

J. Cooper. Coal-Store.

N^o 80275

Patented Jul 28, 1868.

Fig: 1.

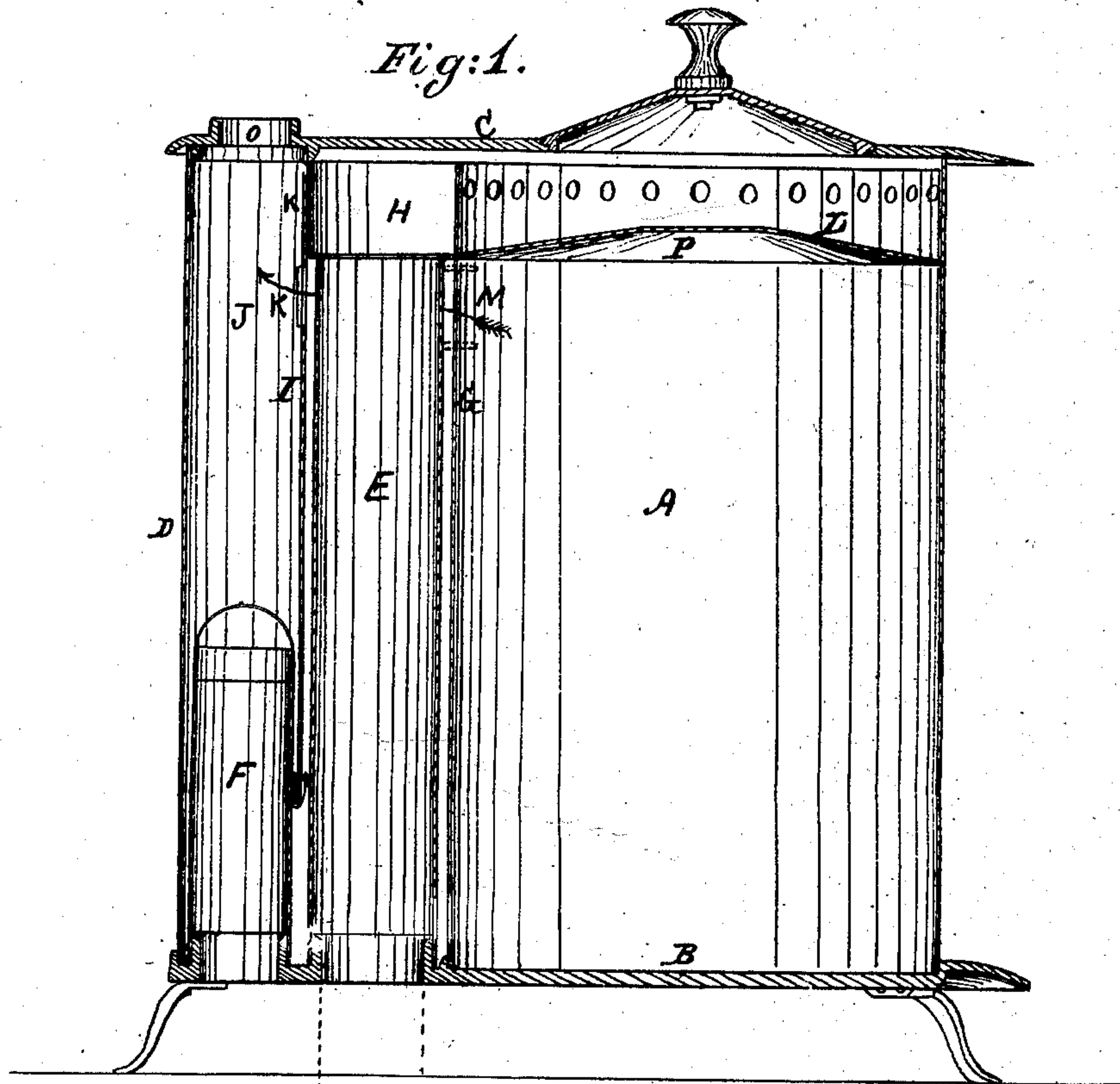
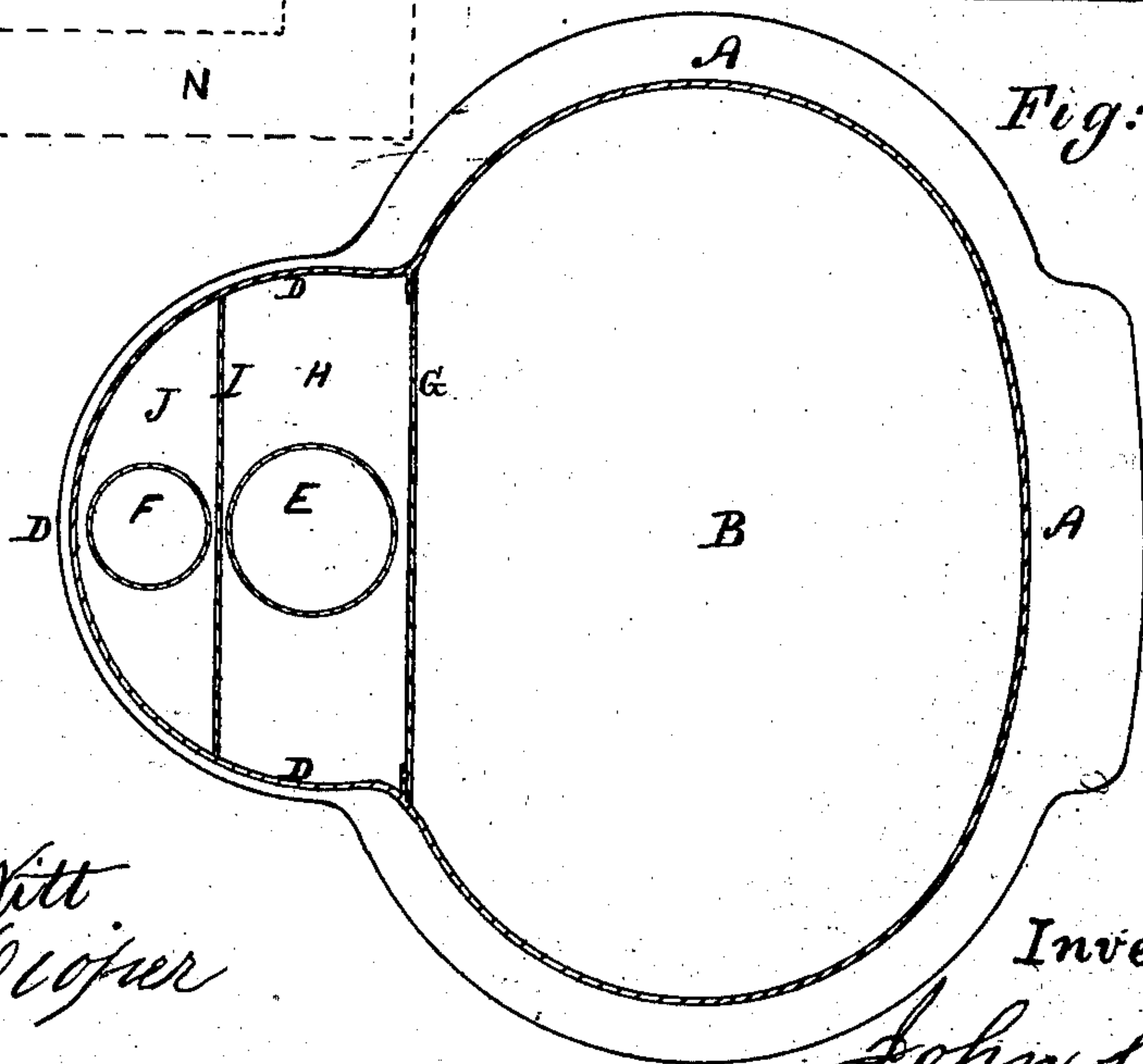


Fig: 2.



WITNESSES.

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JOHN COOPER, OF DUBLIN, ASSIGNOR TO HIMSELF AND BENNETT F. DE WITT, OF INDIANAPOLIS, INDIANA.

Letters Patent No. 80,275, dated July 28, 1868.

IMPROVEMENT IN COAL-STOVES.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN COOPER, of Dublin, in the county of Wayne, and State of Indiana, have invented new and useful Improvements in Stoves; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making part of this specification.

This invention relates to construction and arrangement of stoves combining the advantages of direct radiation with an efficient mode of inducing fresh-warmed air into the room, and educting the impure air from it.

Figure 1 is a vertical section taken through the centre of the stove from front to rear.

Figure 2 is a plan or horizontal section.

Similar letters of reference indicate corresponding parts in the several figures.

The following description will enable skilled artisans to make and use my invention.

A is the sheet-iron body of the stove, B cast-iron base, and C the top. The external form of the stove is that of the common oval sheet-iron air-tight, having a semi-cylindrical addition, D, projecting from the rear, in which is arranged the pipe E, for inducing the fresh air supplied by a pipe, N, (shown in dotted lines,) that connects with the external air, and a pipe, F, for educting the impure air from the room.

The semi-cylindrical smoke-chamber D is separated from the fire-chamber by a partition, G, near the top of which are openings through which the smoke passes from the fire-chamber to chamber D. The position of these openings is indicated by the dotted lines at M.

Chamber D is subdivided by a partition, I, that extends from the top plate down to within six or twelve inches of the bottom plate. This partition has openings near the top, at K, to allow the smoke to pass directly into division J, from whence it passes off by the smoke-pipe O.

The openings at K, in partition I, may be closed by a sliding damper, to cause the smoke to descend in division H, and pass under the partition I into division J, and thus be retained longer in contact with the induction-pipe E, and also with the external case, by which it will impart more of its heat to them.

The vitiated air of the room is drawn into the stove through pipe F, and is carried off with the smoke. A hood is placed over the top of pipe F, to prevent the soot from falling through the pipe to the floor. A plate, P, covers the fire-chamber, and extends across division H, forming a chamber, L, above and between it and the top plate C, into which the fresh air passes from pipe E, where it receives additional heat from plate P, and is thence discharged, through the openings in case A, into the room.

A marked advantage of my invention consists in the arrangement of the induction-pipe E and eduction-pipe F in a comparatively small addition, D, to the stove in the rear, where it takes up no room otherwise available, providing additional direct-radiating surface, combined with a convenient means of warming the fresh air in its passage through the stove, and an available and practicable means of educting the vitiated air from the room.

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

The addition D, separated from the fire-chamber by the partition G, and subdivided into compartments H J by the partition I, as set forth, and, in combination therewith, the induction-pipe E, eduction-pipe F, and chamber L, arranged substantially as set forth.

JOHN COOPER.

Witnesses:

SAMUEL A. COOPER,
C. W. WITT.