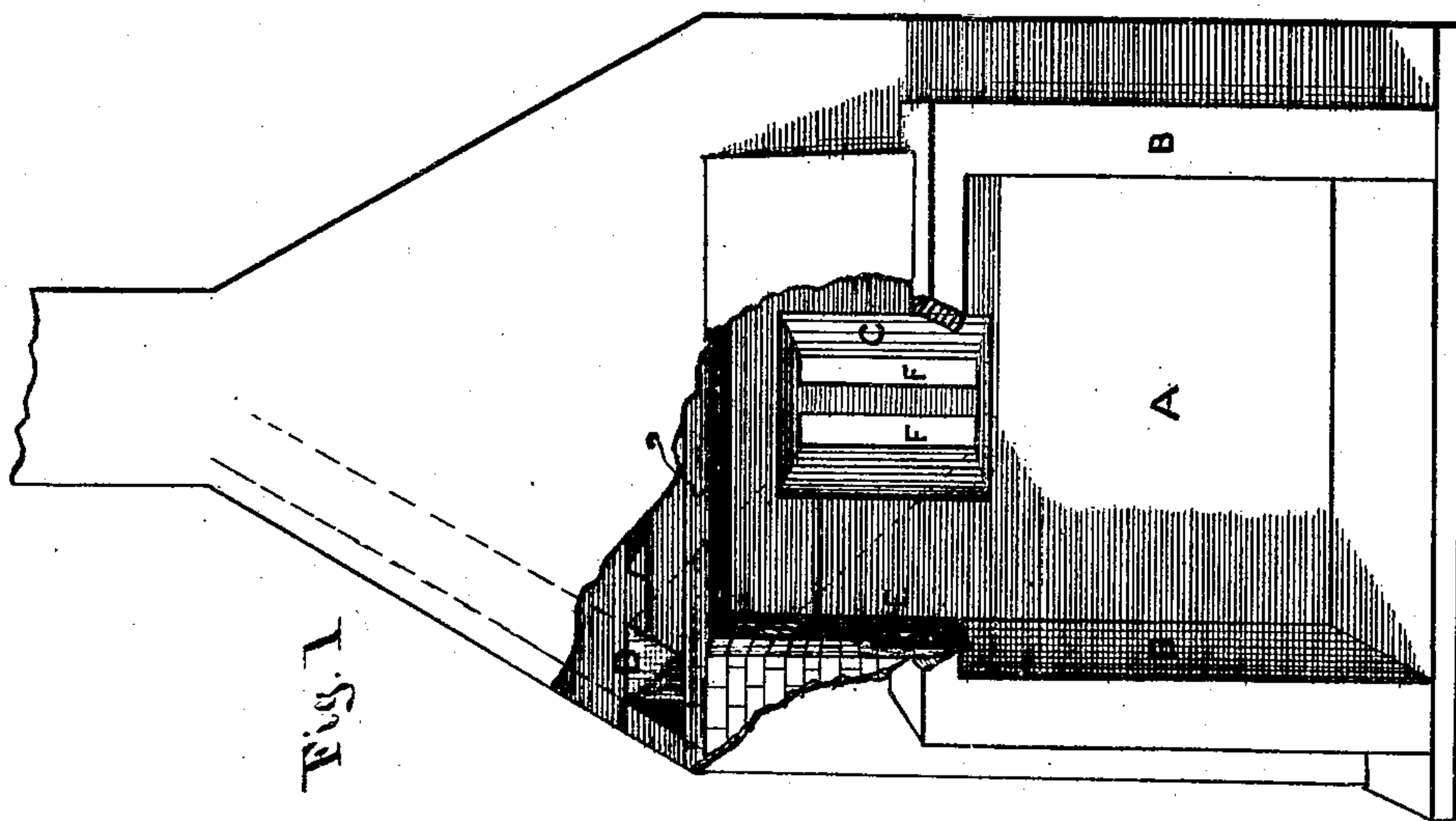
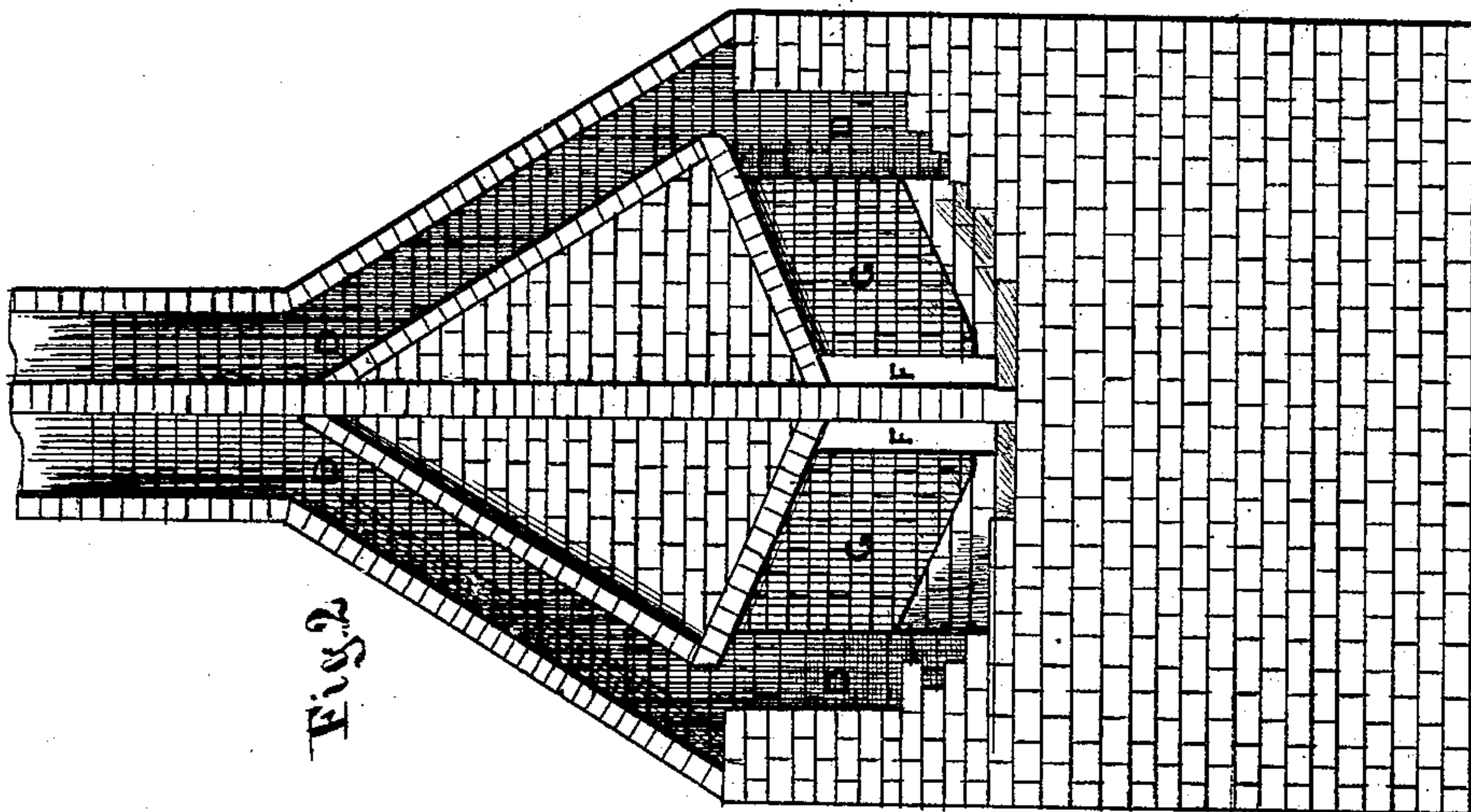


F. RICHARDSON.
CHIMNEY.

No. 102,042.

Patented Apr. 19, 1870.



Witnesses
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FRANCIS RICHARDSON, OF HEBRON, ILLINOIS.

Letters Patent No. 102,042, dated April 19, 1870.

IMPROVEMENT IN CHIMNEYS.

The Schedule referred to in these Letters Patent and making part of the same

I, FRANCIS RICHARDSON, of Hebron, in the county of McHenry and State of Illinois, have invented certain Improvements in Chimneys, of which the following is a specification.

Nature and Objects of the Invention.

The first part of my invention relates to constructing chimneys double, or with two flues at their lower ends, or immediately over the fire-place, said flues approaching, coming nearly together, and continuing so to the chimney-shaft.

The object of this part of my invention being for purposes hereafter described.

The second part of my invention relates to the arrangement of the throats or openings leading from the fire-place to the dual chimneys, so arranged as to prevent the accumulation of cold or "dead air" in the throats, thereby increasing and insuring the draught and so arranged as to prevent rain-water or soot from falling direct into the fire-place; also, so arranged as to throw the heat out from the fire-place and not draw it up the chimney, as is the case with direct throats and single flues, all substantially as hereinafter described.

Description of the Accompanying Drawings.

Figure 1 is a perspective front view of a fire-place and chimney, with a portion cut away, showing my improvements.

Figure 2 is a rear elevation, with a portion cut away, showing also my improvements.

General Description.

A is the fire-place, the back part of which is vertical on the face.

B B are the side jambs, which may be constructed either "square" or "flaring," to burn either coal or wood, as desired.

C is a cavity over the fire-place, the front part of which tapers from the base to near the back at the top.

D D are the flues, one on each side of the fire-place, their lower ends vertical for some distance, their bases commenced on a level with the top of the side-jambs B B, and their distance apart just equal to the width of the fire-place A.

From the vertical part, at their lower ends, the flues D D approach each other until they come nearly together, running so until they reach the top of the chimney-shaft.

E E are rectangular openings or throats leading from the sides of the fire-place into the sides of the flues D D, their lower ends being on a level with the lower ends of flues D and their upper ends extending to the top of the cavity C.

F F are rectangular openings in the back of the cavity C, their lower ends extending a few inches below the level of the bottom of the flues D D, and their tops reaching to within a few inches of the top of the cavity C.

G G are passages or flues leading from the throats F F to the vertical part of the flues D D, as shown.

The situation of the throats F F being such as to allow "rise" sufficient in the passages G G to facilitate the draught.

The size of the passages G G in their cross-section should be about twice the number of square inches contained in one of the throats F F.

This improved chimney may be constructed of brick or any other suitable material, and it will be readily seen that the arrangement of the throats and flues is such that either passage leading into the main flue and receiving heated ascending air from the fire, which may be only burning briskly near its throat, will in its ascent create a draught in the other throats and prevent the accumulation of cold or dead air, as in the case of ordinary flues; this cold air, accumulating in the throats of ordinary chimneys, when the fire is only burning briskly at one side, creating a contrary current to the ascending, and being the main cause of smoky chimneys.

Dampers may be placed in the side flues and the draught controlled, if desired.

Claims.

I claim as my invention—

1. The arrangement of the double flues D D, throats E E, and fire-place A, substantially in the manner and for the purpose described.

2. The combination and arrangement of the passages G G and throats F F, with the flues D D, throats E E, fire-place A, and cavity C, in the manner substantially as described and for the purpose set forth.

FRANCIS RICHARDSON.

Witnesses:

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