M. PRATT.

Cooking Stove.

No. 30,499. Patented Oct. 23, 1860.

Fig. 1.

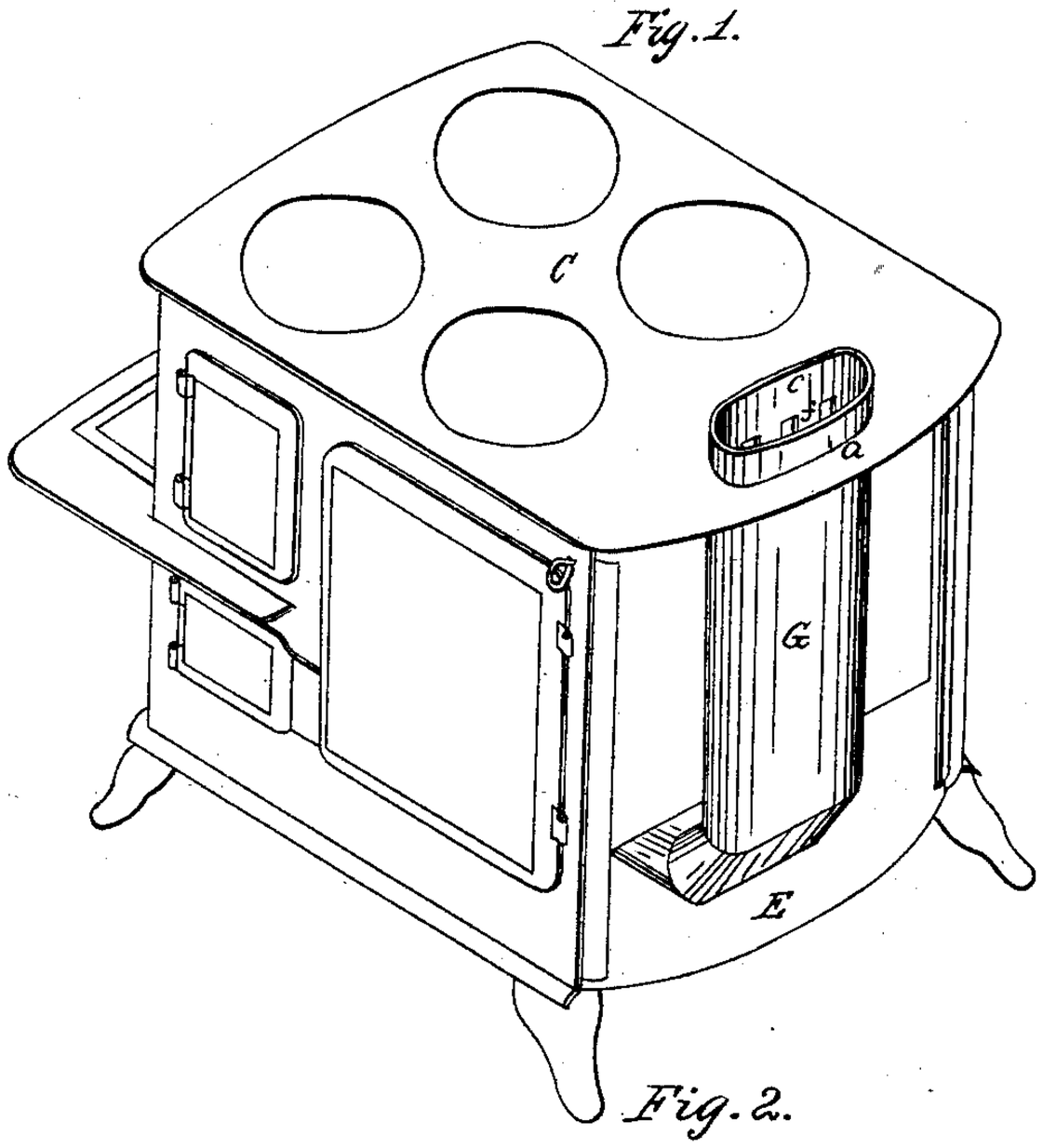
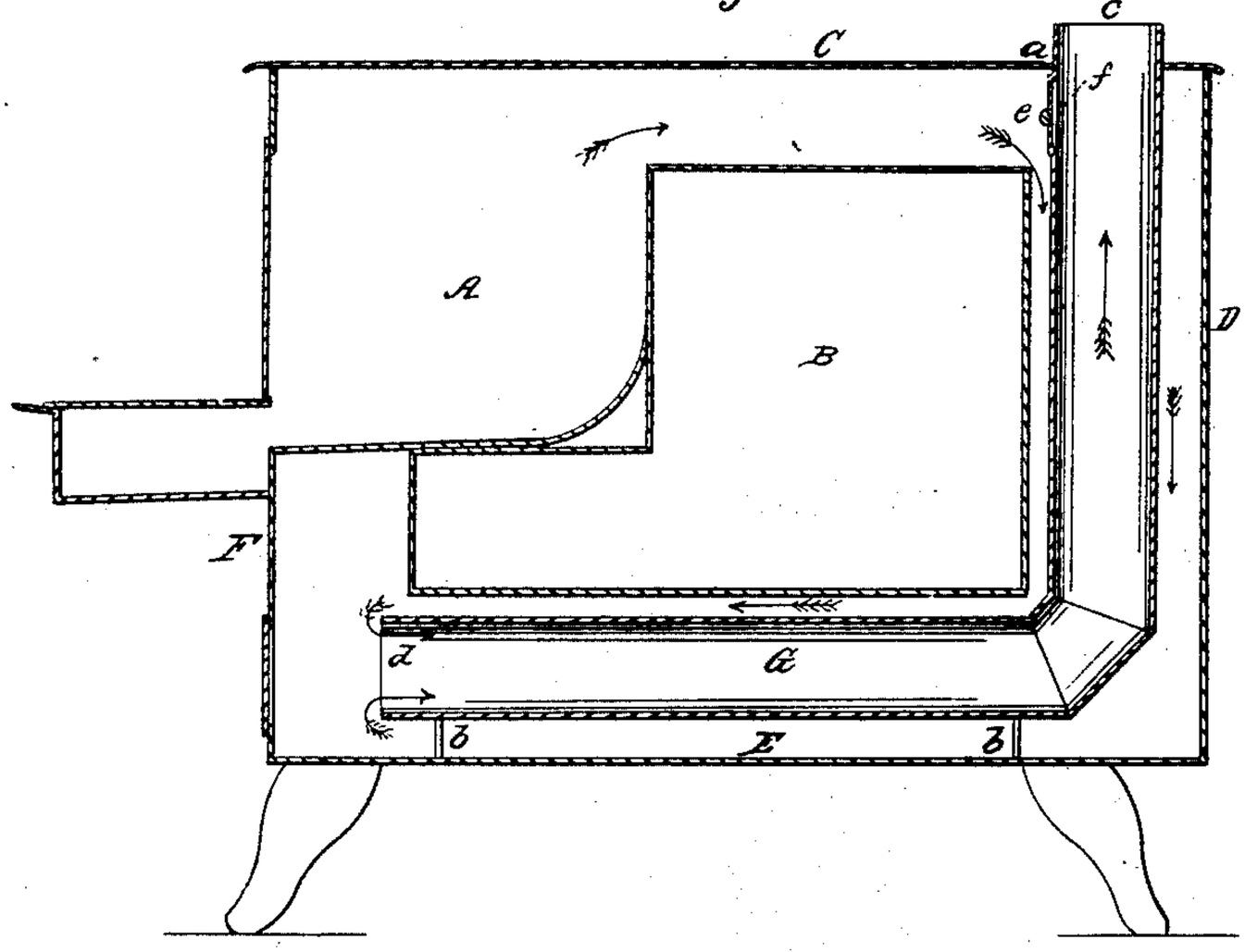


Fig. 2.



Witnesses:
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Inventor:
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UNITED STATES PATENT OFFICE.

MILES PRATT, OF WATERTOWN, MASSACHUSETTS.

COOKING-STOVE.

Specification of Letters Patent No. 30,499, dated October 23, 1860.

To all whom it may concern:

Be it known that I, MILES PRATT, of Watertown, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Cooking-Stoves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, is a perspective view of a stove, the rear end plate being removed to show the flues. Fig. 2, is a longitudinal vertical section through the middle of the stove.

My present invention relates to that class of cook stoves in which the products of combustion are carried over and around the oven to heat it, and then pass off by a return flue to the chimney. In such stoves it has been customary to form this return flue either by division plates which formed two sides of a rectangular passage, the other sides consisting of the bottom of the oven and the bottom plate of the stove, or the end of the oven and the end plate of the stove, or a hemispherical flue was introduced the external stove plates in this case forming one side of the flue. In either case the external stove plate serves to cool the flue and thus check the draft—and where the bottom and end of the oven is used to form one side of the return flue, the heat in which is necessarily not so great as in the flues which first receive the products of combustion, the oven is not heated uniformly throughout as it should be. These difficulties and objections I have overcome by my invention which consists in making the return flue an independent pipe, by which construction the products of combustion before they enter this flue are permitted to circulate uniformly over the outside surface of the oven, and also by surrounding this flue raise its internal temperature and assist in producing a good draft.

That others skilled in the art may understand and use my invention I will proceed to describe the manner in which I have carried out the same.

In the said drawings A, is the fire pot; B, the oven; C, the top plate; D, the back plate; E, the bottom plate; F, the front of the stove; G, the return flue which is an independent pipe (by preference of the form shown in Fig. 1) which is supported at *a*, by the top plate C, and also by legs or stays *b*, resting on the bottom plate E. It communicates at its upper end *c* with the chimney where it may be commanded by an ordinary damper. Its other end *d*, is open. It is also furnished with a valve at *f*, operated by a rod *e*. This valve when open allows the draft to pass directly from the fire pot A, to the chimney (when the oven is not in use) or when closed diverts it as indicated by the arrows down between the back of the oven and the back D, of the stove, thence beneath the oven to the front of the stove at F, whence it passes by the return flue G to the chimney. The products of combustion when taking this course are free to circulate in contact with the entire surface of the back and bottom of the oven, which they would not be if the oven formed part of the return flue, and also that they surround the return flue on all sides and keep it hot, which they would not do if the back and bottom plates of the stove or either of them formed part of this flue. I also consider that the circular or oval form of flue which I am enabled to use, is better suited for producing a good draft than when it has an angular cross section as in the usual construction.

What I claim as new and desire to secure by Letters Patent is—

The employment of the independent return flue, G, in combination with the independent oven B, when, the whole is so constructed and arranged that the products of combustion shall first pass entirely around the oven, in direct contact with it, and surrounding the return flue, G, and then through the said return flue, as specified for the purposes set forth.

MILES PRATT.

Witnesses:

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