(No Model.)

JOSEPH SCHILL, JOHN SCHILL & PETER SCHILL.

FIRE POT.

No. 466,943. Patented Jan. 12, 1892.

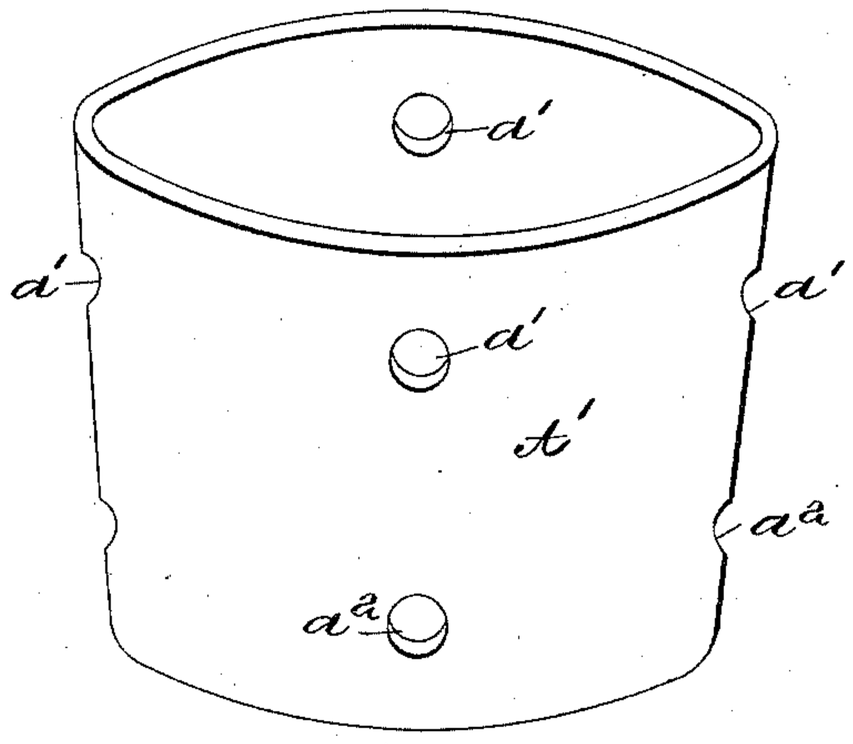

Fig. 1.

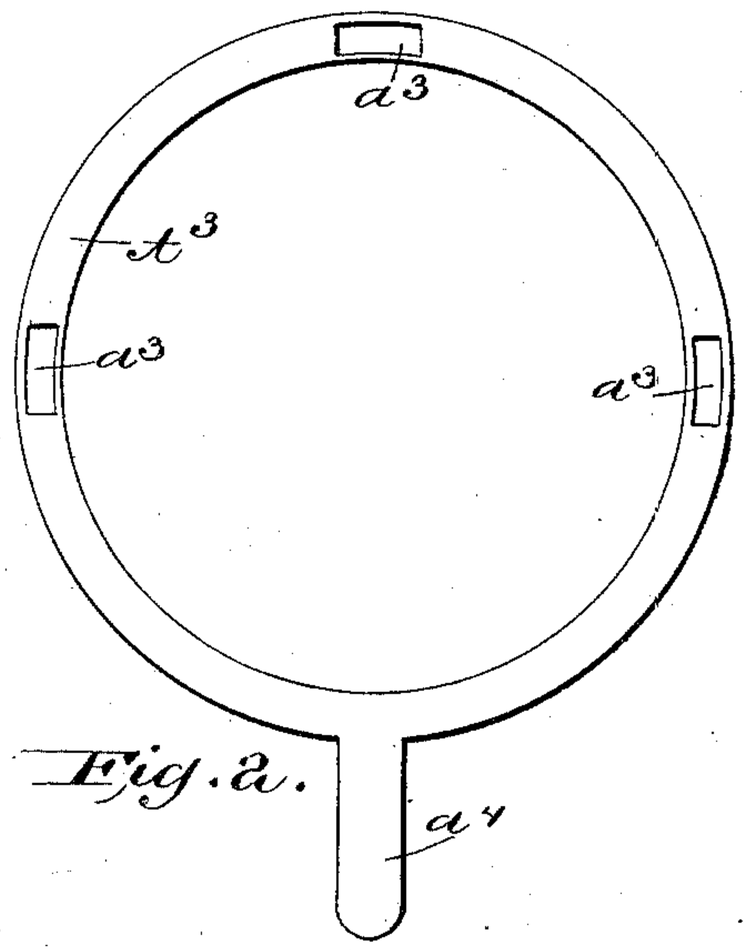

Fig. 2.

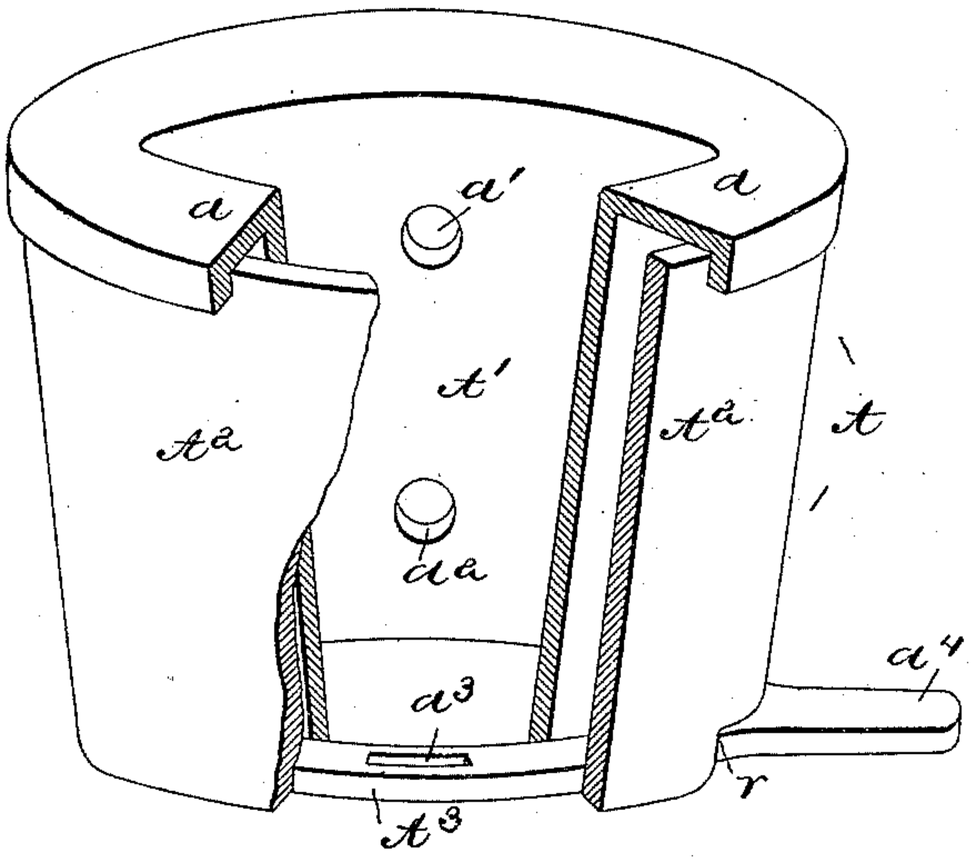

Fig. 3.

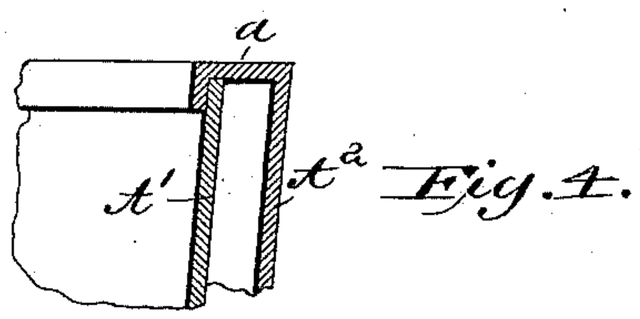

Fig. 4.

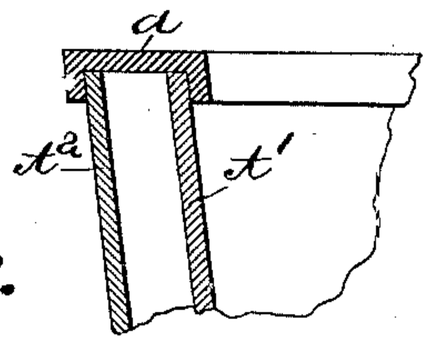

Fig. 5.

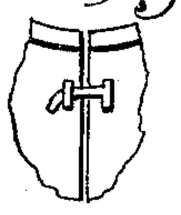

Fig. 7.

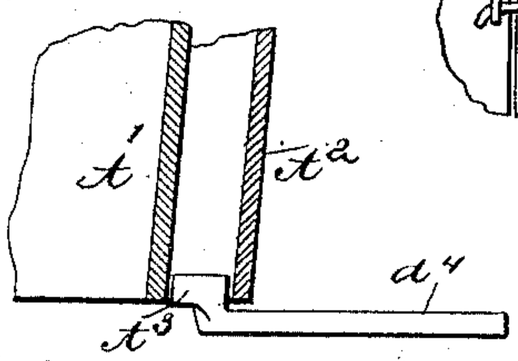

Fig. 6.

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UNITED STATES PATENT OFFICE.

JOSEPH SCHILL, JOHN SCHILL, AND PETER SCHILL, OF CRESTLINE, OHIO.

FIRE-POT.

SPECIFICATION forming part of Letters Patent No. 466,943, dated January 12, 1892.

Application filed March 9, 1891. Serial No. 384,256. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH SCHILL, JOHN SCHILL, and PETER SCHILL, citizens of the United States, residing in the city of Crestline, in the county of Crawford, in the State of Ohio, have invented a new and useful Fire-Pot, of which the following is a description.

The invention relates to a fire-pot or fuel-chamber for stoves or for furnaces, of the kinds which are ordinarily employed for heating dwellings or other structures; and the peculiar construction which has been adopted has been devised with a view to adapt the receptacle to the advantageous use of slack or other fine mineral fuel.

In the accompanying drawings, which constitute a part of this specification, Figure 1 represents a perspective elevation of the inner cylindrical section of the fire-pot or fuel-receptacle detached. Fig. 2 represents a plan view of the movable base-ring, which at the bottom closes the space between the inner and the outer concentric section. Fig. 3 is a perspective view, partly in vertical section, showing the inner and outer shells or cylinders of the fire-pot assembled for use; and Figs. 4, 5, 6, and 7 represent modifications which will be described.

As will be seen, the fire-pot A consists, essentially, of the inner one-part section or cylinder A′, which is provided with upper and lower series of perforations a' a', &c., and a^2 a^2, &c., respectively, and with a top outwardly and downwardly extending covering-flange a, the outer one-part imperforate shell or cylinder A^2, which may have a recess r in its lower extremity, and the closing-ring A^3, which has vertical perforations a^3, and a suitable operating-handle a^4.

As represented in Fig. 3, the space between the two cylinders or rings is covered by a flange which is formed with and projects outwardly from the upper extremity of the inner cylindrical section; but, if desired, this flange may be formed upon and extend inwardly from the upper extremity of the outer member instead, as in Fig. 4, and in some cases a detachable double-flanged ring-cap may be employed, as in Fig. 5.

In practice a suitable grate adapted to the dimensions of the fire-pot will be provided within or below the lower extremity of the same, the grate and the fire-pot itself being supported above the ash-pit in any ordinary or preferred manner.

In some cases the recess r in the exterior section may be omitted and the handle or operating-arm of the ring A^3 may, as in Fig. 6, extend from the bottom surface of the closing-ring, instead of from its outer periphery.

Persons skilled in the art will understand that the fire-pot sections will ordinarily be of metal, either cast or wrought. In some cases, as when the fuel-chamber is to be of unusually large dimensions, one or both of the sections may be formed in vertical semicircular halves, subsequently united by lugs or ears and secured by bolts. This construction, while providing all the advantages of a one-part cylinder, presents an effectual safeguard against fracture of the sections through unequal expansion or contraction when in use.

In operation air from the ash-pit will be supplied through the vertical openings in the closing-ring, and when the recess r is provided through that opening also. Being thus admitted to the space between the two sections, it will be discharged through the openings or perforations a' and a^2 into the mass of fuel within the body of the fire-pot. The openings a^3 in the closing-ring being in coincidence with the perforations a' and a^2 in the inner wall of the fire-pot, ashes which may find their way from the fuel-space through the perforations or air-openings into the space between the two shells will be precipitated through the vertical perforations in the ring into the ash-pit below, and this without appreciably affecting the supply of air to the interior of the fire-pot. It will be observed that the perforations in the closing-ring are slightly larger than those in the fire-pot, and that as a consequence no bits of coal, slate, or clinker which may be discharged from the fuel-space can find permanent lodgment between the two shells. Slight to-and-fro movement of the handle a^4 of the closing-ring will suffice at any time to free the surface of the same from all accumulations of ashes or other débris.

A fire-pot of the described construction has been operated with marked advantage in con-

suming slack, the currents of air having the effect to produce a coking action of this inferior fuel, which results in the thorough combustion and the complete utilization of all its valuable properties.

The invention having been thus described, what is claimed is—

1. A fire-pot or fuel-chamber for domestic purposes, which consists, essentially, of an inner metallic one-part perforated shell or cylinder and an outer metallic one-part imperforate plain shell or cylinder, the two shells embracing between them an air-chamber which is closed at its upper extremity, substantially as set forth.

2. A fire-pot or fuel-chamber which embraces an inner cylindrical or slightly-tapered perforated one-part section and an outer imperforate one-part section, the two sections inclosing an intermediate annular air-chamber, which is closed at its top by an imperforate covering cap or flange and which is closed at bottom by a ring which is provided with perforations.

3. A fire-pot or fuel-chamber which combines an inner perforated one-part cylindrical section, which has at its upper extremity an outwardly-extending flange, an outer imperforate section, which, together with the intervening air-space, is covered by the outwardly-extending flange of the inner perforated section, and a perforated closing-ring between such sections at the lower extremity of the intervening air-chamber.

4. A fire-pot or fuel-chamber which combines an inner perforated one-part cylindrical section, which has at its upper extremity an outwardly-extending flange, an outer imperforate one-part cylindrical section, which, together with the intervening air-space, is covered by the outwardly-extending flange of the inner perforated section, and a perforated reciprocating closing-ring between such inner and outer sections at the lower extremity of the intervening air-space.

5. The described fire-pot, consisting of the inner one-part flanged metallic cylindrical section A′, having a series of perforations near its upper extremity and a series of perforations near its lower extremity, the outer one-part plain cylindrical section A^2 inclosing the inner section at a short distance therefrom, and the ring A^3, provided with perforations a^3 and operating-arm a^4 and located in the lower extremity of the annular space between the two cylindrical sections.

6. The described fire-pot, consisting of the inner one-part flanged metallic cylindrical section A′, having a horizontally-arranged series of perforations near its upper and near its lower extremity, the outer one-part plain cylindrical section A^2 inclosing the inner section at a short distance therefrom, and the ring A^3 closing the lower extremity of the space between the two cylindrical sections and provided with perforations which are of greater dimensions than the perforations in the body of the inner cylindrical section, substantially as and for the purposes set forth.

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