

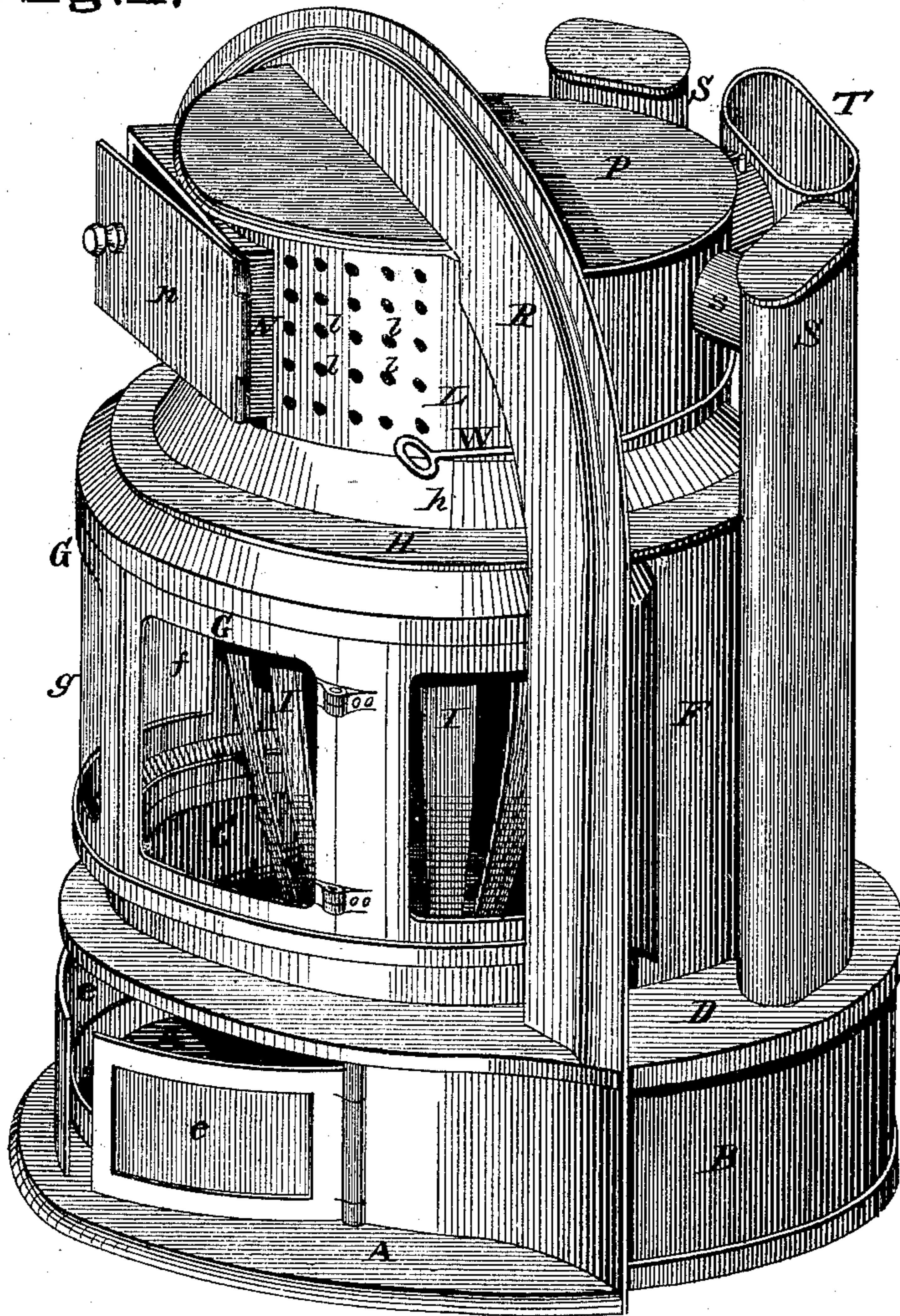
C. H. BLANCHARD.

Fire-Place Heating-Stove.

No. 130,692.

Patented Aug. 20, 1872.

Fig. 1.



ATTEST
Jas. L. Ewin
Walter Allen

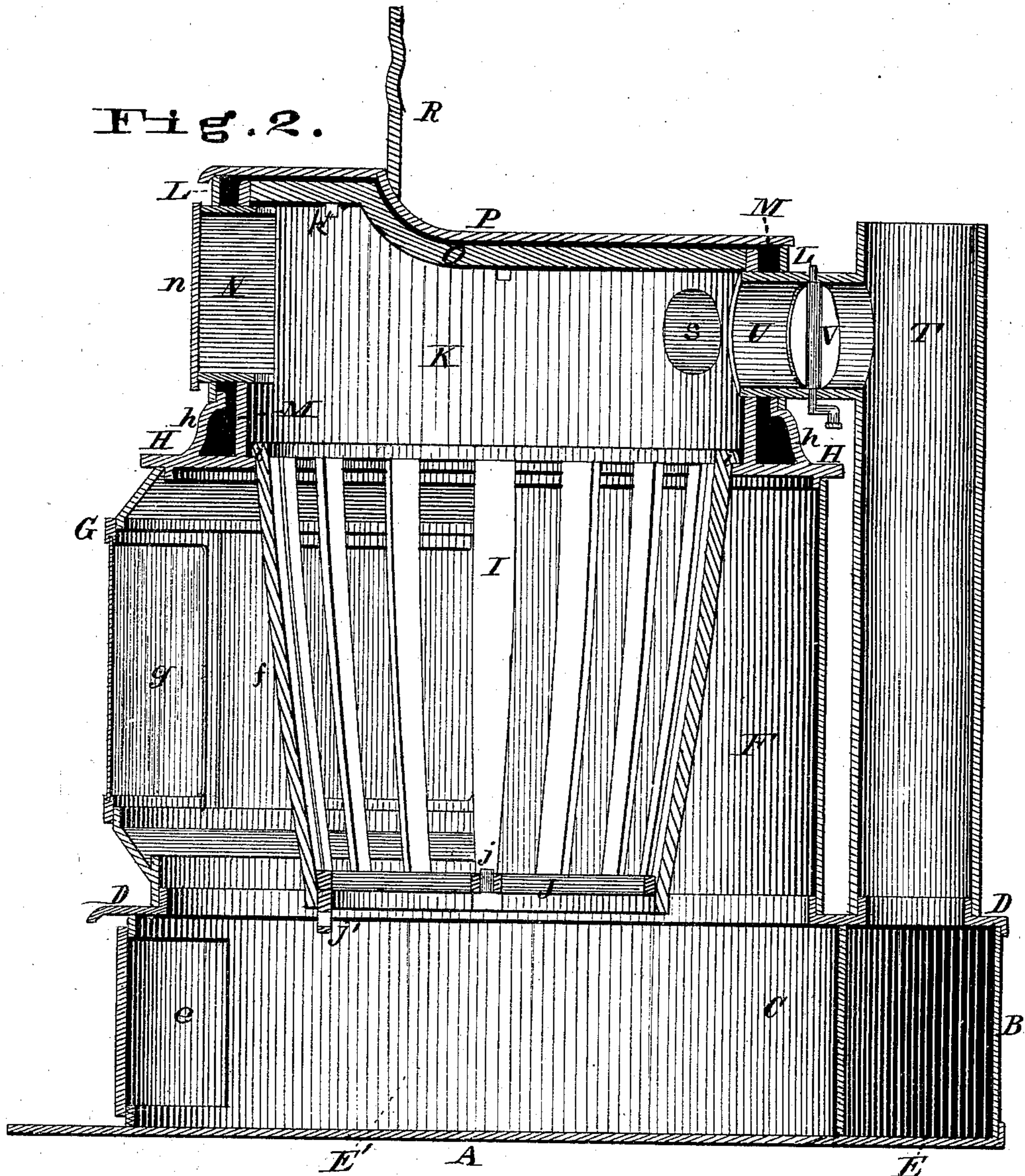
INVENTOR
Charles H. Blanchard
By Knight, Bro. & Atty.

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 Charles H. Blanchard
 By *Thos. H. M.* Atty.

UNITED STATES PATENT OFFICE.

CHARLES H. BLANCHARD, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN FIRE-PLACE HEATING-STOVES.

Specification forming part of Letters Patent No. 130,692, dated August 20, 1872.

Specification describing a certain Improved Fire-Place Stove or Heater, invented by CHARLES H. BLANCHARD, of the city and county of St. Louis and State of Missouri.

My invention relates to a heating-stove for insertion in a fire-place in place of a grate, the said stove being specially constructed for consumption of bituminous or soft coal. My invention consists in the combination, in a fire-place stove, of a removable basket-grate, a removable cap-plate, (preferably of refractory material,) and a removable top plate, the said cap-plate and top plate being separated by an air-chamber, and adapted, as hereinafter described, to permit the removal of the grate without displacing any parts other than the said cap-plate and top plate.

Figure 1 is a perspective view of my improvement. Fig. 2 is a transverse vertical section from front to back, (on an enlarged scale.)

A is the base or bottom plate, from which extend upward two curved plates, B and C, whose upper edges are connected together by a horizontal, flat, curved plate, D. The plates B C D and part of the plate A inclose or form a base flue or chamber, E, partly surrounding the ash-pit E', whose doors *e* may complete the circle of the plate C, and may be furnished with registers to admit and regulate the amount of air supplied to the fire in the basket-grate. Above the plate D the stove has a nearly cylindrical portion, of which the rear-half F is a solid plate; but the front contains the doors G, and apertures in the metal stopped with mica-frames *f*. The doors have mica-frames *g*, and may be supported on hinges, (as shown,) or be made to slide open and shut. At the top of the part F is an annular horizontal plate, H, which has a central circular cavity in which the basket-grate I is inserted from the top; a flange, *i*, upon the upper edge of the grate, taking over the inner edge of the plate H, and serving to support the grate. The grate has a shaking bottom, J, turning on a pivot, *j*, and having a lug, *j'*, perforated to admit the point of the poker to shake the bottom. From the plate H arise two concen-

tric cylinders, of which the inner one, K, is preferably of cast-iron, and the outer one, L, of sheet-iron, slipped on a flange, *h*, of the plate H. Between the cylinders K and L is an annular air-chamber, M, serving to prevent the escape of heat into the fire-place chimney. Air enters into and escapes from the chamber M through holes *l* in the front of the cylinder L, the air becoming heated in the chamber M and serving to heat the room. N is the mouth through which coal is fed to the fire. The throat passes through both cylinders K and L. It has a door, *n*. *k* are lugs on the inner side of the cylinder K, said lugs sustaining a removable plate or tile, O, constituting the top of the combustion-chamber. The plate or tile O may be of cast-iron, but is preferably made of fire-brick, steatite, or other refractory substance. Between the tile O and the top-plate P of the stove is a chamber in communication with the chamber M, and serving the same general purpose as the said chamber—viz., to prevent the escape of heat into the fire-place chimney and to heat the room. The tile O and top-plate P are so constructed and applied that when they are removed the basket-grate I may be lifted out without disturbing any other part of the stove, and so that while said plates are in position the space between them forms a part of the hot-air chamber, as before stated. R is the arch-plate, serving to close the aperture around the stove. The products of combustion escape from the combustion-chamber through horizontal flues *s*, communicating with vertical flues or columns S, whose lower ends are in communication with the base-chamber E, from which they (viz., the products of combustion) have exit through the vertical flue or smoke-pipe T, which ascends the fire-place chimney, and which may communicate with drums to heat other rooms in the house. U is a flue communicating with the combustion-chamber and the flue T, and having a damper, V, operated by a hand-rod, W, extending around to the front part of the stove. This damper is ordinarily closed, and is only opened when the fire is first lighted (or sometimes when a

fresh supply of fuel is added) to allow the smoke free exit from the combustion-chamber through the smoke-pipe T.

Claim.

The fire-place stove herein described, constructed with a removable basket-grate, I, removable tile or cap-plate O, and removable top plate P, the said plates being separated

by an air-chamber, and all arranged to operate as herein set forth.

In testimony of which invention I have hereunto set my hand.

CHARLES H. BLANCHARD.

Witnesses:

SAML. KNIGHT,

W. A. BRAWNER.