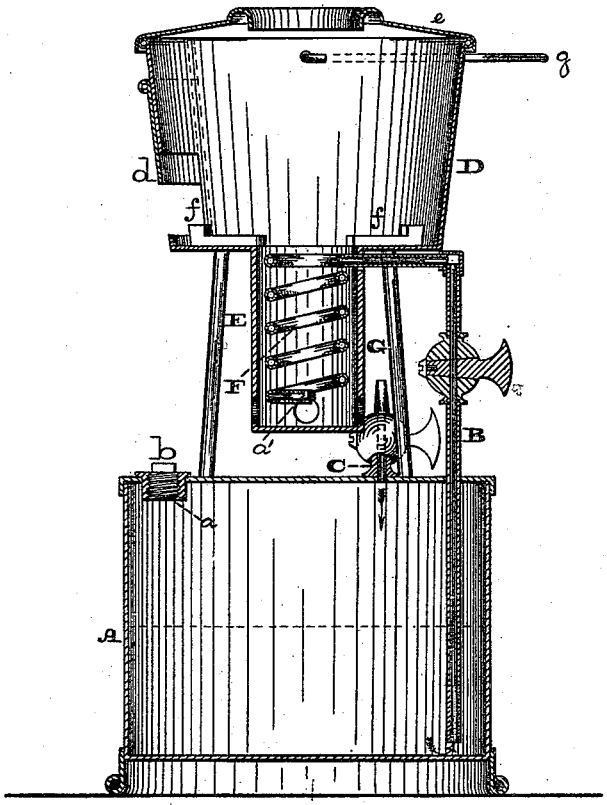
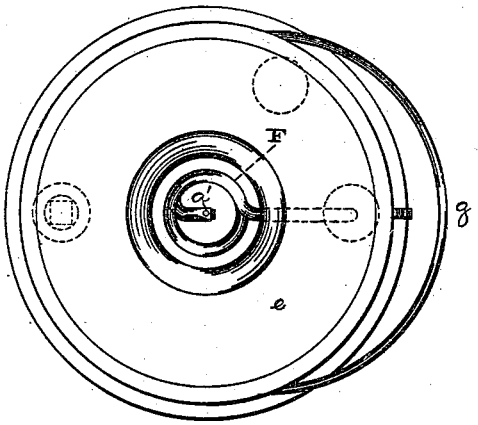


Fig. 2.



Witnesses:

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IMPROVEMENT IN HEATING APPARATUS.

Specification forming part of Letters Patent No. **208,376**, dated September 24, 1878; application filed August 1, 1878.

To all whom it may concern:

Be it known that I, THOMAS CONNELLY, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Heating Apparatus, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a central vertical section of the apparatus embodying my invention. Fig. 2 is a top view thereof.

Similar letters of reference indicate corresponding parts in the two figures.

My invention consists of a portable heater or fire-pot, serviceable for plumbers and others, for heating solder, soldering-irons, and other articles, and for other purposes.

I employ a fire-pot, an oil or fluid reservoir, and an interposed burner, which latter consists of a jacket depending from the fire-pot and inclosing a coil whose inlet from the reservoir is at top and outlet or jet at the bottom under the central space of the coil, the several parts being constructed and operating as will be hereinafter more fully set forth.

Referring to the drawings, A represents a reservoir for inflammable oil or fluid, which is admitted through the opening *a*, having a closing cap or plug, *b*. B represents a pipe which leads into the reservoir for the exit of the oil or fluid, and C represents a nozzle which communicates with the reservoir for the admission of air thereinto under pressure.

Supported on and connected to the reservoir A is an elevated fire-pot, D, having an opening in its bottom, and from which depends a burner, E, consisting of a spiral or helical coil, F, and a surrounding jacket, G, which has a closed bottom and air-inlets in its side near the bottom. The upper end or inlet of the coil F is connected to and communicates with the pipe B, and the lower end thereof has a jet or outlet, *a'*, which is brought under the interior space of the coil, so that the produced flame may be directed upward through said space for gradually heating and vaporizing the oil or fluid.

The fire-pot D will be provided with a door, *d*, in its side for access to the interior thereof, a lid, *e*, for retaining the heat when required, ribs *f* on its bottom for supporting and elevating the article to be heated, and a bail, *g*, for conveniently carrying the apparatus.

The operation is as follows: The oil-reservoir is charged with compressed air, which may be accomplished by simply blowing air from the lungs through the nozzle C. The cock of the pipe B is turned, and the oil ascends and passes through the coil to the jet or outlet *a'*, where it escapes and is ignited. The burning oil soon heats the coil and vaporizes the oil, the vapor whereof uniting with the oxygen of the atmosphere admitted through the bottom of the jacket G produces a flame of great heat, which is directed to the fire-pot, the same being admirably adapted for the purpose required.

The outer diameter of the coil may be less than the inner diameter of the jacket, so as to provide an exterior air-space for the coil and assist in burning the oil prior to the vaporization thereof.

I am aware that it is not new to construct burners with surrounding jackets and of coils to which oil or fluid is supplied under pressure, wherefore I disclaim such features.

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

1. The reservoir A and fire-pot D, in combination with the burner E, consisting of the jacket G, depending from said pot and inclosing a coil, F, whose inlet is at top and communicates with a pipe leading to the reservoir, and whose outlet or jet is at bottom under the central space of the coil, all substantially as described.

2. The fire-pot D, supported on and connected to the reservoir A and supporting the depending burner E, which communicates with the reservoir in the manner described, all combined and forming together an improved portable heating apparatus.

THOS. CONNELLY.

Witnesses:
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