

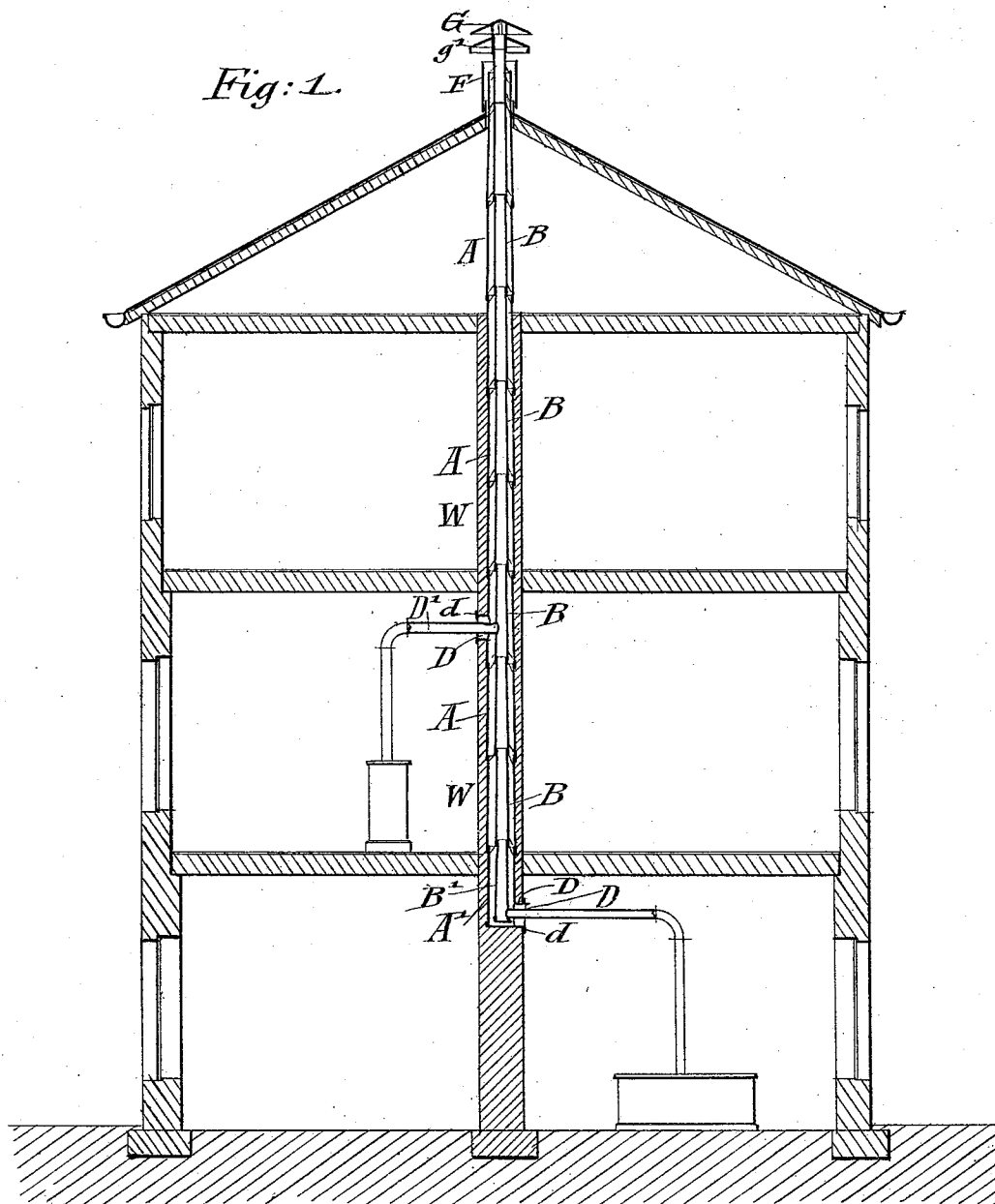
(No Model.)

2 Sheets—Sheet 1.

F. LANGE.
VENTILATING FLUE.

No. 530,229.

Patented Dec. 4, 1894.



WITNESSES:

K. K. Brennan

E. Smith

INVENTOR

Fritz Lange

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Joseph P. Rogers

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Fig: 2.

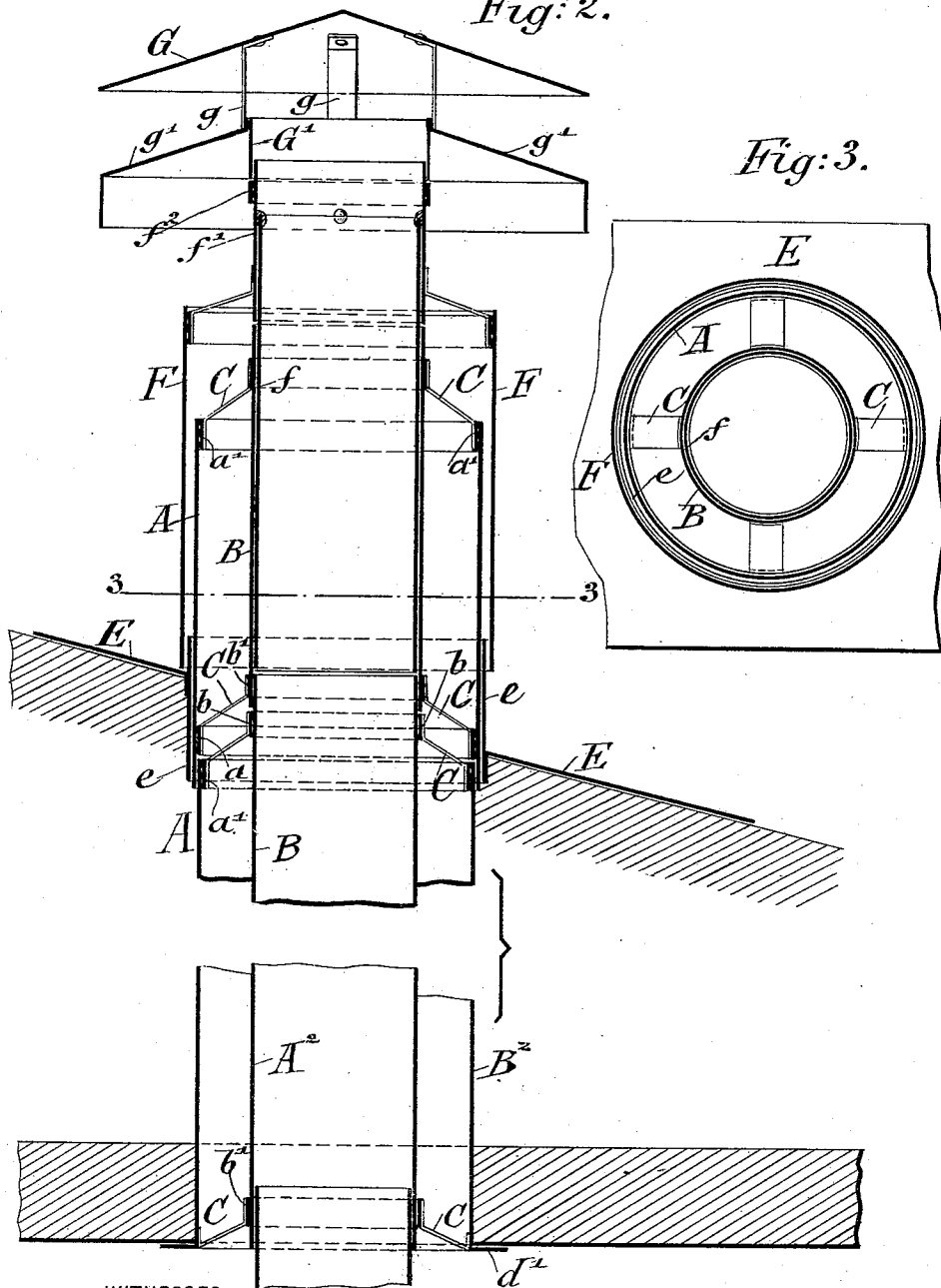


Fig: 3.

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UNITED STATES PATENT OFFICE.

FRITZ LANGE, OF BRENHAM, TEXAS.

VENTILATING-FLUE.

SPECIFICATION forming part of Letters Patent No. 530,229, dated December 4, 1894.

Application filed April 4, 1894. Serial No. 506,366. (No model.)

To all whom it may concern:

Be it known that I, FRITZ LANGE, a citizen of the United States, residing at Brenham, in the county of Washington and State of Texas, have invented certain new and useful Improvements in Sheet-Metal Ventilating-Flues, of which the following is a specification.

My invention relates to ventilating-flues made of sheet-metal tubular sections, and its object is to provide a ventilating flue which can be placed in any building without necessitating making the same in one length, the sections being constructed so as to be readily adjusted on each other.

My invention consists of certain features of construction and combination of parts to be hereinafter described and then particularly claimed.

In the accompanying drawings:—Figure 1 is a vertical section through a building provided with my improved ventilating flue. Fig. 2 is an enlarged vertical section showing a slight modification. Fig. 3 is a transverse section on line 3—3, Fig. 2.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A indicates a suitable number of main flue-sections of preferably tubular form, which lead from the room to be ventilated to the roof, and which are adapted to be adjusted in position one on the other. These flue-sections each contain a smoke-pipe section B which extends at one end beyond the same, while the flue-section extends beyond the opposite end of the smoke-pipe section. Said smoke-pipe sections are of considerably less diameter than the main flue-sections so as to provide an annular air circulating space between them and they are firmly attached to the flue-sections by means of rings *a a'* riveted or otherwise fastened to the inner sides of the flue-sections, spider-arms C riveted or soldered at their outer ends to said rings, and collars *b, b'*, riveted or otherwise firmly fastened to the outer sides of the pipe-sections.

The rings *a* and the collars *b* are respectively located some distance in from the ends of the parts to which they are riveted, so that they

may form abutments for the contiguous ends of the connected flue-sections and smoke-pipe sections, and thus properly support the complete sections one upon the other without the necessity of riveting or fastening them upon each other.

The flue-sections A and the attached smoke-pipe sections B are built up to proper height in the partition wall W of a building and a lower finishing flue and smoke-pipe section A', B', as shown in Fig. 1 or A², B², as shown in Fig. 2, applied thereto.

The manner of attaching the main flue-section A' and smoke-pipe section B' Fig. 1, together is the same as that described, the lower end, however, of each part being closed, as shown. A branch tube D provided with an annular flange *d* leads into the flue-section A' and a branch smoke-pipe D' extends there-through and leads into the smoke-pipe section B'. Similar branch tubes and branch smoke-pipe sections, as shown, may enter the room or rooms above the one into which the lower ones enter, so that the rooms may be ventilated and the stoves therein connected with the smoke-pipe sections of the ventilator. After the described parts have been placed in proper position the same are plastered over so that the flanges *d* will rest against the wall. In Fig. 2 the lowermost section leads through the ceiling and its flange *d'* seats against the same.

A plate E of suitable dimensions and having a central opening in which is secured a sleeve *e* is passed over the flue-section A which projects above the roof, said plate protecting the joint at the roof from rain and rust and said sleeve enabling the roof-plate to be firmly attached. Said roof-plate may be arranged at right-angles to the sleeve *e* or it may be inclined thereto so that it can be applied to hip-roofs or to gable-roofs. A larger finishing flue-section F is now applied over the upper section A, the lower end of the same being pressed down to the roof and thus fitted tightly over the sleeve *e* of the roof-plate, so that the joint between the sleeve and the aforesaid section A is fully protected from the weather. Within the finishing flue-section F is secured a smoke-pipe section *f* in the

same manner as are the smoke-pipe sections B secured to the main flue-sections A, excepting that it is attached only at its upper end, it being entirely detached at its lower part so that the same may pass through the smoke-pipe section B of the upper flue-section A and abut against the top of the smoke-pipe section next below the same. A short sleeve-section f' is secured around the upper end of the smoke-pipe section f , and its lower end abuts against the top of the smoke-pipe section B immediately below it. A removable cap-section, comprising a shed or shield G, a collar G', arms g connecting the former with the latter so as to separate them, and a lower annular shed g' , is soldered onto the collar G'. The collar G' of the cap section is placed over the sleeve-section f' so as to abut against a ring f^2 on the latter, and thereby secure the cap in position.

The cross-section of the parts of the flue may be square or any other suitable shape desired, or as the builder requires, and I do not therefore limit myself to a round cross-section.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A ventilating flue, composed of suitable flue-sections leading through the roof, a roof-plate provided with a sleeve extending above and below the roof-plate and placed tightly

over the section projecting above the roof, said plate being seated on the roof so as to protect the joint between the flue and the roof, a finishing section placed over the main-flue section, which extends above the roof and tightly over and in frictional engagement with said sleeve, and a storm-cap at the top of the flue, substantially as set forth.

2. A ventilating-flue, composed of flue-sections, rings secured within the sections, arms extending inwardly from the rings, smoke-pipe sections arranged in the flue-sections, and rings on the exterior of the smoke-pipe sections connected with said arms whereby an exterior flue-section is rigidly attached to the complementary interior smoke-pipe section, said smoke-pipe sections each extending beyond one end of the flue-section, and the other end of the flue-section extending beyond the smoke-pipe section so that one end of each flue-section and smoke-pipe section abuts against the adjacent ring of the next flue-section and smoke-pipe section, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

FRITZ LANGE.

Witnesses:

L. F. GRASSMUCK,
THOS. H. WILSON.