

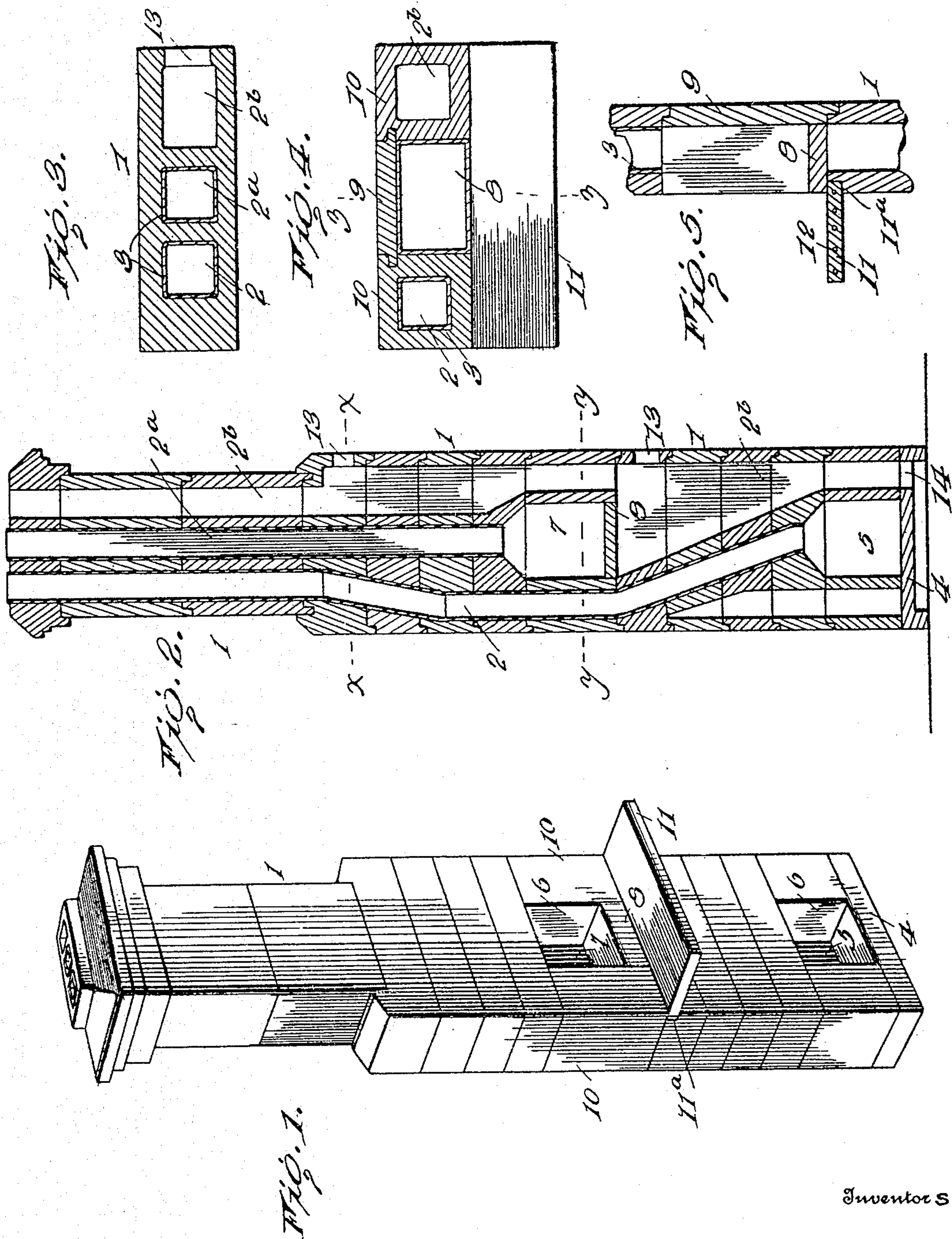
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CHIMNEY.

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# UNITED STATES PATENT OFFICE.

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## CHIMNEY.

No. 797,856.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that we, MATTHIAS KEITH, Jr., and SAMUEL E. KEITH, citizens of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Chimneys, of which the following is a specification.

This invention comprises a chimney flue or stack which is proof against the escape of fire and at the same time capable of being set up in a short time because of the simplicity of construction of the various parts embodied in the structure and which may be used for carrying off smoke or foul gases, having a ventilating-shaft for the escape of foul odors, vitiated air, natural or other gas, which may find its way into a cellar, basement, or similar lower compartment.

For a full description of the invention and the merits thereof, and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view of a chimney embodying the invention. Fig. 2 is a vertical section thereof. Fig. 3 is a horizontal section on the line X X of Fig. 1. Fig. 4 is a horizontal section on the line Y Y of Fig. 1. Fig. 5 is a partial vertical section on the line Z Z of Fig. 4, showing more clearly the structure of the parts of the fireplace.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In carrying out the invention the chimney or stack is preferably composed of a number of superposed sections, which may be made of molded cement or like plastic material, said sections being formed with openings vertically thereof, which register when the sections are assembled and form a plurality of smoke or ventilating flues.

As shown in the drawings, the sections of the chimney are indicated at 1 and are preferably of approximately rectangular form. The majority of the sections 1 used in building the chimney are provided with vertical openings 2, 2<sup>a</sup>, and 2<sup>b</sup>, (see Fig. 3,) said openings being arranged for registration when the sections are disposed one above the other, the openings 2 and 2<sup>a</sup> being lined with fireproof tiles of any suitable form, as shown at 3. The fireproof tiles 3 may be

manufacturing the latter. The several sections 1 have the meeting or abutting parts thereof rabbeted or mated, so as to provide an interlocking connection between the sections and prevent possible lateral displacement, as well as to provide close joints, precluding all likelihood of escape of fire, smoke, or the like through the sides of the chimney and which would thereby injure the structure or building. The flue-openings 2 are provided in the sections 1 of the chimney throughout the length of the latter, and these openings, when the sections are assembled, form a vertical flue leading from the lower end of the chimney structure to the upper end of the same. The sections 1 rest upon a base-plate 4 at the lower extremity of the chimney, and the opening 2 in the lowermost of the sections 1, which rests directly upon the base-plate 4, is enlarged to form a fireplace 5. The fireplace 5 would of course be located in the cellar, and the outer side of the section 1, in which said fireplace is located, is cut away to form an opening 6, forming the entrance to the fireplace 5. Under ordinary conditions the fireplace 5 may not be in use, and the openings 6 leading thereto will admit of all vitiated air or foul gases in the basement or cellar passing upwardly through the flue-openings 2 and out of the top of the chimney in a manner which will be readily apparent. The flue formed by the openings 2 of the sections 1 extends toward the side of the chimney at a point about intermediate the upper and lower extremities of the latter, a fireplace 7 being located at this part of the chimney at one side of the flue formed by the openings 2 aforesaid. The fireplace 7 is formed in certain of the sections 1 about at the central portion of the chimney, the flue-openings 2<sup>a</sup> of the sections extending upwardly from the fireplace 7, forming a flue to carry off the smoke and products of combustion in said fireplace. The fireplace 7 is provided with a base-plate 8, resting upon the section 1 beneath the fireplace, and the back of the fireplace 7 consists of a section 9, having rabbeted edge portions to interlock with the adjacent abutting portions of hollow blocks 10, in which the flue-openings 2 and 2<sup>b</sup> registering with the similar openings of the sections 1 are provided. The side edges of the back section 9 interlock with the hollow section 10, and the horizontal edge portions of the section 9 similarly interlock by rabbeting the abutting portions with the sections 1 arranged above and below the fireplace 7.



The arrangement of the back section 9 of the fireplace 7 is shown most clearly in Figs. 4 and 5 of the drawings. A hearth-plate 11 extends outwardly from the chimney near the base of the fireplace 7, and said hearth-plate is of substantially the same width as the chimney, the rear edge portion of this plate being received between the base-plate 8 and the outer side of the section 1 beneath said fireplace 7. The upper portion of the outer side of the section 1, beneath the fireplace 7, is rabbeted, as shown at 11<sup>a</sup>, to receive the rear edge of the hearth-plate 11 to firmly position the latter upon the chimney. The member 11 may be supported by brackets on joists or corners and is made, preferably, of cement or plastic material, being a substitute for boards, which often render likelihood of fire imminent. The member 11 is strengthened by a number of steel rods 12, which are molded in the body thereof. The sections 1 of the chimney below the fireplace 7 are not provided with the flue-openings 2<sup>a</sup>, but all of the sections 1, from the lowermost to the topmost, are formed with the flue-openings 2<sup>b</sup>, the latter forming a flue also extending throughout the entire length of the chimney. Certain of the sections 1 at intervals in the length of the chimney are provided with openings 13 at one end, which communicate with the flue-openings 2<sup>b</sup> and form ventilating means to permit passage of impure air out of the chimney through the ventilating-flue constituted by the openings 2<sup>b</sup>. An opening 14 in the lower base-plate 4 in vertical alinement with the adjacent flue-opening 2<sup>b</sup> also forms a ventilating-opening at the lower extremity of the chimney.

Having thus described the invention, what is claimed as new is—

1. A chimney of the construction specified, embodying the fireplaces 5 and 7, smoke-flues extending from the fireplaces aforesaid, the smoke-flue of the fireplace 5 extending at one side of that of the fireplace 7, the chimney having a ventilating-flue at the opposite side of the fireplace 7.

2. A chimney embodying the upper fireplace 7, the lower fireplace 5, the fireplace 5 having a smoke-flue leading upwardly therefrom and deflected so as to extend upon one side of the fireplace 7, and a ventilating-flue upon the opposite side of the fireplace 7 and extending the entire length of the chimney.

3. A chimney composed of a plurality of superposed sections, certain of said sections having the flue-openings 2, 2<sup>a</sup> and 2<sup>b</sup>, the fireplaces 5 and 7, a flue formed by the flue-openings 2 leading upwardly from the fireplace 5, a flue formed by the openings 2<sup>a</sup> leading upwardly from the fireplace 7, the flue formed by the openings 2<sup>b</sup> extending the entire length of the chimney at one side of the fireplace 7, the chimney being provided with ventilating-openings at intervals in its length communicating with the ventilating-flue aforesaid.

4. A chimney composed of superposed sections provided with a plurality of flue-openings, a fireplace in the length of the chimney and embodying a back section having rabbeted portions interlocking with adjacent upper and lower sections of the chimney, and a base for said fireplace resting upon the section of the chimney below said fireplace.

5. A chimney composed of superposed sections provided with a plurality of flue-openings, a fireplace in the length of the chimney and embodying a back section having rabbeted portions interlocking with adjacent upper and lower sections of the chimney, a base for said fireplace resting upon the section of the chimney below said fireplace, and a hearth-plate having the rear portion thereof received between the section of the chimney below said fireplace and the base of said fireplace.

6. A chimney composed of superposed sections provided with a plurality of flue-openings, a fireplace in the length of the chimney and embodying a back section having rabbeted portions interlocking with adjacent upper and lower sections of the chimney, a base for said fireplace resting upon the section of the chimney below said fireplace, and a hearth-plate having the rear portion thereof received between the section of the chimney below said fireplace and the base of said fireplace, the section of the chimney below the fireplace having the upper portion of the outer side thereof rabbeted so as to receive the rear portion of the hearth-plate as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

MATTHIAS KEITH, JR. [L. S.]  
SAMUEL E. KEITH. [L. S.]

Witnesses:

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