4 Sheets--Sheet 1.

W. DOYLE.

Parlor Cook Stove.

No. 165,919. Patented July 27, 1875.

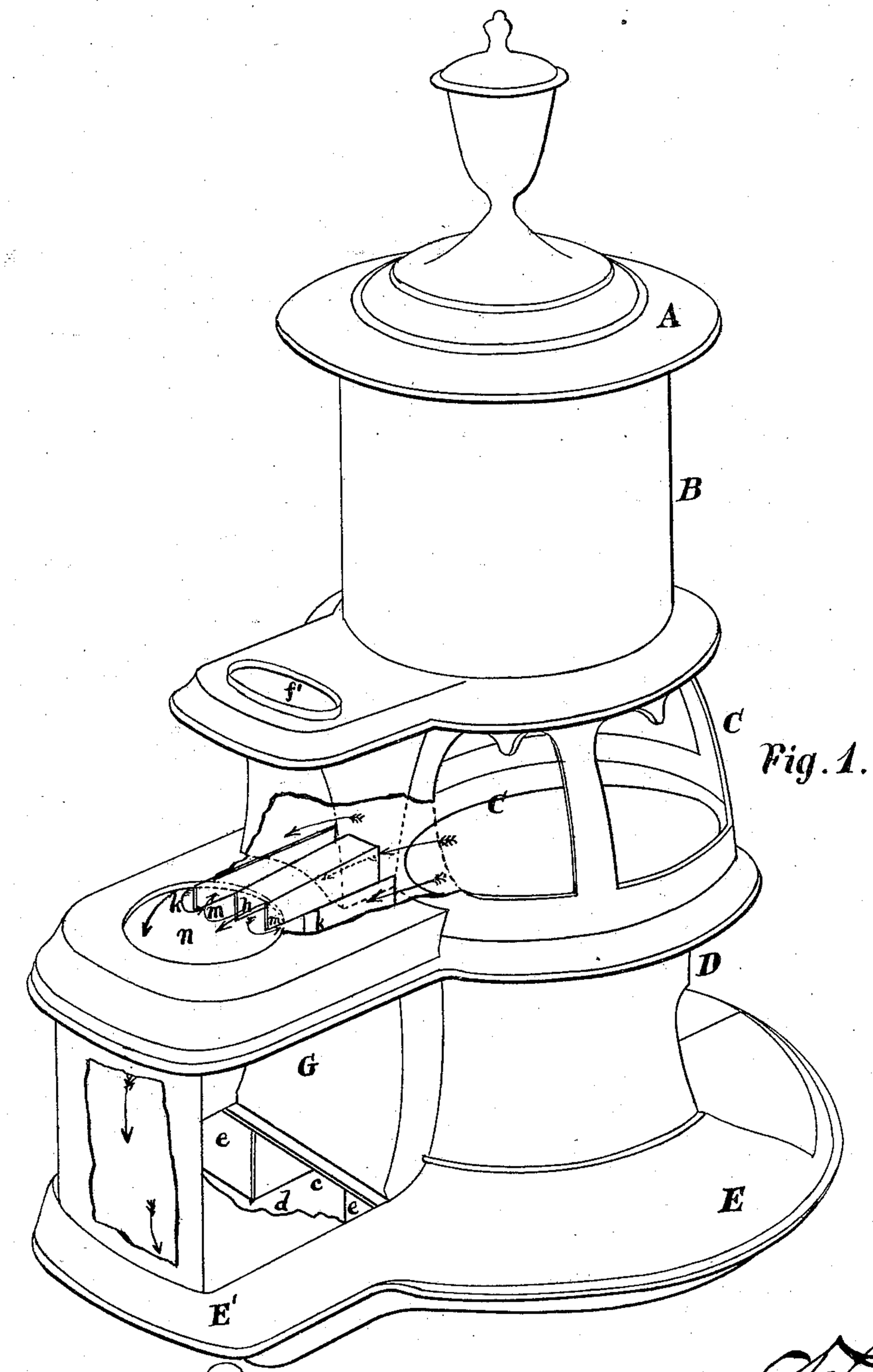


Fig. 1.

Witnesses { James Knight
Edward N. Doyle.

Wm. Doyle

Inventor.

4 Sheets--Sheet 2.

W. DOYLE.
Parlor Cook Stove.

No. 165,919. Patented July 27, 1875.

Fig. 2.

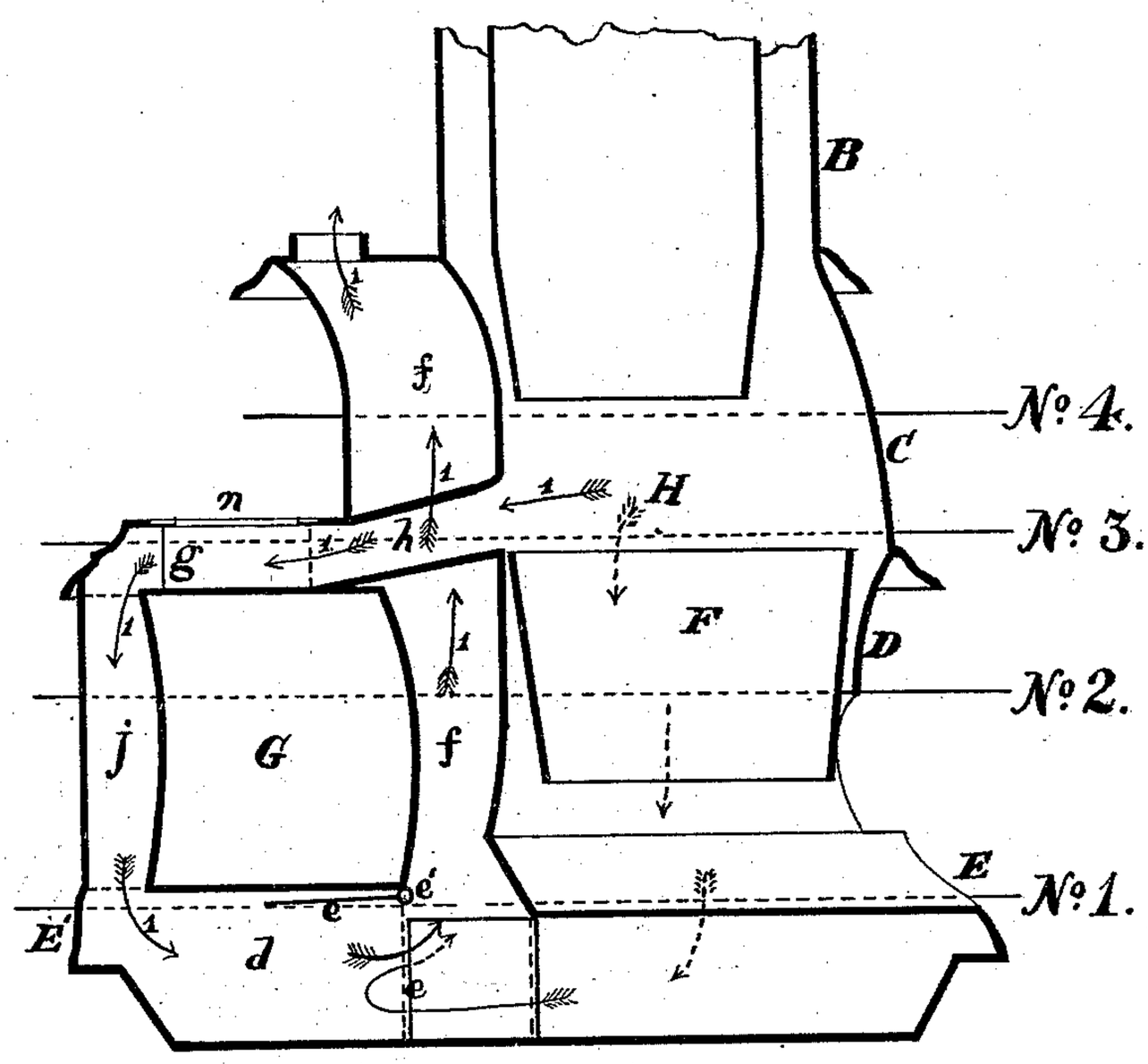
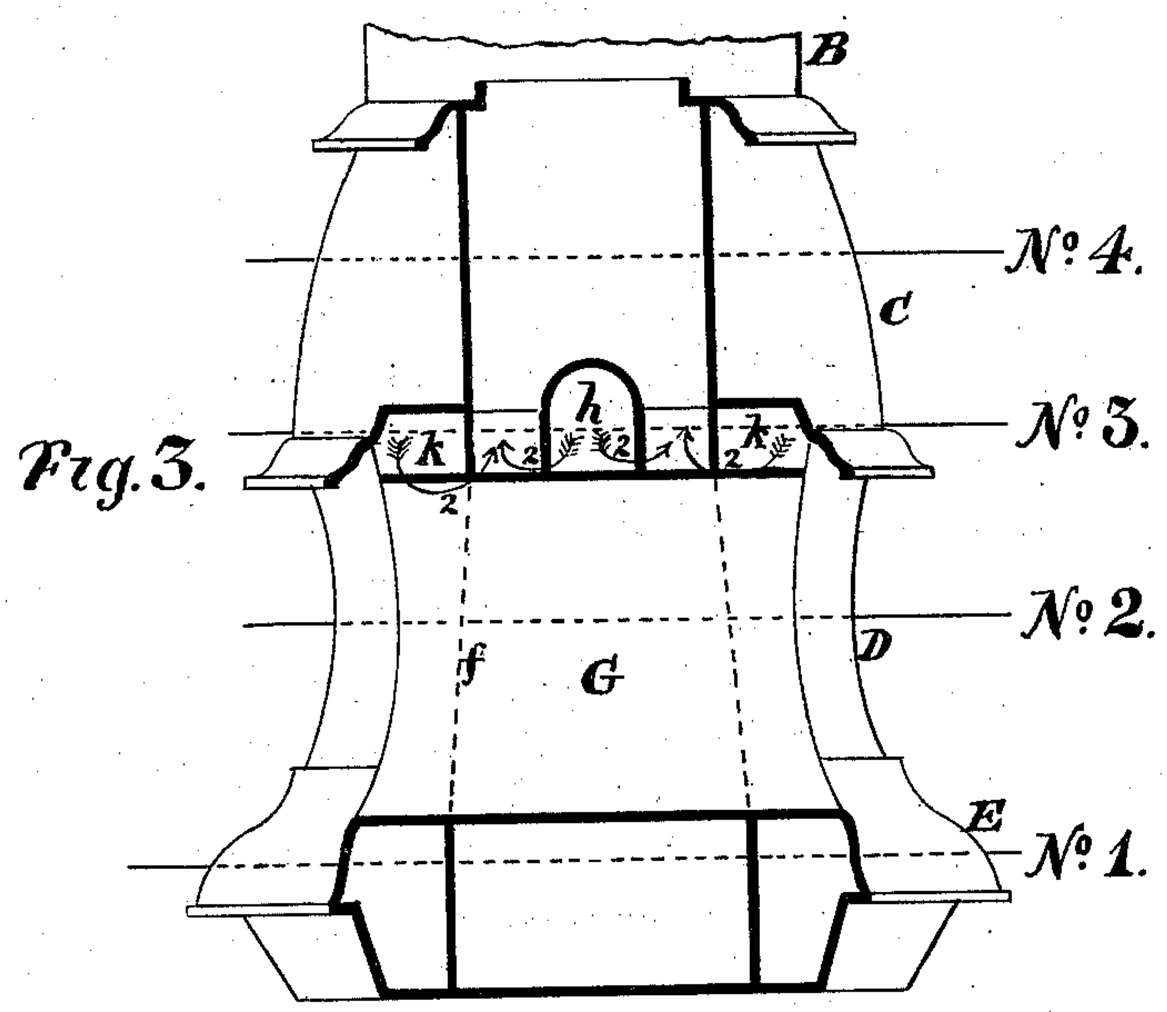


Fig. 3.



Witnesses: James Wright, Edward A. Doyle.

Wm Doyle

Inventor.

4 Sheets--Sheet 3.

W. DOYLE.
Parlor Cook Stove.

No. 165,919. Patented July 27, 1875.

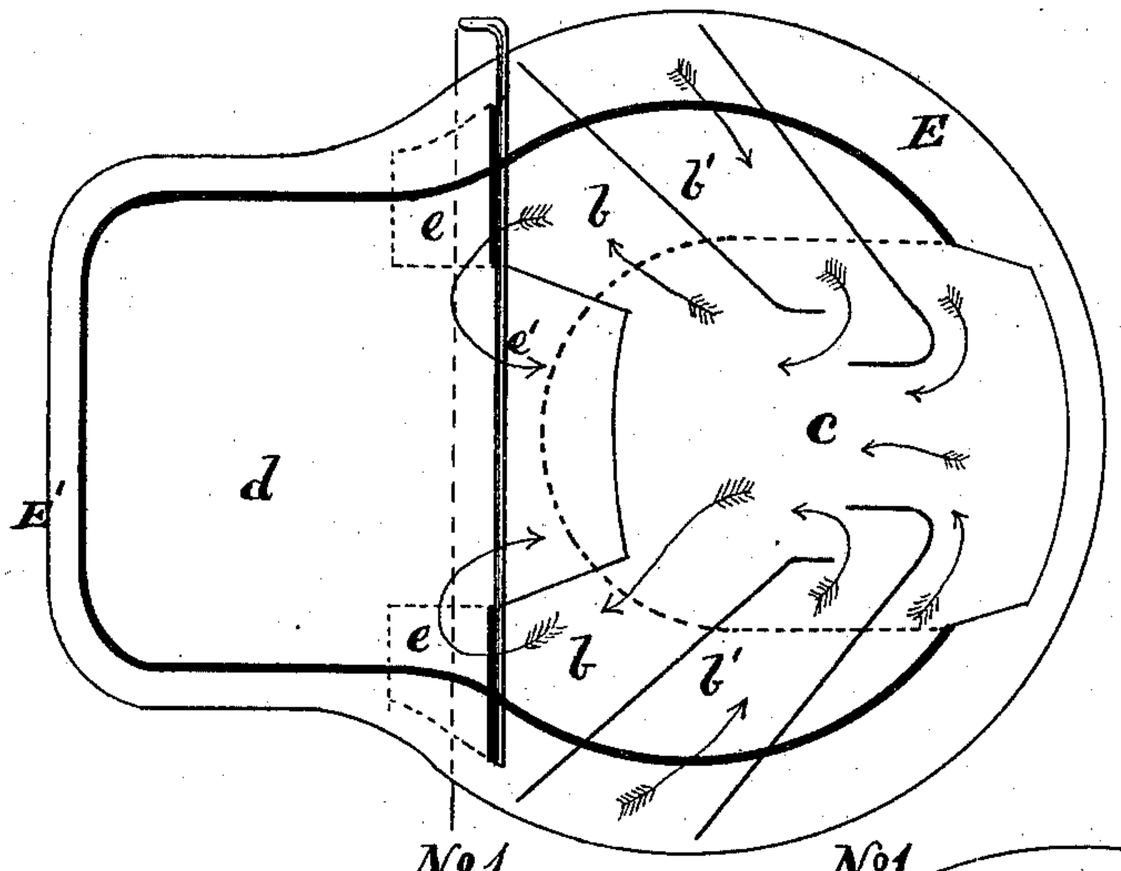


Fig. 4.

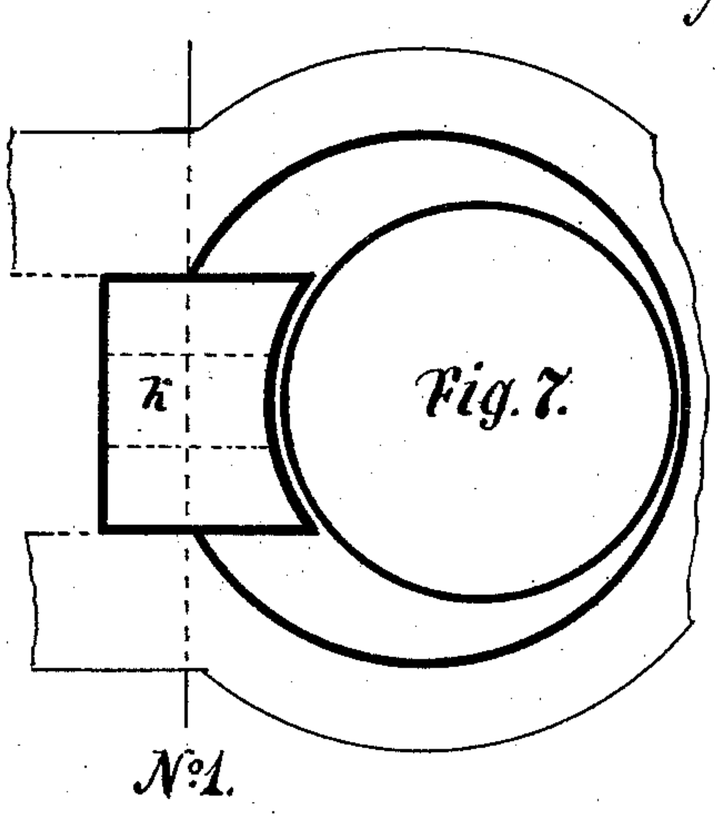


Fig. 7.

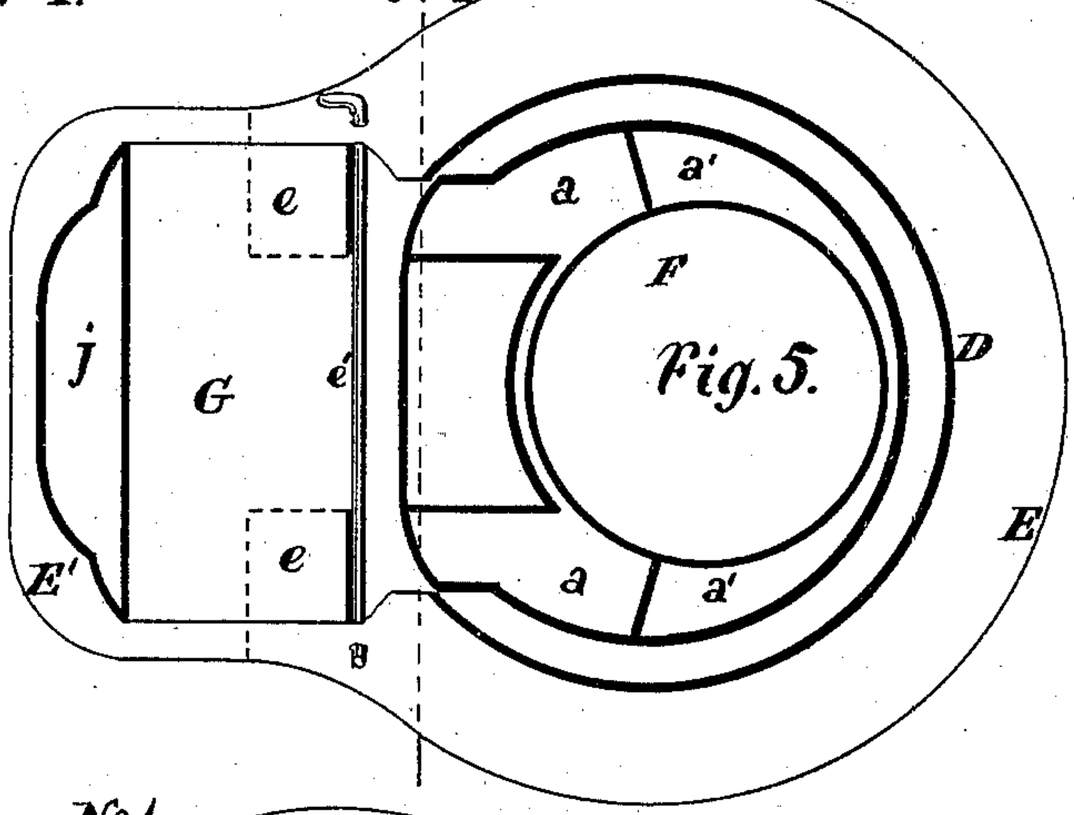


Fig. 5.

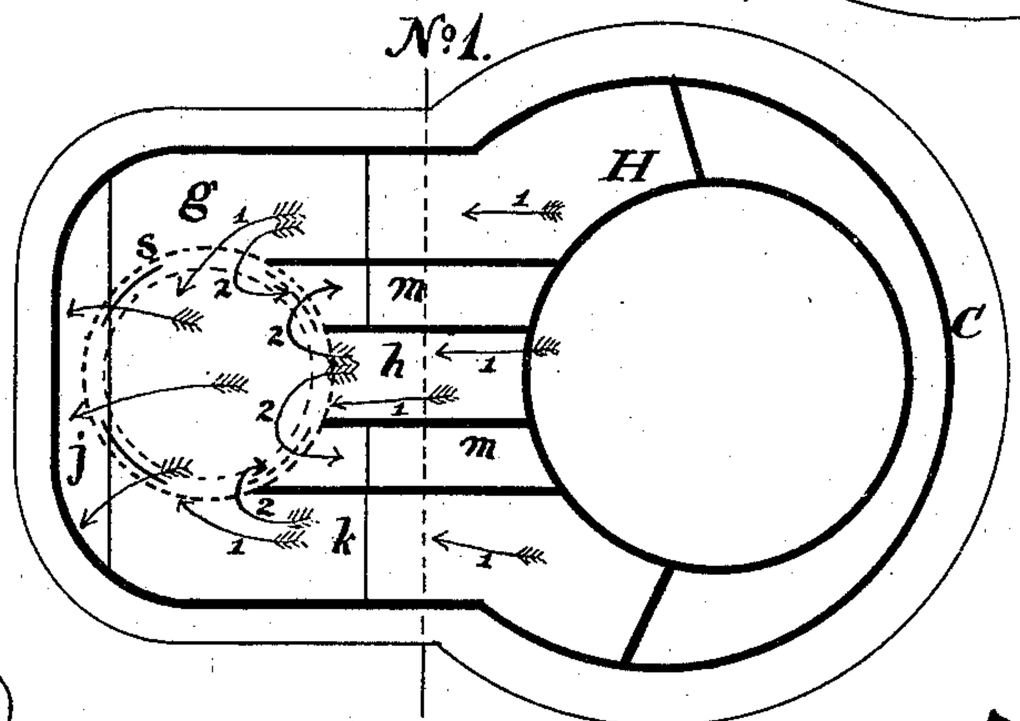


Fig. 6.

Witnesses { James Wright, Edward N. Doyle.

Wm. Doyle

Inventor.

4 Sheets--Sheet 4.

W. DOYLE.

Parlor Cook Stove.

No. 165,919. Patented July 27, 1875.

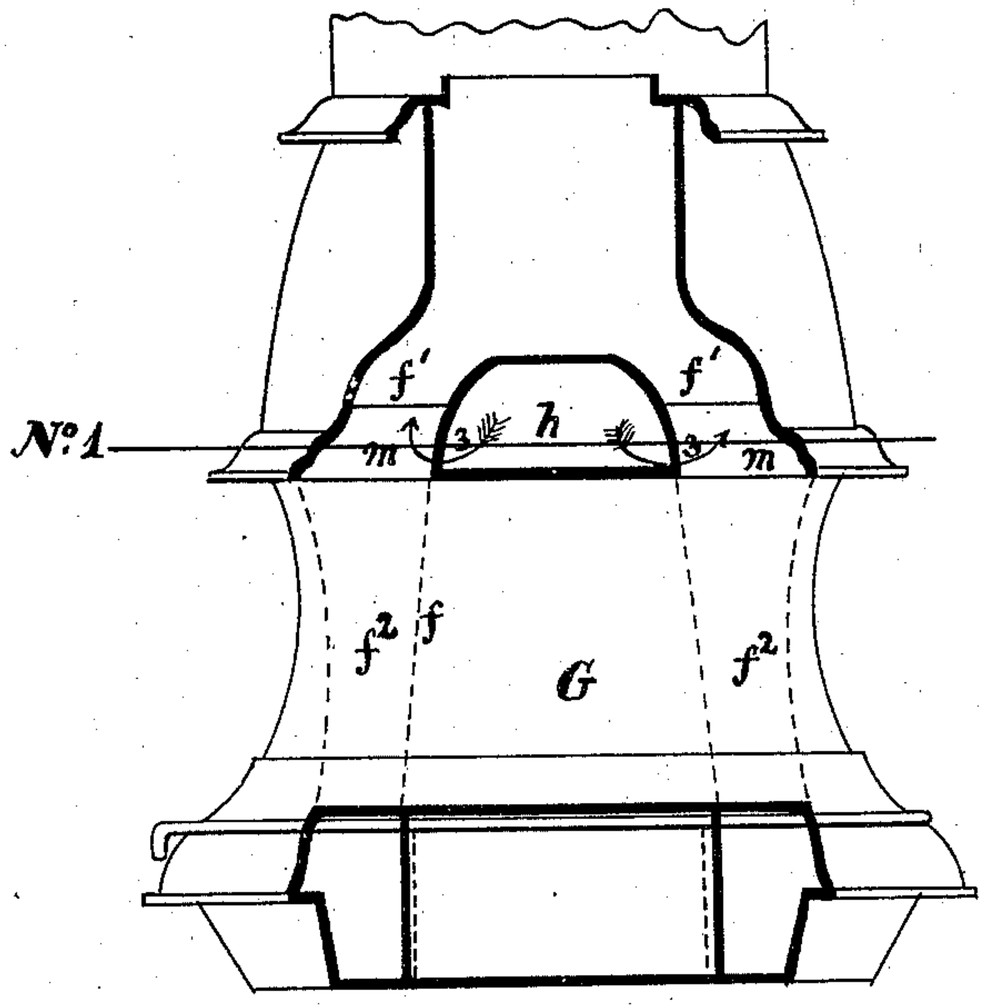


Fig.8.

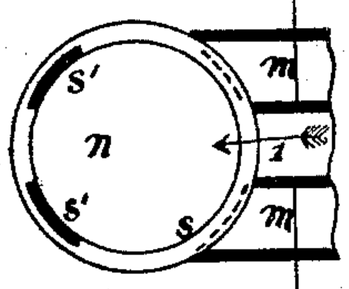


Fig.11.

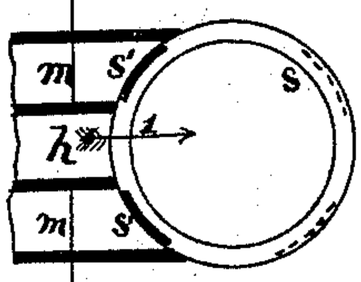


Fig.10.

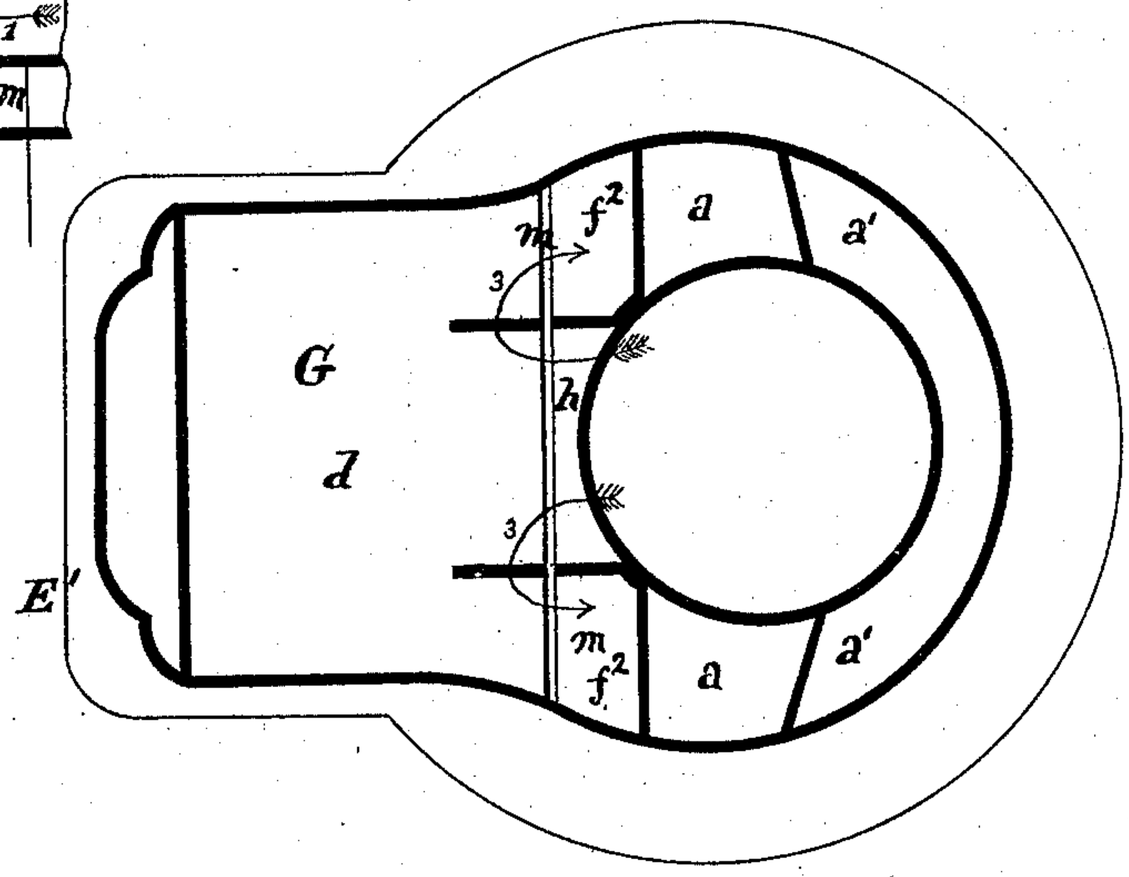


Fig.9.

Witnesses. James Knight
Edward H. Doyle.

Wm. Doyle
Inventor.

UNITED STATES PATENT OFFICE.

WILLIAM DOYLE, OF ALBANY, NEW YORK.

IMPROVEMENT IN PARLOR COOK-STOVES.

Specification forming part of Letters Patent No. **165,919**, dated July 27, 1875; application filed May 31, 1875.

CASE A.

To all whom it may concern:

Be it known that I, WILLIAM DOYLE, of the city and county of Albany, State of New York, have invented certain Improvements in Parlor Cook-Stoves; and I do hereby declare that the following is a description thereof, reference being had to the accompanying drawings, in four sheets, forming a part of this specification, in which—

Figure 1 represents a perspective view of the stove, embodying the improvements in this invention. Fig. 2 is a sectional elevation taken from front to rear. Fig. 3 is a sectional elevation, taken from side at line No. 1 in Figs. 4, 5, 6, and 7. Fig. 4 is a plan view of the base of the stove, taken at line No. 1 in Figs. 2 and 3. Fig. 5 is a horizontal view, taken at line No. 2 in Figs. 2 and 3. Fig. 6 is a horizontal view taken at lines No. 3, Figs. 2 and 3. Fig. 7 is a horizontal view, taken at lines No. 4, Figs. 2 and 3. Fig. 8 is a sectional elevation, taken from front to rear, and embodying a modified form of some of the parts of this invention. Fig. 9 is a horizontal view, illustrating the same, and taken at line No. 1 in Fig. 8. Figs. 10 and 11 are plan views of the ring-damper, illustrating the several ways it may be set for operation in this invention.

My invention relates to that class of parlor cook-stoves having the oven and pot-hole placed at the rear of the fire-pot, and below the combustion-chamber section; and consists in the several parts, and combinations of parts, hereinafter described, intended to operate with the hot gaseous products of combustion evolved from the burning fuel, to conduct the same in several directions about the oven, or to the pot-hole, or to the base of the stove proper, or to both the said base and the cooking parts of the stove, as may be required in baking, cooking, boiling, or for warming a room, or all these purposes at the same time.

To enable others skilled in the art to make and use my invention, I will proceed to describe it in reference to the drawings, and the letters of reference marked thereon, the same letters indicating similar parts.

In the drawings, the top section A, reservoir section B, combustion-chamber section C, ash-chamber section D, and base-section E comprise the heating-stove proper. The said sections may each be made with any desired outline of form practiced by the trade. F is the fire-pot, suspended or supported within the section D, and surrounded in part by the descending side flues *a a a′ a′*, which flues lead into the several base-flues *b b*, *b′ b′*, and *c*. The rear end of the central or base flue *c* is stopped off or closed; an outlet from the same is had through the rear side base-flues *b b* leading from the rear descending side flues *a a*. As in my former invention in improvements in parlor cook-stoves the base E of the stove proper in this invention is also extended back to form the extension E′, in which is made the horizontal oven-bottom flue *d*, with which the base-flues *b b* communicate. A double damper, *e e*, attached to the shaft *e′*, is also provided, which damper when turned open, as shown by full lines in Fig. 2, and dotted lines in Figs. 4 and 5, will permit the hot gases to pass from the base of the stove proper through the flues *b b* into the horizontal flue *d*, to ascend to the exit by the flue *f*; and when closed, as shown by full lines in Fig. 4, and dotted lines in Figs. 2 and 5, will prevent such passage, while in my former invention the hot gases passed to the horizontal flue from the flue *c*, which was open to the same. Located at the rear of the ascending flue *f*, which leads to the exit, is the oven G. Leading from the combustion-chamber H to the top horizontal flue or chamber *g*, over the oven, is the blast-flue *h*, which passes through the ascending flue *f*, as shown in Figs. 3 and 6, and is intended to conduct the hot gases from the combustion-chamber to the top oven-flue for their passage around the oven through the descending flue *j*, and bottom oven-flue *d*, and ascending flue *f*, as indicated by arrows No. 1 in Fig. 2, when the dampers *e e* are turned to close the base-flues *b b*. Leading also from the combustion-chamber H to the top horizontal flue *g* are the side blast-flues *k k*, which also lead the hot gases from the combustion-chamber for a passage around the oven in the same manner as they are led through the central blast-flue *h* when the base-dampers *e e* are closed, as indicated by the

same arrows No. 1 in Fig. 2. Leading from the top horizontal flue or chamber *g* to the upper part of the ascending flue *f* are the direct return-flues *m m*, which, when open, permit the hot gases passing from the combustion-chamber into the top flue or chamber *g* through the blast-flues *h* and *k k* to have a quick and direct passage to the ascending flue *f* leading to the exit *f'*, as indicated by arrows No. 2 in Figs. 3 and 6. It is evident that, by reason of the side walls of the said blast-flues being contiguous with the ascending flue *f* and direct return-flues *m m*, the said flues will become highly heated, and thereby cause a powerful draft to the stove.

It is also evident that the blast-flue *h* may be enlarged and the side blast-flues *k k* may be entirely dispensed with, while the direct return-flues may be placed between the enlarged flue *h* and the casing, as shown in Figs. 8 and 9, without materially altering the principle of the operations of these parts of the stove, for leading the hot gases from the combustion-chamber for a passage around the oven when the direct return-flues are closed, or for a passage of the said hot gases from the combustion-chamber to the top horizontal chamber *g*, and thence direct to the upper portion of the ascending flue *f* for passage to the exit, as shown by arrows No. 3 in Figs. 8 and 9.

In such a case I would also modify the form of my ascending flue in its portion below the line of the top of the oven, and make it consist of the branch flues f^2 f^2, located at the sides, as shown by dotted lines in Fig. 8 and full lines in Fig. 9, and joining with the upper portion, as shown in Fig. 8, with their lower open end opening to the lower horizontal flue beneath the oven, the same as in Fig. 2, in which case the difference would be only that of location, and not of means or results, as the said ascending flues, whether a single flue or a branch flue, would operate to cause the hot gases to envelope the top, rear, and front sides and bottom of the oven, to heat the same, when the dampers were properly turned to direct such a passage of the said gases. The only advantage in this latter case would be that the oven may be made of greater capacity from front to rear by having its front wall thrown nigher to the fire-pot, or the oven may be made with the same capacity and yet have a less extension back from the casing of the stove-proper, which would not involve any invention but only skill in workmanship. Made in the top plate of the top chamber or flue *g* is the pot-hole *n*, which is provided with a ring, *s*, which carries the damper-plates s^1 s^2, which damper-plates, when turned to close the direct return-flues *m m*, as shown by dotted lines in Fig. 6 and full lines in Fig. 10, prevents the hot gases entering into the chamber or flue *g* from passing into the ascending flue *f* through the said return-flues, and causes them to pass from the said chamber or flue down the descending flue *j* and into the lower horizontal flue *d*, and thence to the ascending flue to escape therefrom to the exit, as shown by arrows 1 in Fig. 2, while, when the said ring is turned so that its damper-plates are carried from the said direct return-flues so as to unclose the same, the hot gases will be drawn from the chamber or flue *g* through the flues *m m* to the ascending flue. If it is desired to divert a portion of the hot gases in one direction from the flue *g*, and another portion in another direction, the ring *s* with its damper-plates are to be turned so as to close one of the direct return-flues *m m*, as shown by dotted lines in Fig. 10. When it is desired to employ this stove for warming purposes only, and not use the oven, the dampers *e e* in the base are to be opened and the ring *s* is to be turned to carry the damper-plates s^1 s^2 so as to close the return-flues *m m*, when the hot gases will be drawn down the sides of the stove proper into the base, and thence into the ascending flue *f*.

It is readily seen that by the several improvements in this invention that the stove proper may be made to warm the room without materially affecting the oven, and that when desired the oven may be completely heated on its rear and front sides and top and bottom for baking purposes; and that, if desired, the top plate of the oven portion, and any vessel setting in the pot-hole, may be heated without heating either the oven or the base of the stove proper, or that the said top plate and any vessel in the pot-hole may be heated at the same time the oven is being heated or employed for baking.

It is evident that the oven may be made of greater capacity by greater extension in a horizontal direction, and be provided with two or more pot-holes, and the several flues may be made to correspond in capacity with such extensions, while the fire-pot and other parts of the stove proper may also be enlarged to meet the requirements of such extended oven and increase of number of pot-holes when the same results may be secured by the same but enlarged means.

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

1. A heating-stove having an oven at its rear, and the base-flues *b*, *b'*, and *c*, bottom horizontal flue with dampers *e e* between it and the said base-flues, and an ascending flue between the oven and the stove proper, combined to operate substantially as and for the purpose set forth.

2. The combination, with the ascending flue *f*, of the blast-flue *h* leading from the combustion-chamber to the horizontal flue or chamber *g*, and through the said ascending flue, whereby the hot gases passing through the said blast-flue may reheat the gases of reduced temperature in the said ascending flue, and stimulate the draft of the same, substantially as and for the purpose set forth.

3. The combination, with the stove proper,

of the blast-flue *h*, horizontal flue or chamber *g*, direct return-flues *m m*, and ascending flue *f*, substantially as and for the purpose set forth.

4. The combination, with the blast-flues *h* and *k k*, one or more return-flues, *m m*, and horizontal top flue *g*, of the ring *s*, carrying the damper-plates s^1 s^2, substantially as and for the purpose set forth.

WM. DOYLE.

Witnesses:
JAMES WRIGHT,
EDWARD H. DOYLE.