

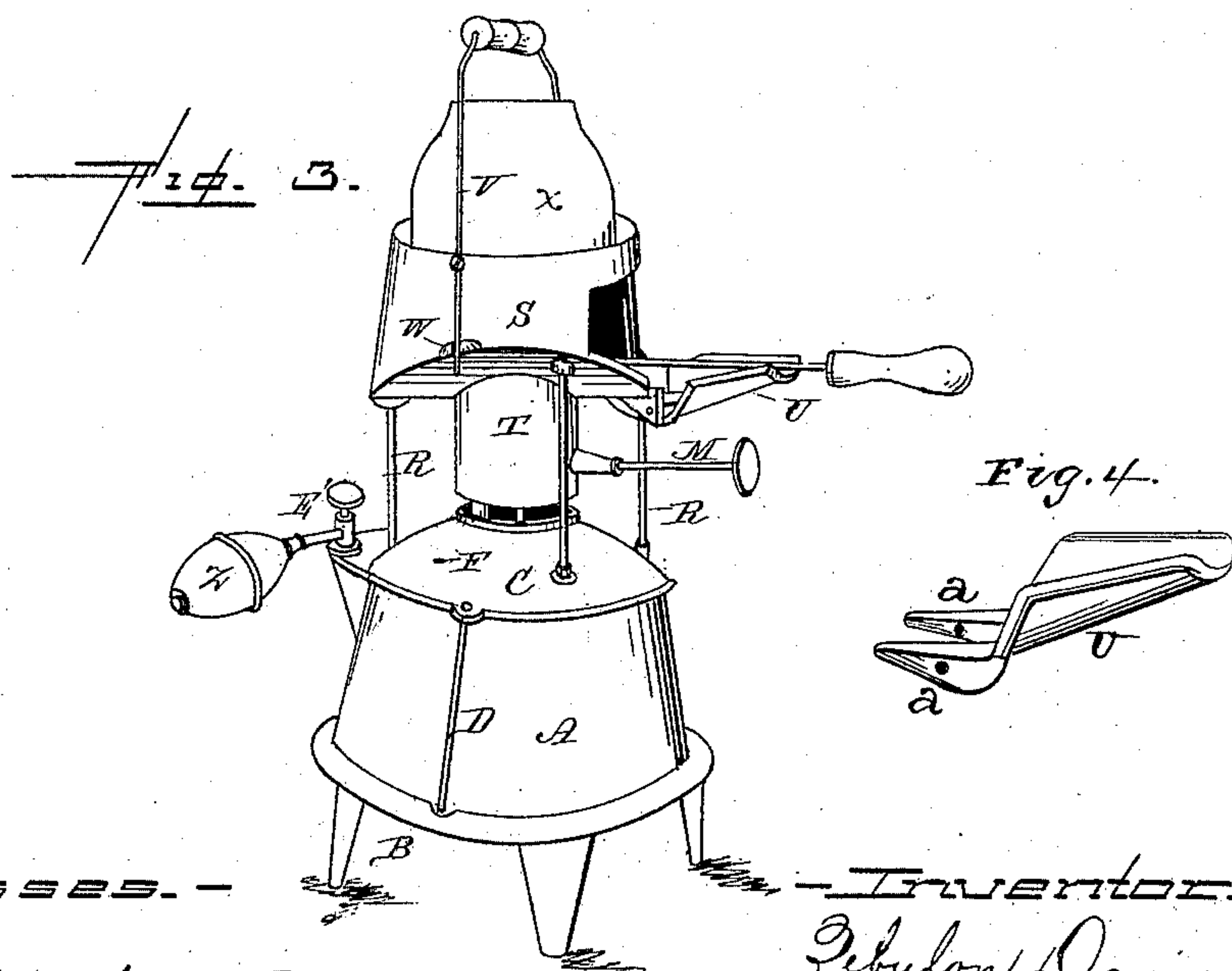
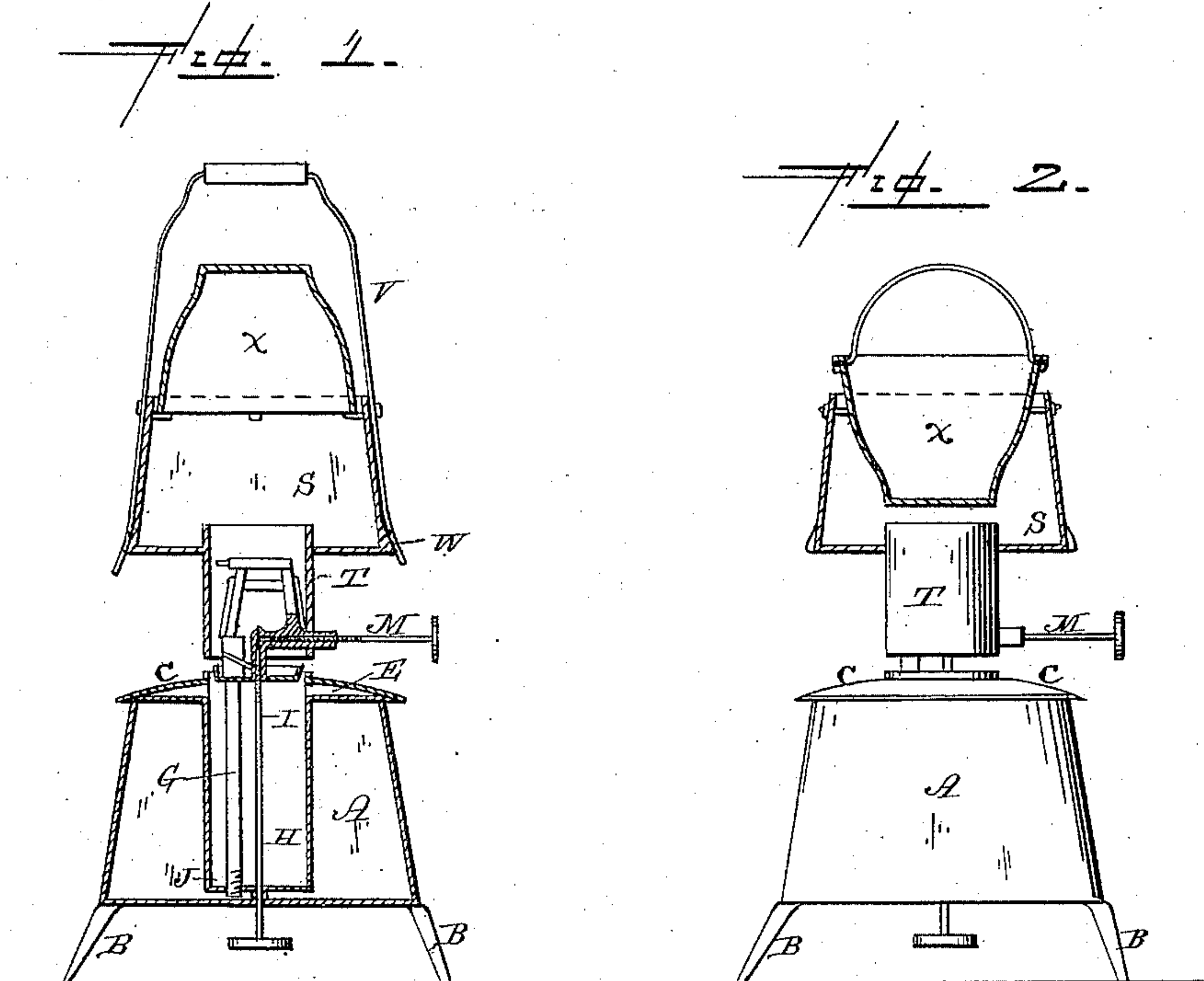
(No Model.)

Z. DAVIS.

TINNER'S AND PLUMBER'S FURNACE.

No. 312,825.

Patented Feb. 24, 1885.



—Witnesses.—

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UNITED STATES PATENT OFFICE.

ZEBULON DAVIS, OF CANTON, OHIO, ASSIGNOR TO THE STANDARD LIGHTING COMPANY, OF SAME PLACE.

TINNER'S AND PLUMBER'S FURNACE.

SPECIFICATION forming part of Letters Patent No. 312,825, dated February 24, 1885.

Application filed June 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, ZEBULON DAVIS, of Canton, in the county of Stark and State of Ohio, have invented certain new and useful
5 Improvements in Tinner's and Plumbers' Furnaces; 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 pertains to make and use
10 it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in tinner's and plumbers' furnaces; and it consists in, first, the combination of the reservoir, the vapor-burner attached thereto, the furnace frame or shell, which is mounted on the reservoir, and a detachable pot, which can be inverted upon the shell, so as to form a cover
15 or roof for the furnace for heating soldering-irons; second, the combination of the furnace shell or frame, a detachable cover, which is to be placed thereon, and a hinged door, which, when let down, forms a support for the soldering-irons while being heated; third, the combination of the furnace frame or shell with a bail, which has its lower end extended down below the point of suspension, so as to engage with suitable projections on the sides of the
20 frame and at its lower edge, for the purpose of holding the bail in a vertical position.

The object of my invention is to provide a furnace in which a vapor-burner is used for producing heat, and which is adapted to be
35 used for melting solder or heating soldering-irons and other purposes.

Figures 1 and 2 are vertical sections of a furnace embodying my invention, the pot being shown in different positions. Fig. 3 is a
40 perspective view. Fig. 4 is a perspective of the door alone.

A represents a reservoir, which will be of any suitable size, shape, or construction which may be preferred, and which is raised a suitable distance above the floor by means of the
45 frame B. Upon the top of this reservoir is placed the convex cover or shield C, and the reservoir is then clamped in between the base B and the cover C by means of the bolts D.

Between the top of the reservoir and the top 50 of the convex cover is left a suitable air-space, E, and through which cover are made suitable air-holes, F, for the escape of the heated air. The cool air, which is constantly passing up through the center of the reservoir, is caught 55 between the top of the reservoir and the cover C, and after it becomes sufficiently heated it makes its escape through the openings in the top of the cover. By thus keeping a volume of air always between the cover, which be- 60 comes more or less heated by the burner, the reservoir is prevented from becoming heated to such an extent as to become dangerous. The gasoline or other fluid that is to be used is poured into the reservoir, and then the bulb 65 Z is compressed a few times after the stop-cock E' has been opened, and a sufficient quantity of air is compressed into the top of the reservoir, so as to force the fluid through the stand-pipe G to the burner. After a suffi- 70 cient quantity of air has been compressed into the reservoir the stop-cock E' is closed, so as to prevent any leakage of the air backward through the bulb. A suitable opening, H, is made through the center of the reservoir, 75 which opening is contracted at its bottom, so as to leave only sufficient space to allow the shank of the pointed needle I to pass freely down through it. The stand-pipe G is se- 80 cured to that portion of the reservoir which forms the extension J at the bottom of the large opening H.

I do not limit myself to any particular method or manner of securing this stand-pipe to the reservoir, for it may be either in the 85 manner here shown or any other that may be preferred. The stand-pipe is passed down through the opening in the center of the reservoir, for the purpose of making contact between the two just as far as possible from the 90 burner. Where the stand-pipe is connected directly with the top of the burner, the heat from the burner would pass down through the stand-pipe and heat the reservoir to such an extent as to become dangerous not only to the 95 reservoir itself, but to the persons around.

No claim is here made to the burner and the manner of attaching the stand-pipe to the

reservoir, for this will be made the subject of another application.

Rising from the top of the cover C are a suitable number of standards, R, upon the top of which is rigidly secured the shell or frame S of the furnace. This shell is preferably made circular in shape, and has the depending pipe or tube T connected with its bottom, and which pipe surrounds the vapor-burner and conducts the heat upward. Through one side of the pipe the blunt plug M extends, for the purpose of controlling the size of the flame. This shell or frame S of the furnace is provided with a hinged door, U, which, when opened back, forms a rest or support for the soldering-irons while they are being heated. This door is provided with suitable ears or extensions, a, through which the pivots pass, and which ears, when the door is lowered, catch against the under side of the frame S and support the door in the position shown in Fig. 3. When the furnace is not being used for heating soldering-irons, this door U is kept closed.

To opposite sides of the shell S is pivoted or loosely connected the handle or bail V. The lower end of this bail or handle is made somewhat smaller, and is made to extend down below the point of suspension, so as to engage with the notches or catches W, formed on the lower edge of the shell. The lower ends of the bail are made of lighter metal, so as to be more or less elastic, and when the bail V is raised into an upright position the lower ends of this bail catch in the catches W, and the bail is then supported in an upright position, so as to be ready for use for carrying the furnace around. When the pot X is being used and the bail would be in the way, it is only necessary to disconnect the elastic portions of the bail from the catches W, and then the bail can be turned down out of the way. In the top of this shell or frame S of the furnace a pot, X, is used, and which pot serves both as a cover or top for the furnace and as a pot for melting solder, heating water, and other similar purposes.

When the furnace is used for heating soldering-irons, the pot is inverted, as shown, and then it forms the top of the furnace. When it is desired to use the pot for melting solder or other purposes, the pot is reversed in position. In case the pot has something in it and it is not convenient to use it as a cover for the furnace, a flat plate or similar device may be placed in or upon the top of the shell S, and this plate will then form the top of the furnace.

By means of the construction here shown and described, I produce a furnace which is adapted both for tinnern's and plumbers' use, and thus save the necessity of two separate and distinct furnaces.

Having thus described my invention, I claim—

1. The combination of the reservoir, a vapor-burner connected thereto, the furnace frame or shell, which is mounted above the reservoir, and a detachable pot, which is adapted to be used as such, or be inverted and fit upon the shell, so as to form a cover or roof to the furnace, substantially as shown.

2. The combination of the furnace frame or shell, a vapor-burner, a hinged door, U, and a reversible pot, X, which is adapted to be inverted and fit upon the shell, so as to form a cover while the door is open, to form a support for the tools that are being heated, substantially as described.

3. The combination of the furnace shell or frame with the bail, which has its lower ends extended down below the point of suspension, so as to engage with suitable projections on the side of the frame, for the purpose of holding the bail in a vertical position, substantially as specified.

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

ZEBULON DAVIS.

Witnesses:

JAMES PARMELEE,
MYRON S. HERRICK.