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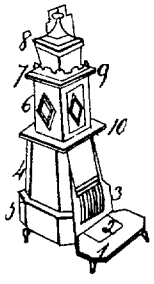
BEST AVAILABLE COPY

I. N. Olney.

Heating Stove.

7,893 X

Patented Dec. 26. 1833.



Inventor;

Isa. N. Olney

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

7893X

Dec 26, 1833

Ans 14

271

James A. Bray, Providence R. I.

Sitting Patent

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words following, viz: I James A. Bray, have invented certain Improvement called "Bray's Patent Gas Burner"

Be it known, that I James A. Bray of Providence in the County of Providence and State of Rhode Island &c. have made a New and useful Improvement in the Lamp &c. called Bray's Patent Gas Burner, which is described as follows.

The first Modification of my Improvement is where a burning fluid is used the annular or Circular Plate and the annular Tube of the Upper part of the Stem rest; upon which is placed a Plate of Metal, the upper Chamber through which the fluid is distributed to the Wick Tube and Flame; the ornamental Tube upon the top is Cylindrical and the Centre Tube which passes through the Face or Circular Plate is cast with an opening in its Centre thro which the Wick passes from the Plate into the Upper part of the Stem; and is cast with the Flame Spreader having its Parallel sides or grooves cast with inclined Edges to direct the Wick Tube, and four Dovetailed grooves to admit the four legs in which it rests and the round Tenon or Screw to connect it with the fluid Chamber.

The Port-a-Feu is Cylindrical in shape and is cast in part with the Circular Plate and Tube, the Key: it is in the same line with the Lower Cylinder of the Upper part of the Stem; and is of one Metal or Casting. Hanging the Cast in the Centre Cylinder is Stem through which the Steam passes to the Flame of the Circular Plate. A Hole being also opening in it to receive the Screw made on the upper part of the said Cylinder is fastened on the top of the said Cylinder by Screw passing into the Plate and Cast on the top of the Port-a-feu Cylinder.

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The grate is movable and can be taken out to clean the flue. The upper Chamber into which the fuel is put and by which the Caloric is distributed equally is formed by four plates of cast iron properly joined and ornamented with Grecian devices and united together to the bottom plate by screws leaving a top plate having an opening in it similar to that in the bottom plate in one of these plates Communicating with one end of a smoke pipe. The two are to prevent Coal getting into the pipe.

The ash pan or box is made of sheet iron of a rectangular figure open at top having flanges which screw to the under side of the bottom plate. The Blower is a plate of cast iron in shape & size of opening with the opening in the fuel Chamber for the grate and from its projection a pivot cast on it in grooves or Cavities left in the lower plate. When it is turned up it acts as a screen to ignite the fuel by closing the opening in front of the grate and when turned down it forms the hearth, or the opening in the bottom plate above the ash box and which it does also make tight.

The ornamental Vessel on the top to contain water is made of cast iron of a square figure with a recessed square plate to stand on forming the Cover of the stove and can be moved at pleasure to admit fuel.

There are four Curtain pot Irons made of Cast iron which slide in the three grooves on the under side of the bottom plate.

The Cause or Fortic Letters is in principle the same as the three Grecian Letters with this difference that instead of the iron Chamber for distributing the heat as there described there is a Shell of a square figure made of cast iron and placed on & bound up with the top plate of the fuel Chamber for the fuel, and is made of cast iron with open pillar pot work forming a Chamber for distributing the Caloric & heat ornamented with gothic ornament

There are four pieces Cast iron Buttresses which unite the four plates of the pot work at the four angles by means of iron rod passing through them: on the top of these are four pinnacles pointed at the two ends and made hollow to receive the top of the rods. The heads of the rods forming the caps or tops of the pinnacles. On the top is placed a square plate for closing in the top of the stove like the former ornamented with open

—proper getting down. The flue is attached to the Grate and is of such
a length as to hang clear of the bottom of the Chamber.

Operation. The hot Gases at top and bottom of the Chamber heating
it being caused a small quantity of Kindling such as Shavings wood &c
&c is put on the Grate & the Door closed through which the Flue
is put into the Anthracite Coal. The Kindlings being lighted the Flue is then
withdrawn & the Door of the Grate which prevents the draught of Air
& causes the fire which ignites the Anthracite Coal. When the Coal
is sufficiently ignited the Flue or damper is turned down and the
fire managed in the usual way.

The advantages arising from the before described Manner of Constructing Stoves for burning Anthracite Coal consist chiefly in having the Chamber of Construction lined with fire Clay by which the Caloric is retained & distributed in the most economical manner. Whilst the upper Chamber being of Cast Iron only suffers the heat to pass quickly through it to warm the room. Besides the necessity of lining the Chamber of Construction with fire Clay is to retain & distribute the Caloric & heat with the greatest economy & the manner of setting the Door & Flue to make part of the back when open & turned down.

To a further illustration of my Invention I refer to the models and drawings of the same deposited in the Rolls Office. Chancery Lane this 13 day of November 1833

Witness
Luc. C. Calvert
Nathaniel Lewis

1200 Inv.

Thomas Ashby

(Drawing in portfolio)

Patented 26 Dec 1833

Enr.
CHW.