

G. G. HUNT.

Stove.

No. 38,828.

Patented June 9, 1863

Fig. 1.

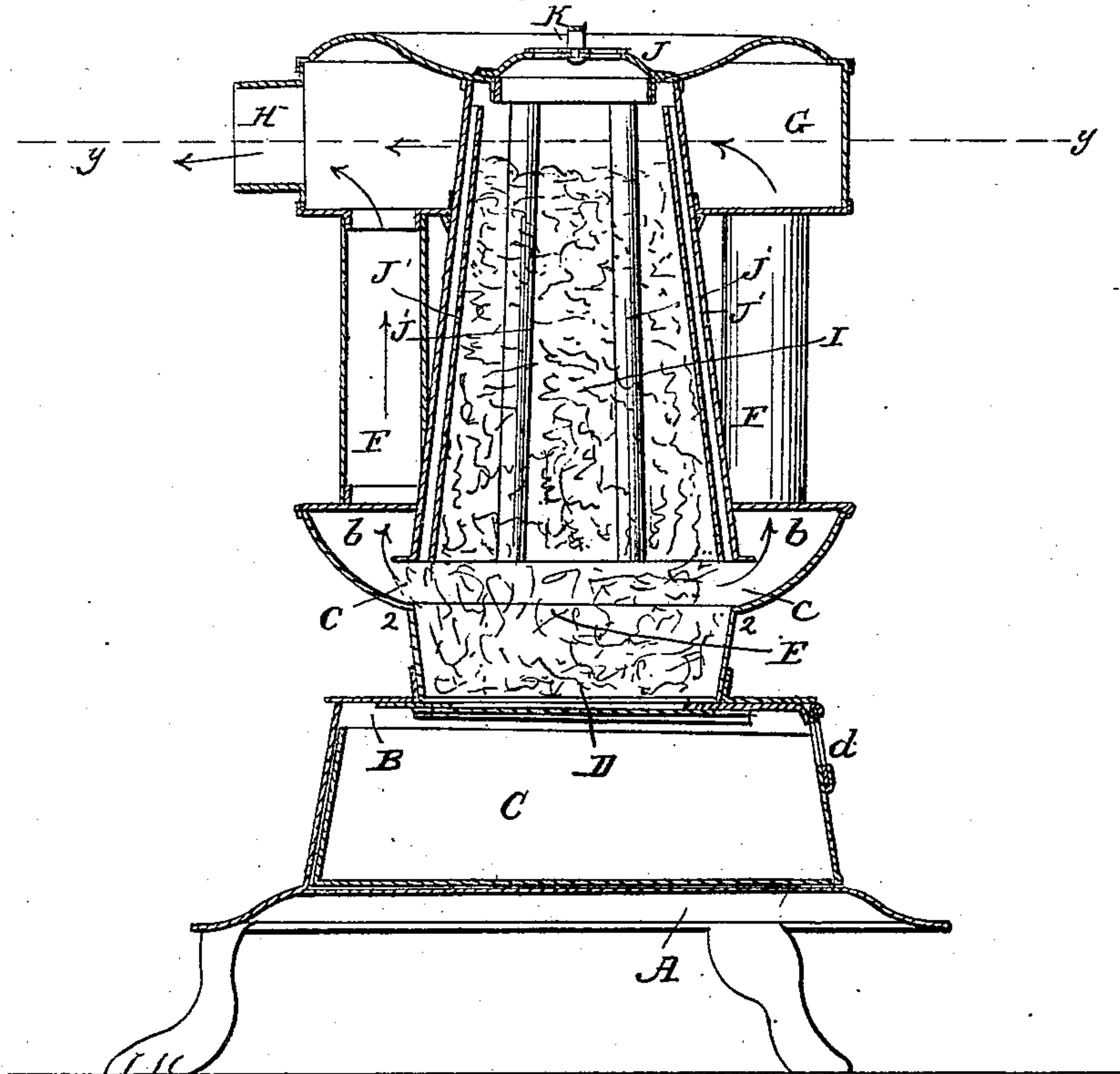
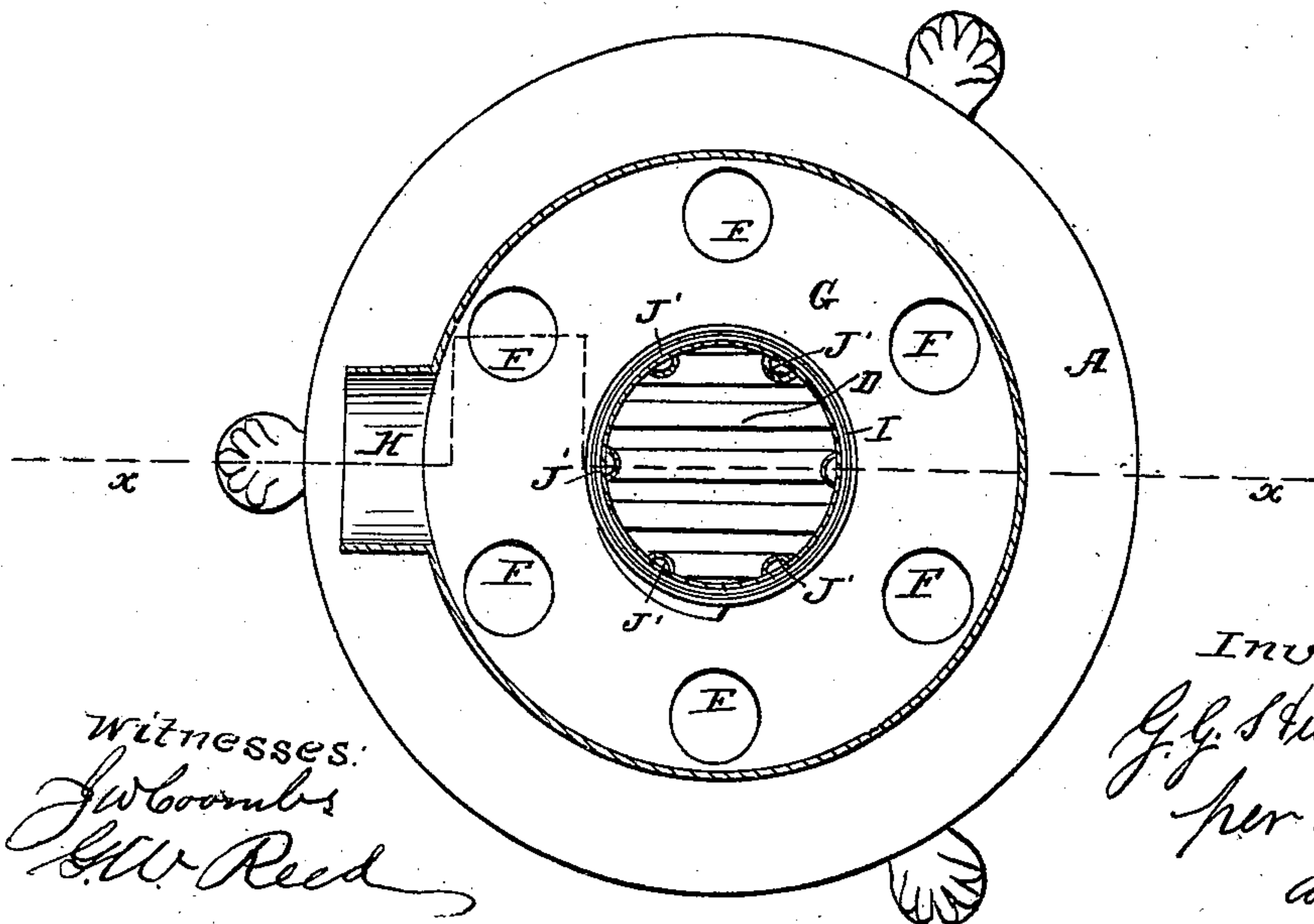


Fig. 2.



Witnesses:
J. W. Coombs
G. W. Reed

Inventor:
G. G. Hunt.
per Munn & Co
attorneys.

UNITED STATES PATENT OFFICE.

G. G. HUNT, OF QUINCY, ILLINOIS.

IMPROVEMENT IN STOVES.

Specification forming part of Letters Patent No. 38,828, dated June 9, 1863.

To all whom it may concern:

Be it known that I, G. G. HUNT, of Quincy, in the county of Adams and State of Illinois, have invented a new and Improved Coal and Gas Burning Stove; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a horizontal section of the same, taken in the line *y y*, Fig. 1.

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

The object of this invention is to obtain a stove which will burn all the inflammable gases, smoke, &c., evolved by imperfect combustion, thereby economizing in fuel, and at the same time obviating the difficulty hitherto caused by the flues of the stove becoming clogged or choked up with soot. The invention is more especially designed for the burning of bituminous coal, but anthracite coal may be used and a saving in that also effected.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the base of the stove, on which the ash-box B is placed, the latter being provided with a drawer, C, and having a fire-grate, D, at its upper end.

E represents the fire-pot, which is fitted on the ash-box B and directly over the grate D.

F represents a series of vertical tubes, the lower ends of which communicate with the upper part of the fire-pot E, as shown in Fig. 1. The upper ends of the tubes F communicate with an annular chamber, G, with which the smoke pipe H communicates. The tubes F are simply flues, as also is the chamber G.

I represents a conical chamber, the lower end of which is fitted centrally into the upper part of the fire-pot E and its upper end fitted in the central opening formed by the chamber G. The chamber I is provided with a lid, J, which may have a register, K, at its center, and to the inner side of the chamber I there are attached a series of tubes, J', which extend from the bottom of I upward nearly to its upper end.

The central opening, in which the upper end of the chamber I is fitted, is provided with a pendent annular flange, *a*, which projects downward sufficiently far to prevent the upper

ends of the tubes J' from being choked up with coal, the latter being thrown into the top of I, as presently shown. This is an important feature of the invention, for if the tubes J' should become choked or clogged the stove would be rendered comparatively inoperative so far as the gas-burning property is concerned.

The upper part of the fire-pot E is of flaring or bell shape, as shown clearly at *b* in Fig. 1, and the lower end of the chamber I extends down within a short distance of the bottom of the part *b*, so as to form a narrow throat, *c*, all or nearly around the fire-pot.

The operation is as follows: A fire is kindled in the fire-pot E, and when fairly under way the chamber I is nearly filled with coal, the damper *d* in the front of the ash-drawer *c* is partly closed, and the register or damper K in the lid J is opened in order to admit air into I, which air passes down through tubes J' and mingles with the smoke and gases in the throat *c*, these products of combustion, or, rather, of imperfect combustion, being thereby ignited and consumed in the upper part of *b* and in the tubes F.

It will be understood that there is no smoke in the upper part of the chamber I, and the lid or cover J may be entirely removed for replenishing I without any danger of smoke issuing therefrom. The narrow throat *c* causes a uniform draft all around the fire-pot E. This fire-pot, it will be seen, is quite shallow, and is supplied with fuel from I. The mingling of the air with the smoke and gases at the throat *c* causes the same to be thoroughly incorporated with each other, so as to insure perfect combustion of the same.

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

1. The chamber I, provided with the internal air-tubes J', in combination with the fire-pot E, flues or vertical tubes F, communicating with the annular chamber G and smoke-pipe H, all arranged to operate as and for the purpose herein set forth.

2. The annular pendent flange *a* in the central opening of the annular chamber G, when placed relatively with the upper ends of the tubes J', to operate as and for the purpose herein set forth.

G. G. HUNT.

Witnesses:

J. WILLIAMS,

D. C. WARWICK.