(No Model.)

D. M. MURRAY.

STOVE.

No. 346,939. Patented Aug. 10, 1886.

Fig. 1

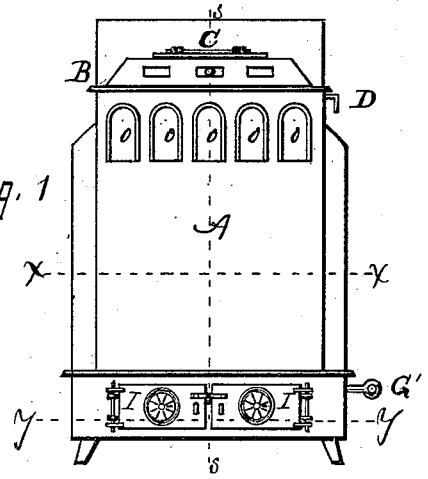

Fig. 2

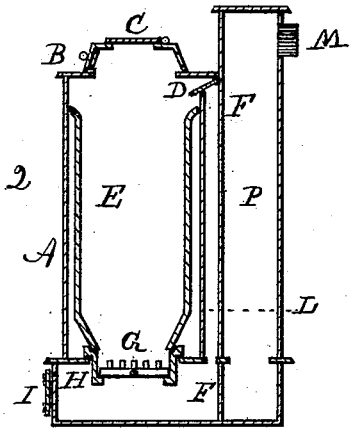

Fig. 3

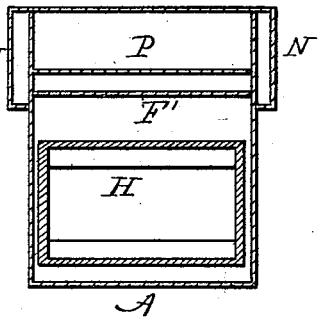

Fig. 4

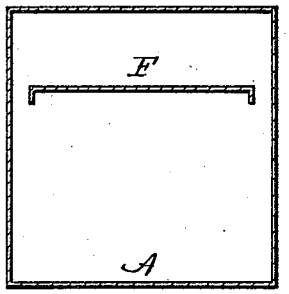

Fig. 5

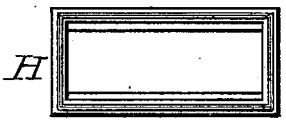

Fig. 6

WITNESSES:

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DAVID M. MURRAY, OF DAYTON, OHIO.

STOVE.

SPECIFICATION forming part of Letters Patent No. 346,939, dated August 10, 1886.

Application filed December 26, 1885. Serial No. 186,714. (No model.)

To all whom it may concern:

Be it known that I, DAVID M. MURRAY, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Stoves; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in stoves; and it consists of the arrangement of the several parts, as will be fully hereinafter set forth. The objects are to consume the fuel by a downward draft through the same, to effect a very complete combustion, and to so situate the fire-pot as to prevent any escape of smoke to the external air. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of the stove. Fig. 2 is a longitudinal section of the same on the line *s*. Fig. 3 is a horizontal section of the same, on the line *x*. Fig. 4 is a horizontal section of the base, on the line *y*. Fig. 5 is a top view of the supporting casting or holder for the grate. Fig. 6 is a top view of the grate.

Like letters designate like parts throughout the several views.

The form of the stove is shown in Figs. 2 and 4. Projections on the sides serve as flues, and a top projection serves for the attachment of the pipe.

A represents the external plates of the stove. The front plate, the plate L, and the sides form the radiating-chamber inclosing the fire-pot. These plates are supported on the plate which divides the ash-pit from the radiating part of the stove. In the front plate may be placed mica windows, as shown at *o o*, Fig. 1.

B is the top, which has a register in its front plate, to admit the air for combustion, and the lid C is pivoted at the apex, through which the fuel may be supplied to the fire-pot. Within the plate over the ash-pit is held the grate-holder H, which is shown in section at Fig. 2, and a top view at Fig. 5. On a projection of this holder rests the grate G, and in a recess of the same rests the fire-pot E. This fire-pot fills the space above, and the bottom is narrowed to cover the space occupied by the grate. The grate can be moved longitudinally for the purpose of shaking down the ashes, and for this purpose the handle G′ is used. Between plate F′ and L there is a space which serves as a flue, and the top of which is closed by the damper D, which is pivoted in the side plates of the stove. The plate F is on a line with plate or diaphragm F′, and the former fills the space within the base, with the exception of the passages to the sides, as shown at F, Fig. 4. On the rear wall is cast a thimble for the pipe M.

At N N are shown the side flues, that convey the products of combustion into the space between the rear outer wall and the diaphragm F.

I I are doors opening into the ash-pit, and within which are the ordinary circular registers.

Either anthracite or bituminous coals may be used, and the operation is thus: The kindling and fuel are put into the fire-pot through the top and are ignited through the doors in the base. The register in the top is opened, the air passing down through the fuel to support combustion, carrying the gases and smoke down to be consumed at and beyond the lower edges of the grate, the products then passing to the side of the base, vertical plate, up the side flues, between the back walls, and into the pipe extending to the flue leading to the outward air. To arrest combustion the damper D is opened, letting the air pass off over the fire-pot through the intermediate flue, and pass off as before described.

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

1. In a heating-stove with downward draft through the grate, the combination of the plate dividing the ash-pit and the chamber, the holder H, grate G, and fire-pot E, inclosed in the said combustion or radiating chamber, substantially as set forth.

2. A heating-stove having a combustion or radiating chamber inclosing a fire-pot, an ash-

pit, a smoke-flue leading from the ash-pit to the top of said combustion or radiating chamber and communicating therewith, a flue behind the smoke-flue communicating with the ash-pit, a damper at the top of the smoke-flue, and a diaphragm in the ash-pit extending to near the side walls thereof, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

DAVID M. MURRAY.

Witnesses:
C. A. WALTMIRE,
B. PICKERING.