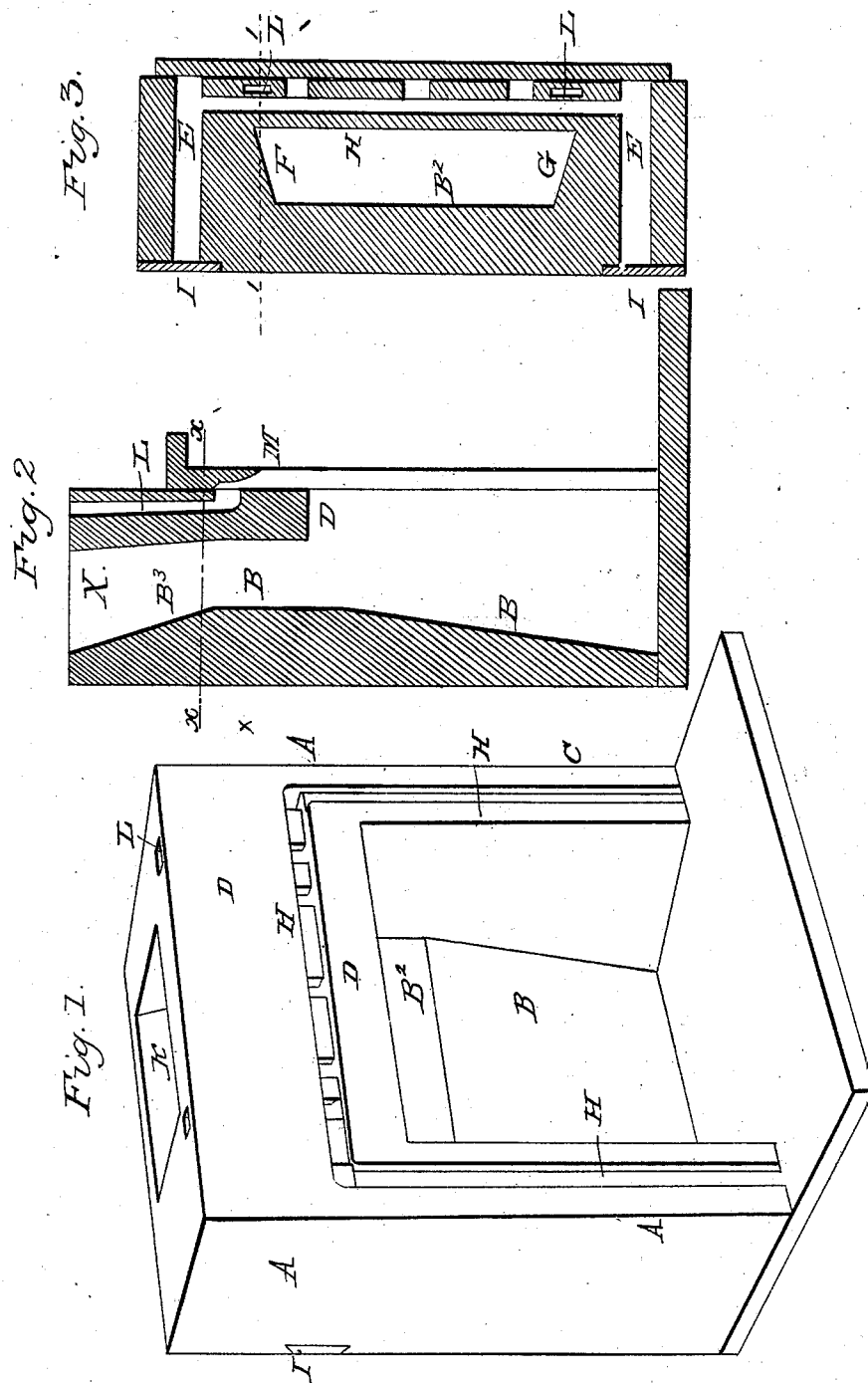


J. GILBERT.
House Chimney.

No. 3,826.

Patented Nov. 13, 1844.



UNITED STATES PATENT OFFICE.

JOSEPH GILBERT, OF FREASES P. O., OHIO.

BUILDING CHIMNEYS.

Specification of Letters Patent No. 3,826, dated November 13, 1844.

To all whom it may concern:

Be it known that I, JOSEPH GILBERT, of Freases P. O., in the county of Stark and State of Ohio, have invented a new and
5 useful Improvement in the Construction of Chimneys for Preventing Them from Smoking, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.
10 tion.

Figure 1 is a perspective view of a section of the chimney, showing a fire place and flue and the channels left in the brick work for the introduction of cold air to the
15 fire place, for increasing the draft of the flue. Fig. 2 is a vertical section at the line 1, 1, of Fig. 3—showing the fire place, flue, one of the channels, and the mantel. Fig. 3 is a horizontal section at the line X X of Fig. 2, showing the fire place, channels, valves or dampers and mantle.

I construct the chimney A in the usual manner except in the particulars hereafter described, constituting the improvements.
25 The back B of the fire place, I carry up in the usual manner; near the level of the arch of the fire place. I then carry it up vertical at B², nearly to the level of the mantle, I then cause it to retreat toward the back of the stack, as at B³ Fig. 2 gradually enlarging the flue K. The arch and breast D, I form in the usual manner. Immediately
30 above the fire place, I form a channel H, around the fire place in the jambs and breast, for the introduction of cold air to the fire place, communicating with horizontal channels E, passing transversely through the chimney stack to the outside thereof, for the introduction of cold air
40 from the outside of the building, opened or closed by dampers I to regulate the admission of the air—the aforesaid channels in the breast of the chimney, also communi-

cating with vertical channels L, formed in the chimney stack, and communicating by 45 branch channels with the spaces between the several floors, and the ceilings, for the introduction of the cold air in said spaces, to the fire place.

The pilasters and fascia, of the mantle 50 are placed over the above described channels around the fire place, thus forming the front thereof. The lower portion of the fascia of the mantle, is brought to a feather edge, so as to form a horizontal longitudinal 55 space M, behind the mantle, communicating with the horizontal air channel H in the breast of the chimney, through which space behind the mantle the cold air passes from the aforesaid channels to the fire- 60 place—rushing by the intrados of the arch, of the fire place to the throat thereof into the partial vacuum, therein treated by the rarefaction of the atmosphere in the chimney, by the combustion of the fuel; and 65 thus causing a strong upward draft in the flue, which carries off effectually all the smoke in the fire place through the flue. The admission of the cold air is regulated by the aforesaid dampers I, and consequently the draft of the chimney is increased or diminished. 70

I do not claim admitting the external air, for the purpose of preventing chimneys from smoking, as that has been before done; 75 but

What I do claim, is—

The mode herein described of introducing the air—that is to say, between the mantle and the arch, in the manner and for the purpose described. 80

JOSEPH GILBERT.

Witnesses:

EDWIN MAHER,
A. E. H. JOHNSON.