

W. F. ROSSMAN.
Soldering Fire Pot.

No. 45,179.

Patented Nov. 22, 1864.

Fig. 3,

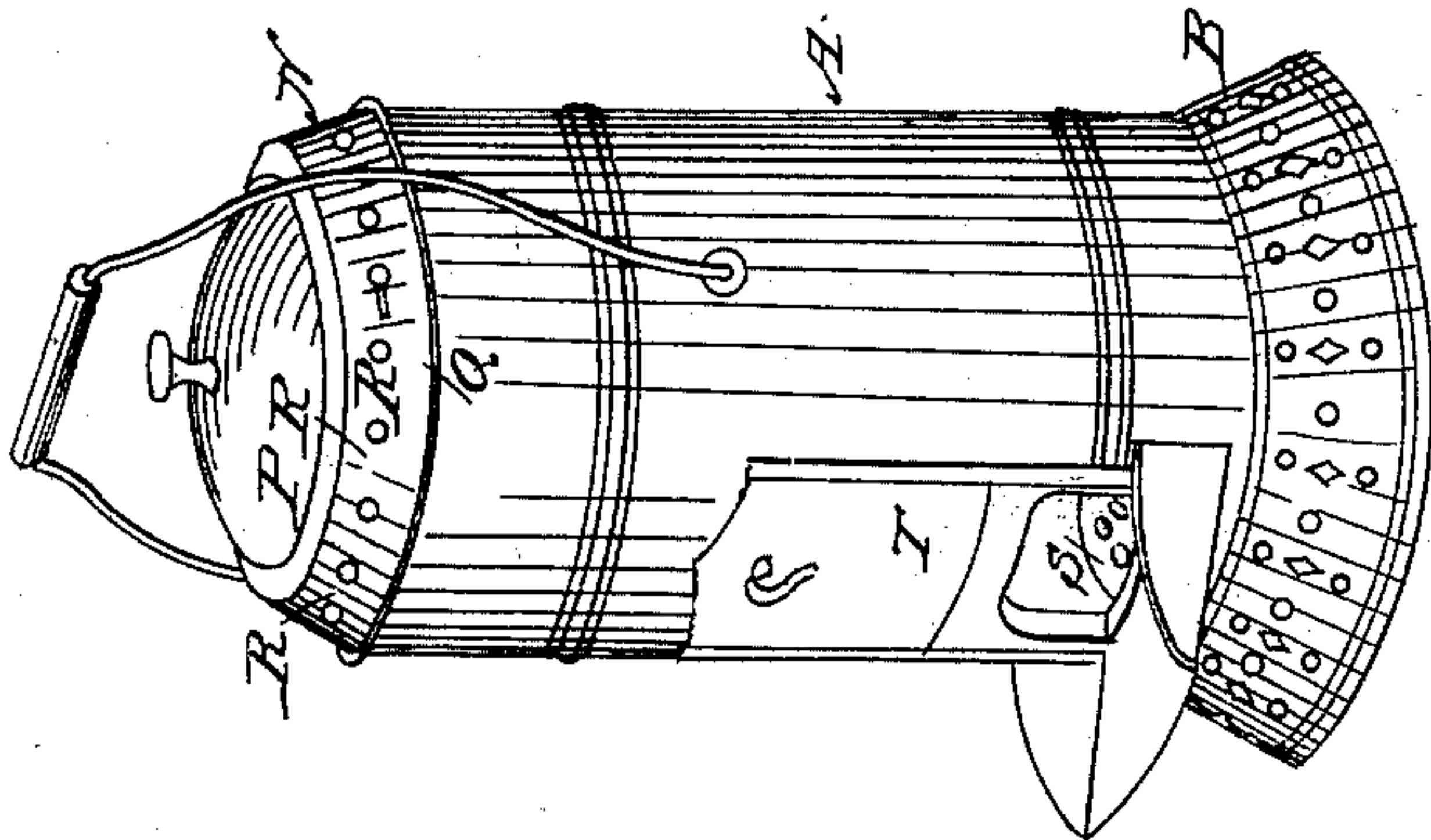


Fig. 4,

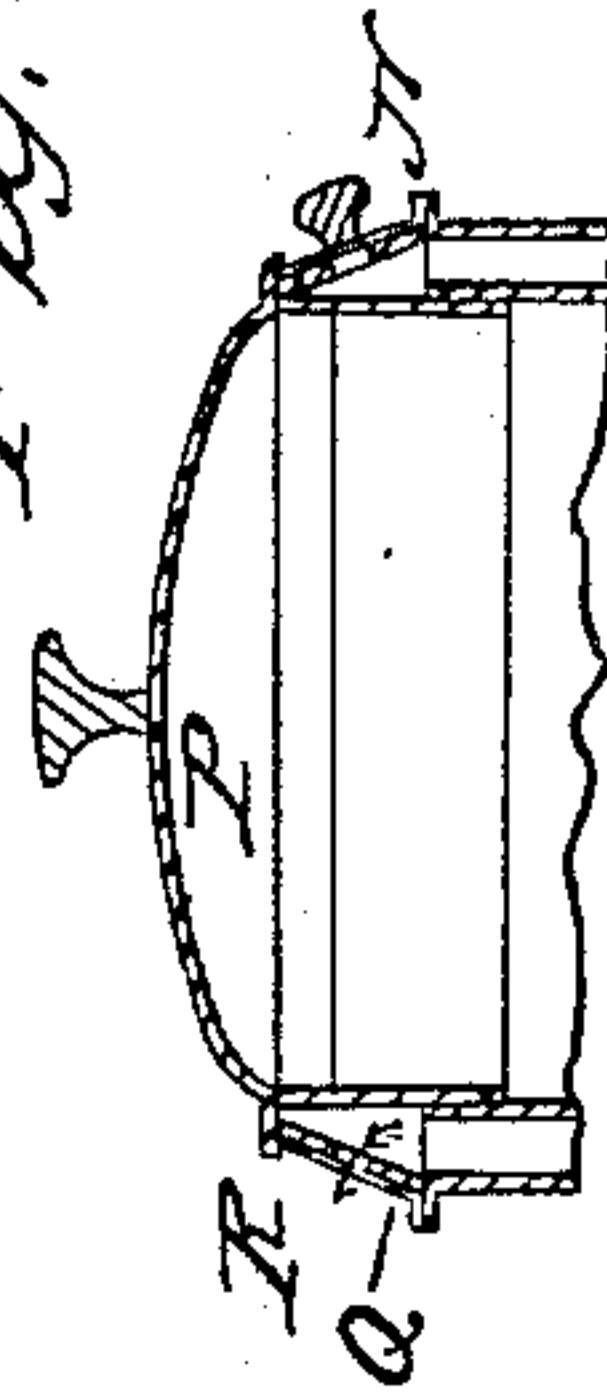


Fig. 2,

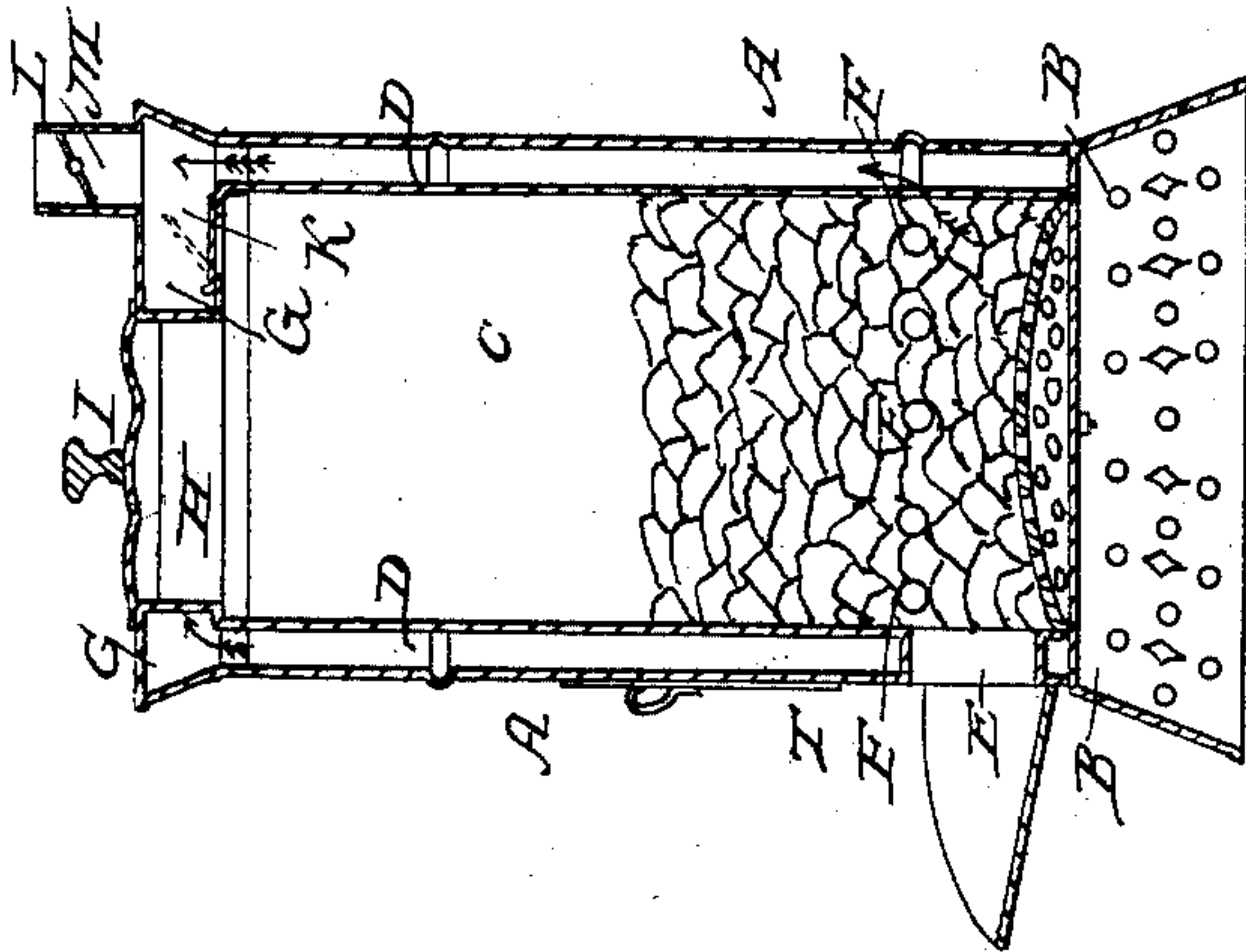
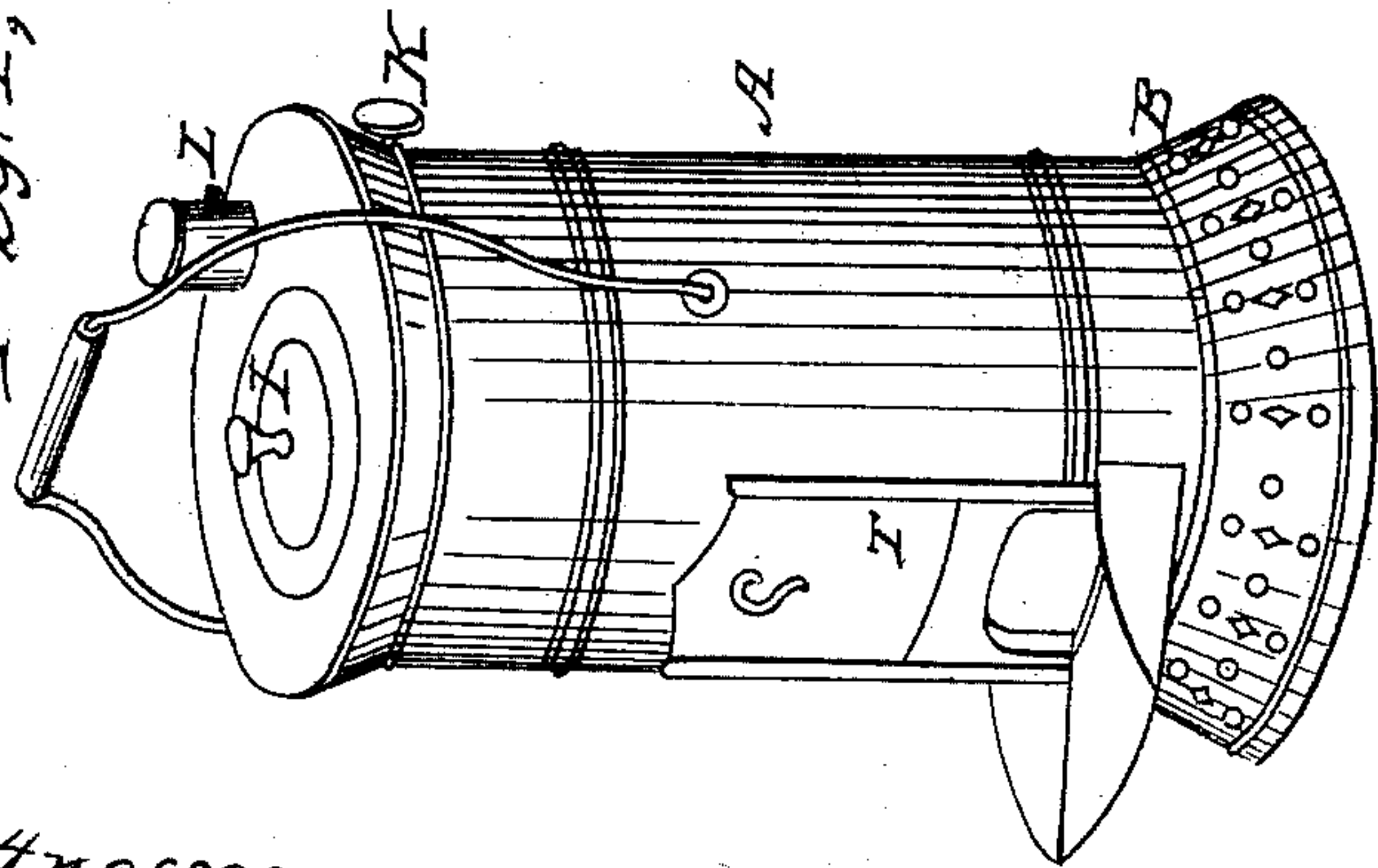


Fig. 1,



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UNITED STATES PATENT OFFICE.

WILLIAM F. ROSSMAN, OF HUDSON, NEW YORK.

IMPROVEMENT IN SOLDERING FIRE-POT.

Specification forming part of Letters Patent No. 45,179, dated November 22, 1864.

To all whom it may concern:

Be it known that I, WILLIAM F. ROSSMAN, of the city of Hudson, in the county of Columbia and State of New York, have invented a new and useful Improvement in the Construction of Soldering Fire-Pots; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the fire-pot as arranged for inside or shop use. Fig. 2 is a vertical section of the same. Fig. 3 is a perspective view of the arrangement for outdoor use. Fig. 4 is a section of the top or cover for same detached.

Letter A is the outside cylinder. B is the base to which A is secured. C is the coal-chamber. D is the draft-space between the outer and inner cylinder. E is the mouth of fire-pot; F F F, &c., holes or apertures leading from fire or coal chamber to draft-space D; G, space between tops of inner and outer cylinder; H, opening through top to supply fuel; I, cover to this opening; K, regulating-damper in cast-iron top of inner cylinder; L, smoke-pipe or chimney; M, damper in same; N, cap or cover for outdoor use; (see also Fig. 4;) P, opening to same for supplying fuel; Q, sliding damper around same; R R R, &c., draft-holes through same and top; S, convex, perforated, removable, or false bottom; T, sliding door to close mouth E.

The arrows indicate the course of the draft.

The nature of this invention consists in providing the ordinary soldering fire-pot used by tinmen and others for soft-soldering with draft-holes or apertures a suitable distance above the bottom, which shall open into a space or flues formed by the addition of a second cylinder or box inclosing the former, communicating with the smoke-pipe or chimney, so as to make it base-burning and self-feeding.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I usually construct this fire-pot in the ordinary or cylindrical form, (see Figs. 1, 2, and 3,) using two cylinders, the one within the other. The inside cylinder, C, is made of sheet-iron, with a cap piece or top of cast-iron,

and a cast-iron mouth piece surrounding the mouth E. In this cast top piece is a damper, K, which is opened and closed at pleasure. When open, the draft is direct from the mouth E through chamber C into pipe or chimney L. When closed, it passes from mouth E through the holes F F F, &c., into space D, between the outer and inner cylinders, and thence into the chimney L. The draft-holes or perforations, F F F, &c., through the inner cylinder, are on a line horizontal or level with the top of the mouth E. The fire is thus kept bright and burning only below these apertures and in the base of the mass of fuel, just where it is required for heating the coppers, and never clogs, as in a straight or upward draft, where the air has to pass up through this mass. As the coal is consumed below, that above of course drops down to supply the fire, thus being self-feeding. The advantage of employing a cast-iron cap or top to the inner cylinder, with damper K attached, is that we can thus make the damper fit closer and better, and the top is not so liable to warp. The advantage of the cast-iron mouth-piece or rim surrounding mouth E is that it prevents the sheet-iron from warping and burning out, (which it soon does where this is not used,) and preserves the front smooth and true, so that the slide door or damper T can be used. This is very essential for safety as well as economy. As this fire-pot is made in sections and held together by rods, it can be easily taken apart and the inside cylinder replaced whenever required.

I do not intend to confine myself to the cylindrical form alone in the construction of my soldering fire-pot. It may be made square as well, or the inner case may be cylindrical while the outer one is square, leaving vertical flues only at each of the four corners. The outer cylinder, A, I make of galvanized iron.

For outdoor use I substitute the top or cover represented at Fig. 4. It has an opening, P, through which the fuel is deposited into chamber C. The rim or flange which lines this opening, like that of cover I, extends so far down as to embrace the opening leading to chamber C, thus preserving the draft-space between the tops of the two cylinders perfectly tight, even when the covers are removed for supplying fuel to chamber C. The space D between the outer and inner cylinders extends

up into this top (see Fig. 4) and terminates just above the draft-holes R R R, &c. The revolving damper Q, surrounding this top, is perforated with similar holes, which, when the damper is open, coincide or correspond with those in the wall or outer casing of the top, and communicate with space D. By sliding or revolving the damper Q, these holes are opened or closed and the draft regulated as required. In using this top, no wind or weather can affect the fire.

I also employ in the bottom of the fire-pot a convex movable or false bottom, S, perforated with holes, serving the purpose of a grate, allowing the ashes to drop through beneath it, and for supporting the fire above the real or fixed bottom, thus preserving it. When this top is used no pipe is required, the holes R R R, &c., answering the same purpose. In kindling the fire, the mouth E is opened and the damper K, so as to obtain a direct draft. The fire being kindled, the damper K is closed and the draft made to pass through the apertures or holes F F F, &c., into space D, and thence to chimney L or holes R R R, &c. The

fire may be regulated as required by sliding door T in front, and dampers M or Q.

Having used the ordinary and best constructed single-cylinder soldering fire-pot for many years, and this, my improved, for more than a year past, I am satisfied that for economy, efficiency, and convenience the latter possesses advantages over all others ever before used.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

A double-cylinder soldering fire-pot, or its equivalent, having a draft-space, D, or flues between the outer and inner cylinder, in combination with the draft holes or perforations F F F, &c., through the inner one, level or nearly level with the top of the mouth E, connecting the fire-chamber C with the space D, substantially in the manner and for the purpose herein set forth.

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