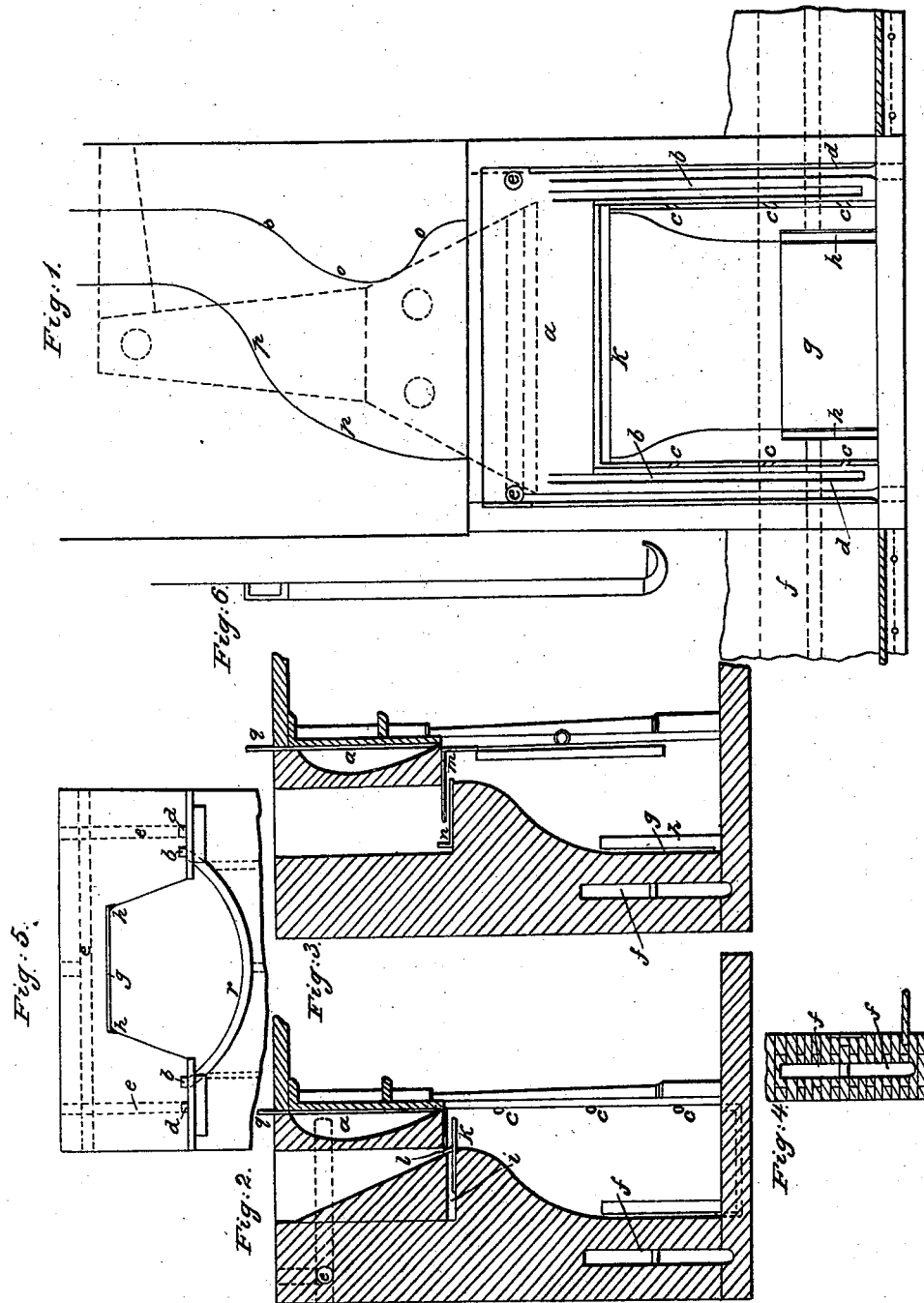


J. PLANT.
Chimney Cowl.

No. 4,279.

Patented Nov. 21, 1845.



UNITED STATES PATENT OFFICE.

JOHN PLANT, OF WASHINGTON, DISTRICT OF COLUMBIA.

CURING SMOKY CHIMNEYS.

Specification of Letters Patent No. 4,279, dated November 21, 1845.

To all whom it may concern:

Be it known that I, JOHN PLANT, of the city of Washington, District of Columbia, have invented a new and useful Method of

5 Curing Smoky Chimneys; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

10 Figure 1 is a front view of a fireplace constructed on my improved plan with the mantelpiece removed. Fig. 2 is a vertical section on the line A, B, Fig. 1. Fig. 3 is a vertical section of a modification. Fig. 4

15 is a cross section of a portion of the lower part of the side wall of the house showing the horizontal air flues therein.

The nature of my inventions consist in forming a reservoir for air above the breast

20 of the fireplace and discharging it through a narrow slit as long as the width of the opening of the fireplace and also in extending said reservoir down the sides of the jambs and throwing the air therefrom in-

25 ward when found necessary the air for the supply is taken in through flues leading in between the walls or floors and ceiling or directly through from the outside of the house as hereafter described. The method

30 of gathering the flue of the chimney and carrying it out so as to give room for the next fireplace above also aids in my improvements for curing or preventing smoky chimneys.

35 The construction of my improvements are as follows: The fireplace is constructed somewhat like those in common use, but the back is curved outward and then turns up in an ogee form as shown in the sections Figs.

40 2, and 3. In the breast of the chimney over the arch there is a recess (*a*), curved out over which the mantle fits and covers it see the sectional drawings 2 and 3 there is from this recess two others descending from it on

45 each side from the inside ones (*b*) of which are openings into the fire place through the front of the jambs, or the sides thereof as shown at (*c*) the outer recesses (*d*) continue down through the hearth and under the

50 floor to draw the air therefrom to supply the recess above named or there may be apertures through the jambs as shown at (*e*) to supply the air from the outside of the wall or the air may be brought down by the

55 side of the flue to supply the recess, and in building new houses I form a horizontal

flue or flues as shown at (*f*) around in the walls for the purpose of drying the same and drawing the foul air from under the basement floor to prevent its rotting and to

60 keep dry the walls near the ground by supplying the air from either of these sources a constant current is thrown down from over the fire place and in at the sides which entirely prevents them from smoking—the

65 lower part of the horizontal flues (*f*) and formed into a gutter to drain off the water from the walls.

Below the curve in the back of the fire

place there is a cast iron plate (*g*) with

70 wings (*h*) on it at each end either hinged or otherwise that are parallel with the jambs, a little distance therefrom and so as to permit the egress of air between them

75 which air may be received from under the floor or otherwise for that purpose into a recess behind them.

In flues constructed as shown in Fig. 2,

there is a recess formed in the back at (*i*)

80 across the throat the whole width into which a plate of iron (*k*) slides having a flanch

(*l*) projecting up from it near its front edge so that when it is drawn forward it shall

close the throat of the chimney and prevent

any smoke from descending from other flues.

85 A modification is shown in Fig. 3, where what is called a grate throat is used a piece of sheet iron or other suitable substance (*m*) is put in under the arch that projects back,

the front edge curving down at right angles

90 in front, as clearly shown in the drawing; on the horizontal part of the back a slide lies designated by letter (*n*) which has a flanch on its back edge so that when it is

drawn forward it comes in contact with the

95 above named piece (*m*) it closes the flue.

In kitchen fireplaces or where a cheap fix-

ture is to be applied without regard to ap-

pearance I make a flat broad tube shown in

outline in Fig. 1, by a red dotted line and an

100 edge view, in Fig. 6. This receives the air from any convenient place. The bottom of the tube is as broad as the fireplace and has the end turned under the arch of the fire-

105 place when it discharges the air.

The method of gathering the throat of

the chimney is as follows: if I intend to

carry my chimney flue to the right I com-

mence gathering on the right hand side just

above the arch as shown by the outline

110 (*o, o*) in somewhat of a semi-elliptical curve carrying it back to the straight line

of the flue on that side; the other side of the flue is carried up straight to the level of the greatest projection on the right hand side and is then carried over in a curve as shown in the outline (*p, p,*) Fig. 1, till it reaches the line of the flue.

Just behind the mantle piece is situated a damper (*q*) that can shut off the air from issuing; this is a common sliding damper formed so as to cover all the apertures for the egress of air.

In kitchen fireplaces and all others where cooking is done a curved trench (*r*) Fig. 5, may be cut into the hearth extending from one jamb to the other which communicates with the reservoir in said jambs. This is covered with a cast iron plate having a small aperture the whole length for the exit of air which carries off all effluvia.

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

1. Forming a recess in the breast of a chimney over the arch of the fireplace for the reception of external air and delivering the same in a thin stratum as herein described the whole width of the arch in the manner and for the purposes above set forth.

2. I also claim gathering the throat of the flue as above described by curving out from the side the flue is to be carried upon and curving the other side up over it as above specified.

JOHN PLANT.

Witnesses:

J. J. GREENOUGH,
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