(No Model.)

J. O. & J. S. BURCH.

COMBINED STOVEPIPE THIMBLE AND FLUE STOPPER.

No. 560,969. Patented May 26, 1896.

FIG. 1.

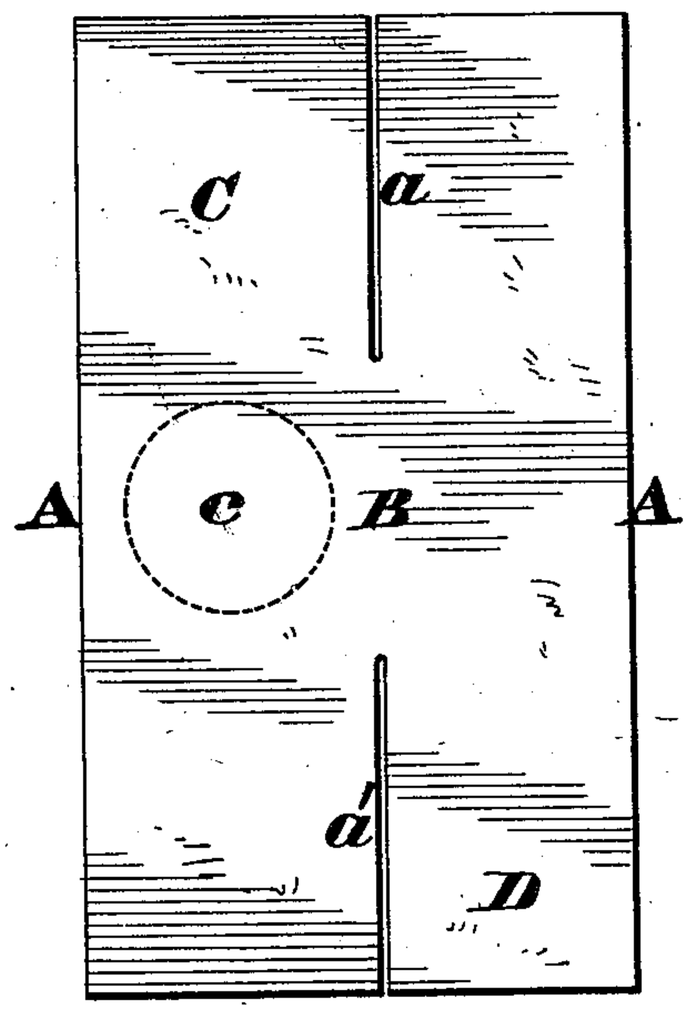


FIG. 2.

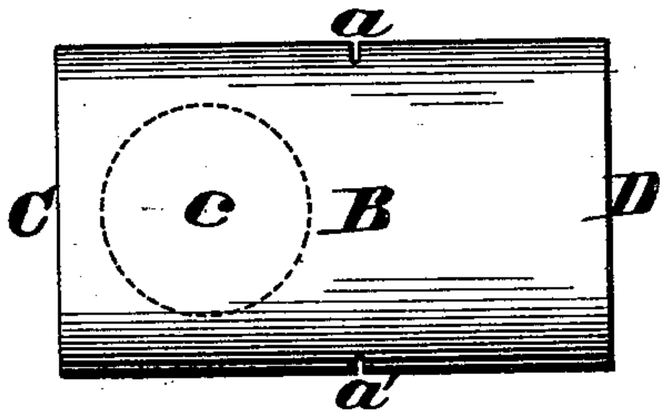


FIG. 3.

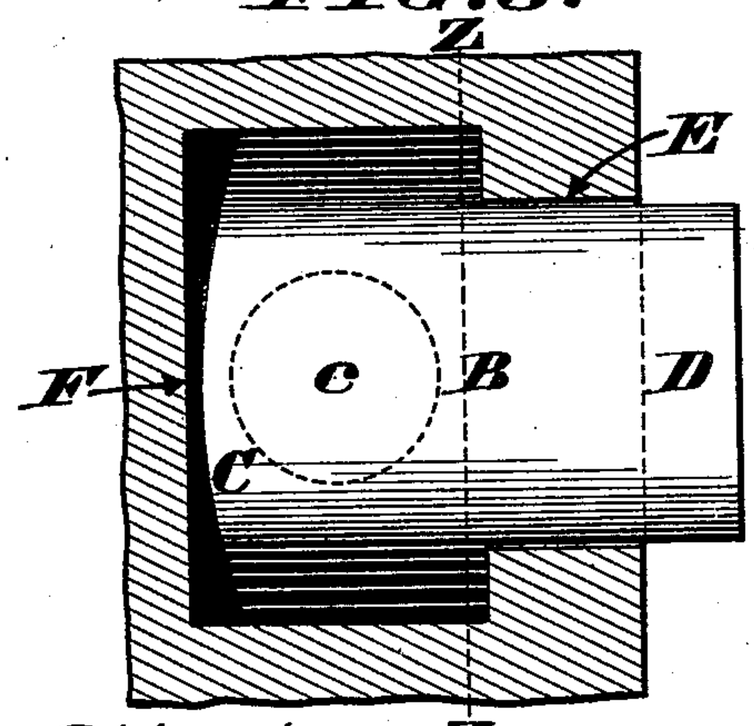


FIG. 4.

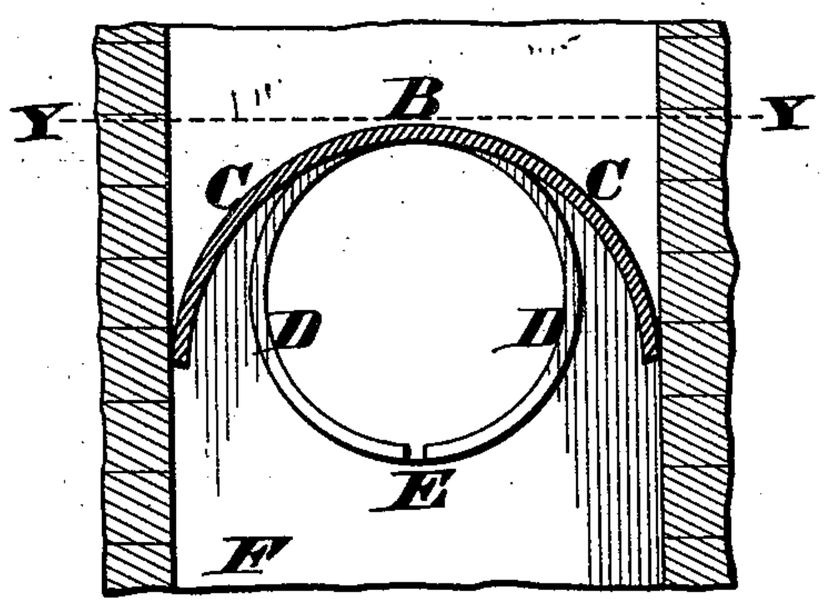
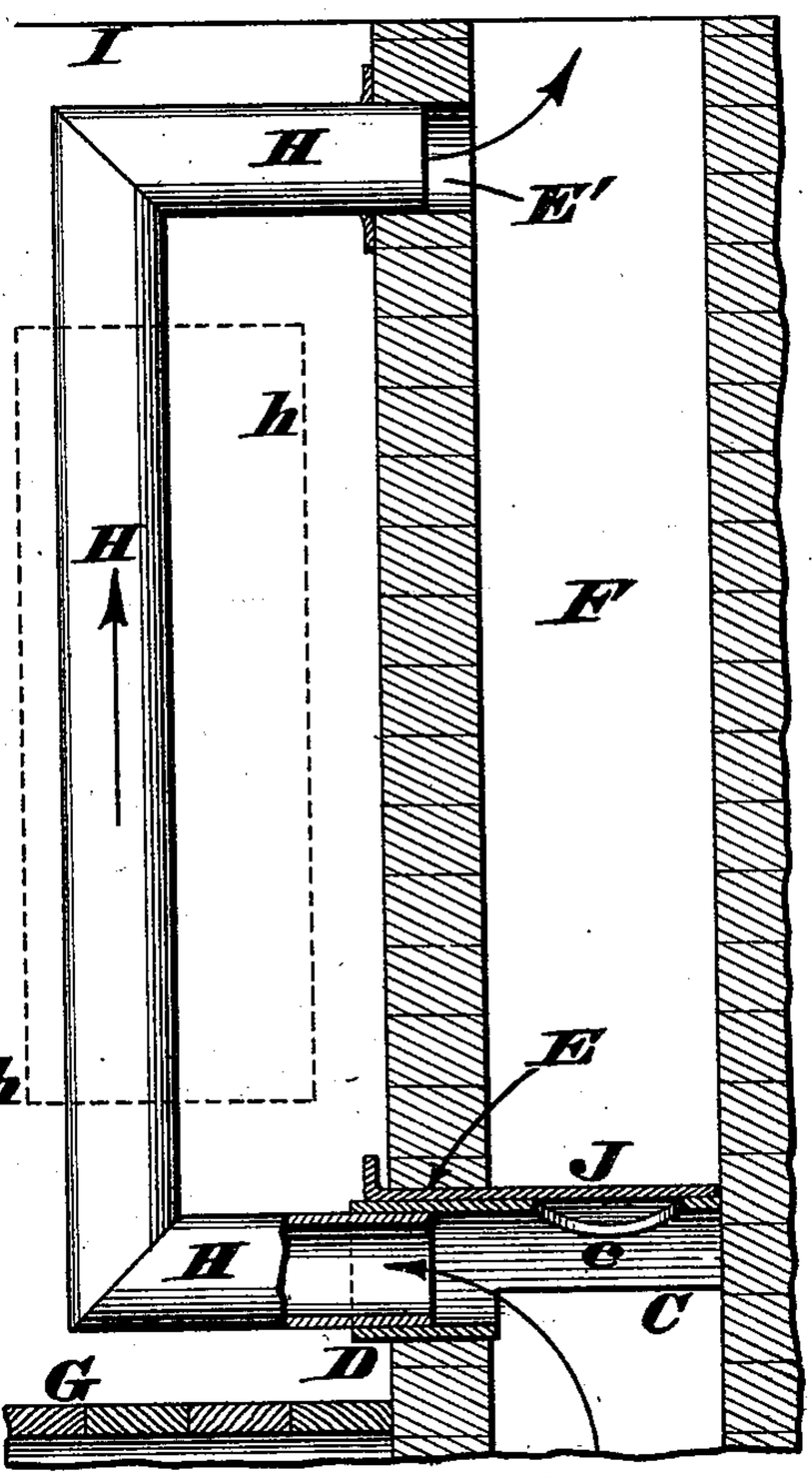


FIG. 5.



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UNITED STATES PATENT OFFICE.

JOHN O. BURCH AND JAMES S. BURCH, OF NEWPORT, KENTUCKY.

COMBINED STOVEPIPE-THIMBLE AND FLUE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 560,969, dated May 26, 1896.

Application filed December 5, 1895. Serial No. 571,103. (No model.)

To all whom it may concern:

Be it known that we, JOHN O. BURCH and JAMES S. BURCH, citizens of the United States, residing at Newport, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in a Combined Stovepipe-Thimble and Flue-Stopper; and we do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form a part of this specification.

Our invention comprises a combined stovepipe-thimble and flue-stopper which is capable of being readily passed through a stovepipe-hole, so as to completely obstruct the chimney-flue said hole communicates with, after which act an ordinary pipe is fitted to the exposed end of said thimble, the improvement being designed more especially to facilitate the construction of a cheap, but very effective, heating apparatus, as hereinafter more fully described.

In the annexed drawings, Figure 1 is a plan showing the first step in the manufacture of our combined stovepipe-thimble and flue-stopper. Fig. 2 is a plan of the complete device. Fig. 3 is a horizontal section showing the device fitted within a chimney-flue, the section being taken at the line Y Y of the following illustration. Fig. 4 is a vertical section of said flue, taken at the line Z Z of the preceding illustration. Fig. 5 is a vertical section of a flue with the device fitted therein and a stovepipe attached to the thimble.

Our combined stovepipe-thimble and flue-stopper is made of a single piece of sheet metal A, steel being preferred on account of its ability to spring back to its normal shape after being bent to a practically-cylindrical form. Each sheet is cut of a proper length and width to adapt the device to the exact size of a stovepipe-hole and chimney-flue, after which act a pair of incisions *a a'* are made in the opposite ends of the plate. These incisions or slots leave a central connecting-web B and two sections C D, which will be hereinafter designated as the "stopper" and "thimble," respectively. The incised sheet is now bent to the cylindrical form seen in Figs. 2 and 4, and is passed through a stovepipe-hole E, as represented in Fig. 3. The cylinder is pushed in until its advancing end comes in contact with the back of the chimney-flue F, and then the sheet is liberated and allowed to spring outwardly as far as it can go. Now as the pipe-hole E is circular, as seen in Fig. 4, and as the sheet was first cut with reference to the size of said hole it is evident that the very moment said sheet is liberated the portion D assumes the shape of a cylindrical thimble that fits very snugly within said hole; but as the flue F is somewhat wider than the pipe-hole the stopper portion C flies outwardly on each side and thereby forms a secure arch or barrier, as represented in Fig. 4.

The hole E is usually made in the chimney-flue F very near the level of a second-story floor G, as represented in Fig. 5, and vertically above this hole is cut another one E', that also leads into said flue.

H is a stovepipe the lower end of which is fitted to the thimble D, while its upper end is inserted within the elevated hole E', or, in other words, said pipe extends, practically, from the floor G to the ceiling I.

From the above description it is evident that all products of combustion ascending the flue from a fire in a lower room are arrested by the arch-plate or stopper C and deflected through the thimble D into the smoke-pipe H. After traversing this pipe the products of combustion again enter the flue through the upper hole E', the direction of the current being indicated by the arrows, and, if desired, the above-described arrangement of parts can be duplicated in the third story, and so on, up as high as the chimney extends. Hence it is evident the pipe H affords considerable radiating-surface and serves to warm an upper room by heat usually wasted in the chimney, and by applying a drum to said pipe, as indicated by the dotted lines *h*, the radiating-surface will be still further increased. As soon as the cold weather is over the pipe H is taken down and a person's hand is then passed through the thimble D, so as to grasp the arch C and gradually bend it back to the shape of a cylinder of less diameter than the pipe-hole E. The entire device is then pulled bodily out of said hole, and the two openings E E' being closed with ordinary flue-caps the chimney performs its usual duty during the summer.

One great advantage peculiar to our invention is that the plate can be cut to the proper size by any tinner, and then the act of fitting the device within a flue and removing it therefrom can be performed by an adult and without employing a tool or instrument of any kind.

The above is a description of a simple form of our invention to be used when the stovepipe is readily removable in the summer season; but if said pipe is a fixture to the chimney a more complicated arrangement is necessary. In this case we cut an opening *c* in the center of the arch-plate C, and arrange a damper or cut-off J to slide back and forth over said hole, as seen in Fig. 5, the uncovering of said hole permitting a direct draft up the flue F. In Figs. 1, 2, and 3 the position of this hole is indicated by a dotted circle, but said opening may be of any shape best adapted for the purpose, the proper adjusting of the plate J over said hole causing more or less heat to be thrown into the pipe H.

We claim as our invention—

1. A combined stovepipe-thimble and flue-stopper consisting of a single, flexible plate A, incised at *a*, *a'*, and having a web B connecting the sections C, D, of said plate, which latter is adapted to be bent and then inserted within a pipe-hole and chimney-flue, in the manner described, and for the purpose stated.

2. The chimney-flue F having a lower pipe-hole E, and an upper one E'; an integral thimble D and arch-plate C being inserted within said lower hole, and flue, in the manner described, and a smoke-pipe H being connected to the outer end of said thimble and leading up to the hole E', for the purpose described.

3. A combined stovepipe-thimble, flue-stopper and damper consisting of the flexible plate A, incised at *a*, *a'*, pierced at *c*, and having a web B connecting the sections C, D, a sliding plate J, being fitted over said arch-section C, for the purpose described.

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

JOHN O. BURCH.
JAMES S. BURCH.

Witnesses:
JAMES H. LAYMAN,
ARTHUR MOORE.