

Chimney.

Patented Sept. 11, 1847.



UNITED STATES PATENT OFFICE.

JOHN B. KELSEY, OF NEWBURYPORT, MASSACHUSETTS.

CONSTRUCTION OF CHIMNEYS.

Specification of Letters Patent No. 5,287, dated September 11, 1847.

To all whom it may concern:

Be it known that I, JOHN B. KELSEY, of Newburyport, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in or Manner of Constructing Chimneys in Order to Prevent Them from Smoking, and that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

Of said drawings Figure 1 denotes a front elevation of my improved fireplace and chimney. Fig. 2 is a horizontal section of it taken through A, B, Fig. 1. Fig. 3 is a vertical and transverse section taken through one side of the center of the back of the fire place. Fig. 4 represents a view of the rear part of the back of the fireplace, chambers and pipes.

In said figures C exhibits a common fire place, having its back *a* and jambs *b, b*, made of cast iron, brick, stone or other proper material. In the rear of said fire place or back and jambs thereof I construct two chambers D and E each having a partition F placed across it, and extending upwards from the bottom, nearly to the top of it, as seen in Fig. 3. Into the bottom of each of the said chambers I insert one end of a pipe G which I make to open into the chamber, and to pass along into the upper part of the cellar or room immediately beneath that in which the fire place is erected, and to open at its other end into the external atmosphere. Through the side of each of the said pipes G, G, I make an opening or hole H, (for the admission of air from the cellar) to which I apply a sliding door I for the purpose of closing said opening when necessary. And besides this I place a damper or turning valve K, within each pipe in the position or thereabouts as seen in Fig. 1.

Into the side of each of the chambers D, E, I insert a bent elbow pipe L, which I make to open into the chamber at one end, and at the other end into the room, in which the fireplace is built. I provide said pipe with a register valve M, by which the communication between the chamber D or E and the room may be interrupted at pleasure. Out of the top of each chamber D or E I lead a pipe N, which I cause to pass into the chimney above the throat of the fireplace as seen in Fig. 3. In said pipe I place a damper or turning valve O, whose

handle extends into the room in which the fire place is situated.

Whenever there is a tendency of the chimney "to smoke" or in other words whenever there is not sufficient draft up the chimney to carry off the smoke, I open the valves K, K, in one or both the pipes G, G, and then allow the atmospheric air to flow into one or both the chambers D and E, in rear of the back and jambs of the fire place. I then close one or both of the register valves of the pipes L, L, and open one or both of the valves in the pipes N, N; the whole being done in such manner as to cause the air after being heated by contact with the back and jambs of the fireplace, to pass into the chimney, above the throat of the fireplace. Having entered the chimney it will rush upwards through the same, and escape at the top of it, and in its passage through it, will create so great a draft, as to readily carry off the smoke, and prevent the chimney from smoking.

It is not often the case that all the part of the back and sides or jambs of the fireplace, is required to heat the air necessary to keep up a good draft through the chimney. Therefore, but one of the chambers D or E may be used for this purpose. By a proper disposition of the valves of the pipes, leading into and out of the said chamber, the air may be taken either from the cellar, or external atmosphere, and carried into the chimney. By closing the valve of the other pipe N, of the other chamber and opening the register of its pipe L, the hot air of the said chamber, may be made to pass, into the room. Thus the cellar may be ventilated, and a draft procured up the chimney, and the surplus heat, be made to pass into the room.

I am aware that for the purpose of preventing chimneys from smoking, the external air, has been heated, and made to pass into them above the throat of the fire place. I am aware also, that a chamber has been made in the rear of a fireplace and jambs, for heating air to be admitted into a room for warming it, and that said chamber has communicated with the external atmosphere or that of the room or cellar below, by means of pipes. I am aware that the air to be warmed has been introduced between the mantel and arch of a chimney, such having been the subject of a patent granted to one Joseph Gilbert on the thirteenth day of No-

vember, A. D. eighteen hundred and forty-four. I therefore do not lay claim to any such modes of preventing a chimney from smoking—as separately considered—but

5 That which I do claim is—

1. The combination of the air chamber in rear of the back, and sides of the fireplace, or any part thereof, with the inlet air pipes or passages—and outlet pipe leading into
10 the room, the said pipes having dampers or valves, in the manner as described.

2. And for the purpose of distributing the heated air, and using part of it for the

chimney and part for heating the room, I claim the combination of the two separate
15 chambers D and E, and their respective inlet and discharge pipes, valves, etc., as arranged and made to operate together substantially as specified.

In testimony whereof I have hereto set
20 my signature this fourth day of February, A. D. 1847.

JOHN B. KELSEY.

Witnesses:

J. B. SWASEY,
F. S. SPRING.