

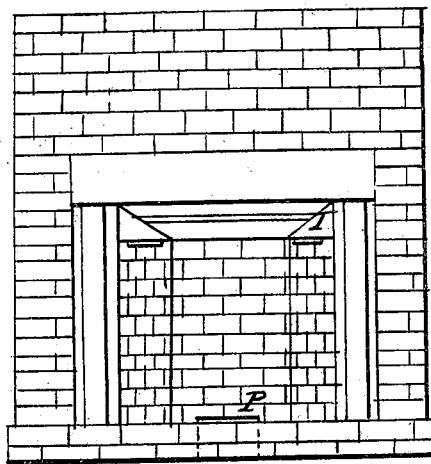
H. ROBERTS.

Chimney.

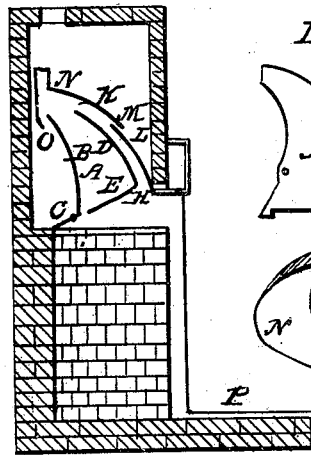
No. 1,578.

Patented April 30, 1840.

*Fig. 1.*



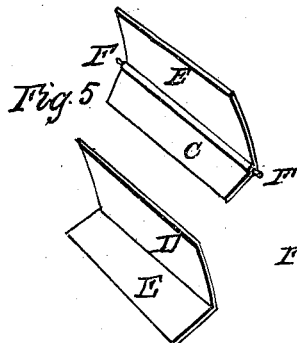
*Fig. 2.*



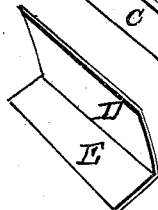
*Fig. 3.*



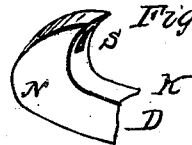
*Fig. 4.*



*Fig. 5.*



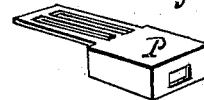
*Fig. 8.*



*Fig. 6. Fig. 7.*



*Fig. 9.*



# UNITED STATES PATENT OFFICE.

HOMER ROBERTS, OF DELHI, NEW YORK.

## CONSTRUCTION OF FIREPLACES TO PREVENT THEIR SMOKING.

Specification of Letters Patent No. 1,578, dated April 30, 1840.

*To all whom it may concern:*

Be it known that I, HOMER ROBERTS, of Delhi, in the county of Delaware and State of New York, have invented a new and useful Improvement in the Construction of Chimneys to Prevent Them from Smoking, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 represents a front view of the fire place; Fig. 2, vertical cross sections; Fig. 3, one of the end plates; Fig. 4, curved plate forming the bottom of upper flue and straight plate forming back of franklin; Fig. 5, hinged plates; Fig. 6, one of the upper sheet iron plates; Fig. 7, the other sheet iron plate; Fig. 8, the curved or twisted sheet iron flue; Fig. 9, the air box in the hearth.

Similar letters refer to similar parts in the figures.

The nature of this invention consists in a certain new and useful arrangement of curved and straight cast and wrought iron plates in and above the throat of the chimney by which the wind is prevented from blowing through the throat into the fire place and driving the smoke and fire into the rooms and by which the draft is increased by the air becoming heated from said plate and also said arrangement furnishing facilities for cleaning out the soot and likewise preventing an entrance of persons to the interior of the house through the chimney and fire place.

The fire place and chimney are made in the usual mode.

I take two cast iron plates A, each made similar to that represented in Fig. 3 and place them in a vertical position upon offsets in the back work of the jambs. Then I place between said plates two combined inclined and curved plates B C D E, like those represented in perspective Figs. 4 and 5. Fig. 4 is in one piece and turns on pivots F running through the end plates, so as to raise the lower part to open a passage for the discharge of soot, at the same time depressing the curved part. That which is represented in Fig. 5 is made in two parts D, E. The straight part E forms part of the franklin back. The curved part D

forms the bottom part of the top flue G, Fig. 2, which enters immediately under the mantel piece at H. The straight part E or that which forms the back of the franklin extends nearly to the angle of the movable part, leaving a space I for the lower flue. The straight stationary plate E or upper part of the franklin back is secured by tenons running through the side plates A and are keyed on the outside. The curved part D rests with its lower edge upon the top of the franklin back and upon small knobs or projections cast on the inside of the end plates A. The top of the upper flue is formed by two segment wrought or cast iron plates K, L, such as those represented in Figs. 6 and 7, and rest on the upper edges of the end plates A fastened by tenons on said end plates running up through mortises in the top plates and keys inserted through the tenons above them. The two top plates K L do not come together, but are sufficiently far apart to form a flue M, Fig. 2, for allowing the air which blows down the chimney to pass into the curved rim flue. The lower edge of the lower plate turns up and rests against the back of the mantel piece having an opening for the discharge of soot. Where these curved plates approach each other and are contracted to a narrow throat they enter a hollow curved or twisted flue N, Fig. 8, with a small aperture *s* in the end, which turns over and prevents the wind from blowing down the chimney by the curved plate, which turns over and covers it, and through said opening the smoke is discharged into the chimney. This curved flue is riveted to the top edge of the top curved sheet iron plate. It is represented in Fig. 8 in perspective. The lower part of the outside plate of the curved flue curves under the upper edge of the swinging plate and forms an entrance *o* for air which blows down the chimney. There is a cast iron box P, Fig. 9, placed in the hearth to admit cold air from the outside to the fire place to promote a quick draft. The cold air in the chimney is rarefied by the heated plates and ascends and the counter currents of cold air blowing down the chimney strike against the curved plates, are turned upward and pass

through the openings M and O into the curved flue.

What I claim as my invention and desire to secure by Letters Patent consists in—

The before described mode of arranging  
5 the cast and wrought iron straight and curved plates in the chimney forming curved flues for curving and preventing chimneys

from smoking and forming openings for the convenience of removing the soot and for 10 obtaining an easy admission into the chimney from the fire place as herein set forth.  
HOMER ROBERTS.

Witnesses:

EDMUND MAHER,  
WM. S. ELLIOT.