

(No Model.)

2 Sheets—Sheet 1.

G. L. MORRISON.

FIRE PLACE HEATER.

No. 312,003.

Patented Feb. 10, 1885.

Fig. 1.

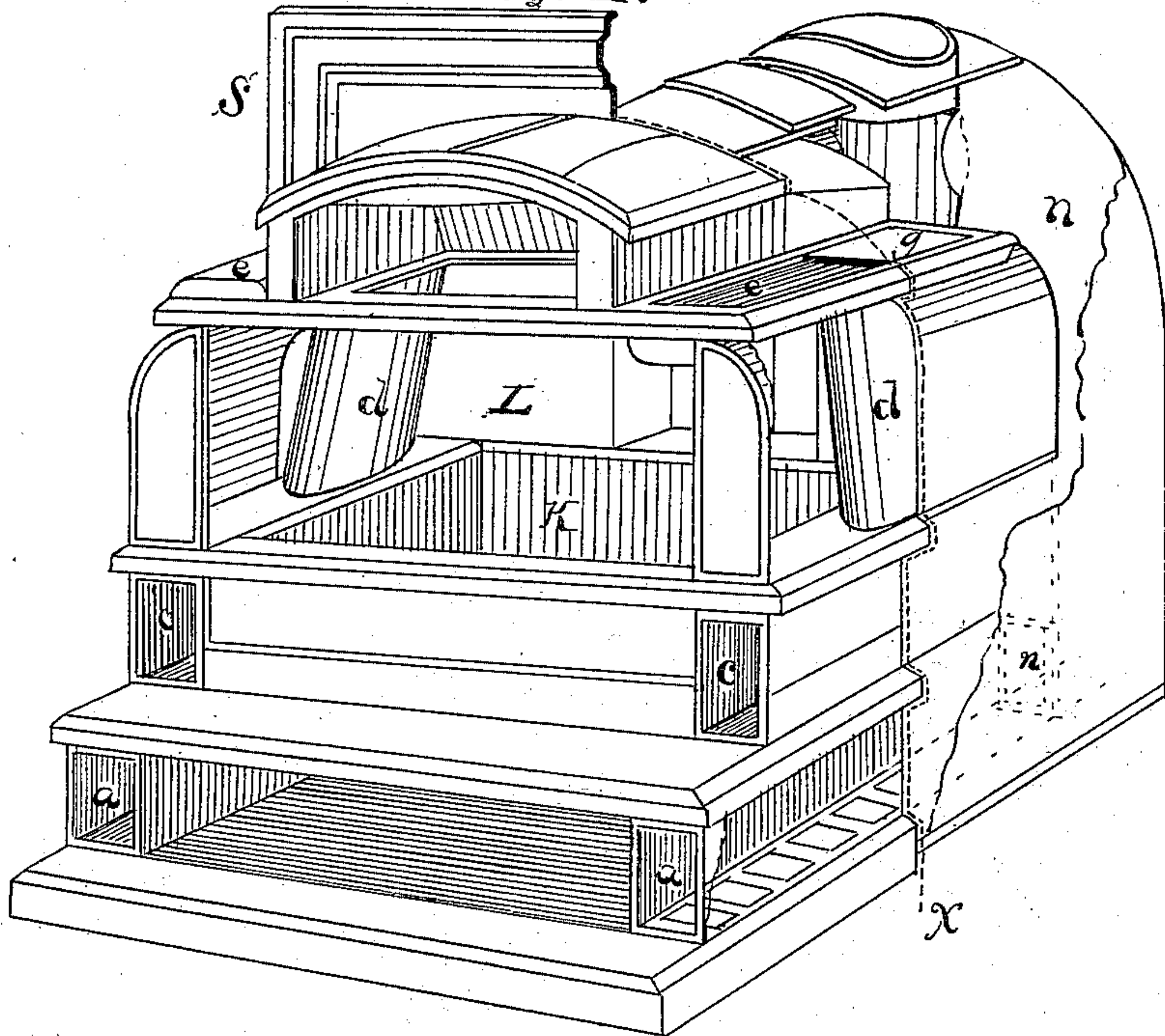
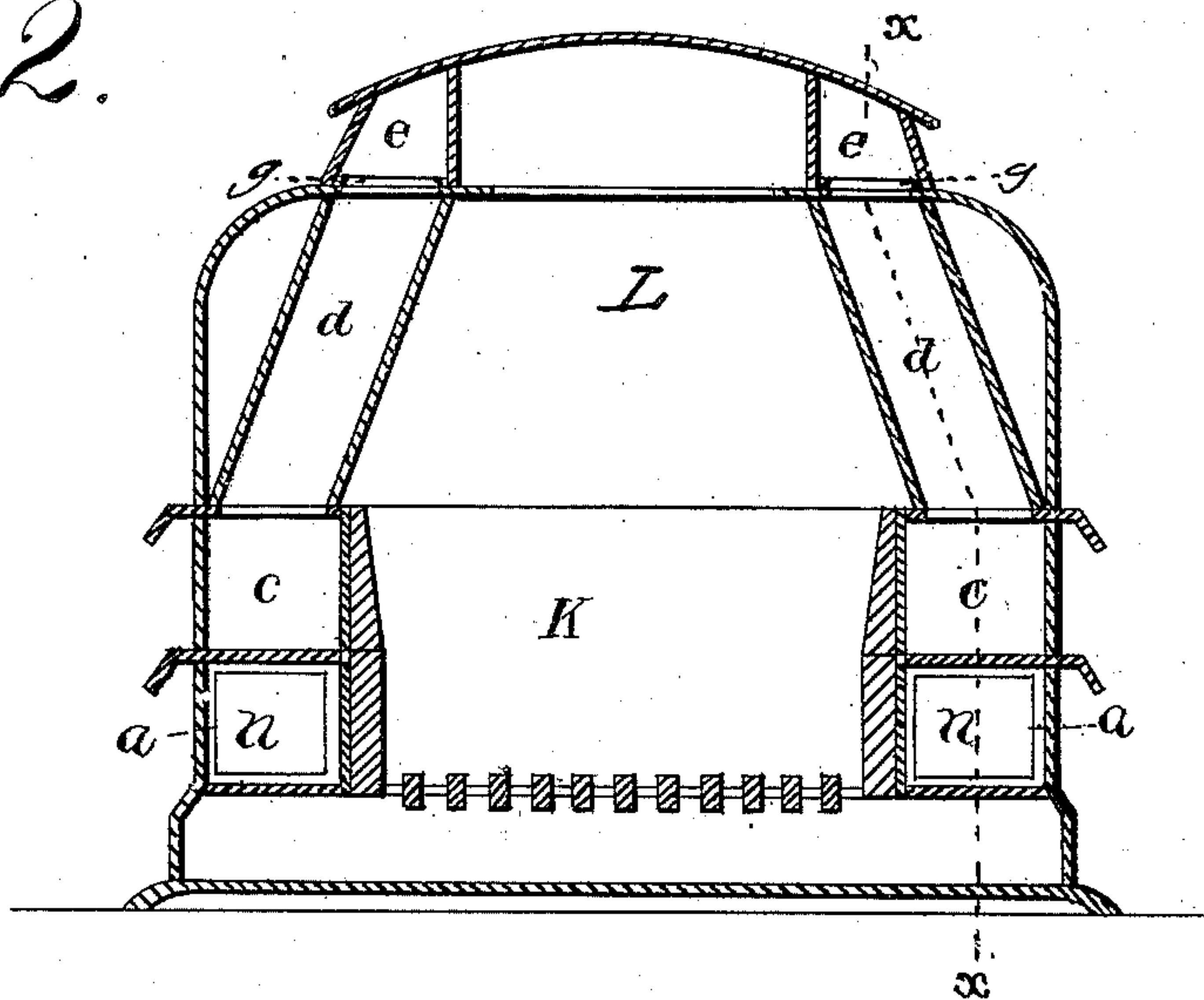


Fig. 2.



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(No Model.)

2 Sheets—Sheet 2.

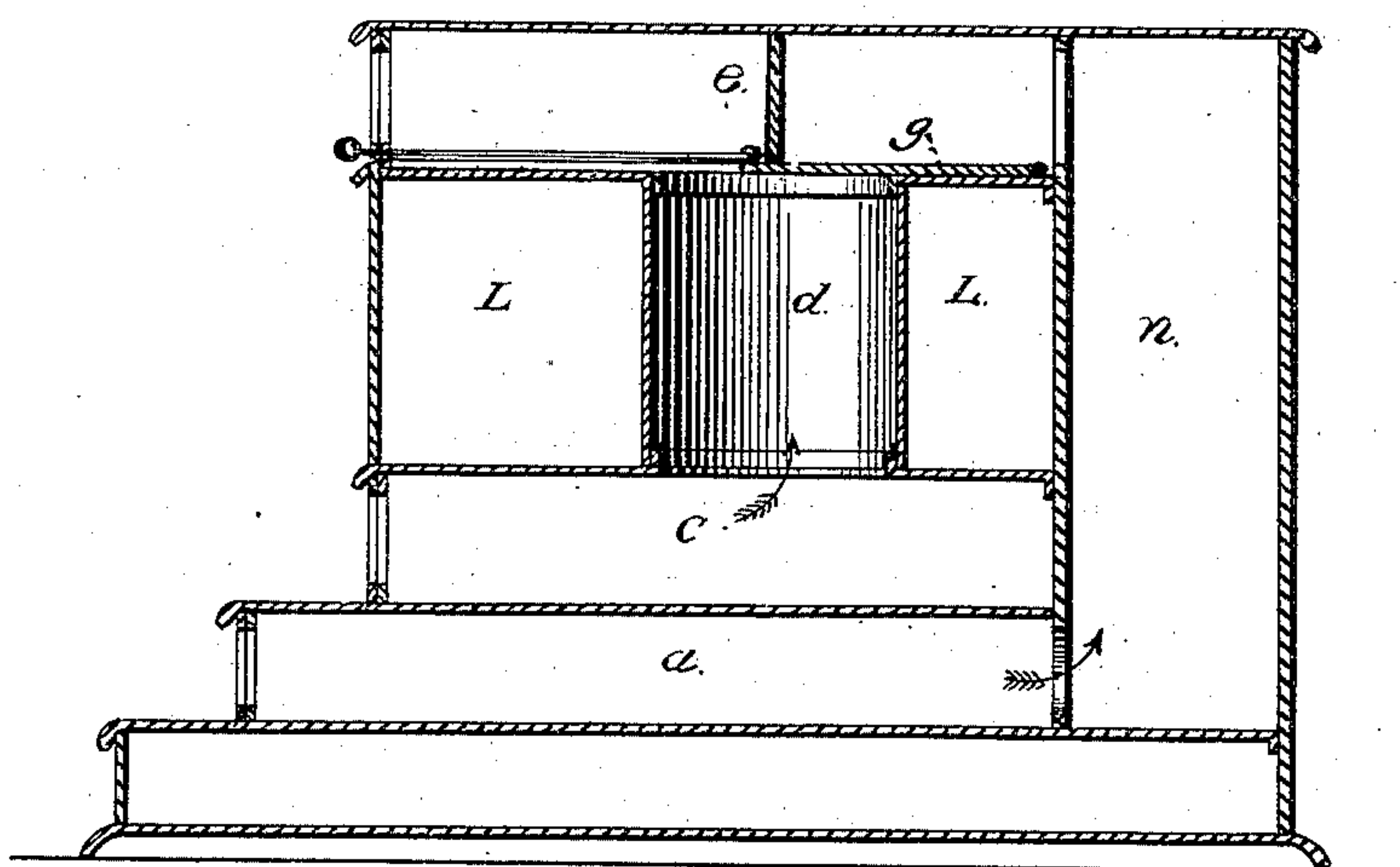
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FIG. 3.



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FIRE-PLACE HEATER.

SPECIFICATION forming part of Letters Patent No. 312,003, dated February 10, 1885.

Application filed February 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, GARDNER L. MORRISON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Fire-Place Heaters; and I do hereby declare that the following is a full, clear, and exact specification thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a perspective view of my improved heater with the sides open and front doors removed. Fig. 2 is a transverse vertical section of the heater in a plane cutting through the side chambers, combustion-chamber, oblique flues, and register-boxes; Fig. 3, a vertical section thereof from front to back in a plane indicated by the line *x x*, Fig. 2.

Like letters designate corresponding parts in all of the figures.

A fire-place heater is of that class of stoves for warming houses which are set partly into a fire-place and partly incased, to form an air-chamber within the fire-place, that the air drawn into said chamber may be heated by the direct radiation from the fire-pot and combustion-chamber and flues which pass through it. The air thus heated is conducted to upper apartments or allowed to enter the immediate apartment, according to the adjustment of a damper which controls the exits of the same.

The air to be heated in this class of ordinary stoves is admitted through side flues or free openings, and is drawn around and to the rear of the combustion-chamber and fire-pot, entering the air-chamber, and is thence admitted to conductors or flues communicating with upper rooms, or else is diverted by means of a damper, and is drawn through an exit-flue above the fuel-magazine into the apartment in which the heater is located. By this manner of constructing the heater the air for warming rooms is not subjected to the greatest heat directly above the incandescent fuel in the fire-pot.

My improvement is designed to avail of the superior advantages above referred to; and it consists in the provision of two auxiliary induction-flues for air at the sides of the fire-pot, each connecting with an inwardly-inclined

oval-shaped flue, which communicates with a register-box laterally above the combustion-chamber. The oval-shaped flues are within the combustion-chamber, and incline over the fire-pot, and receive the full effect of the radiation from the incandescent fuel and the ascending heat of the burning gases, which envelops them in its passage to the smoke-flue.

In the drawings, *a a* denote the air-ingress flues, which communicate with the air-chamber around the rear part of the stove within the fire-place, and from which, by means of a damper, heated air can be admitted to the lower apartment of the house or allowed to pass upwardly through pipes which communicate with upper rooms.

My improvement is more particularly described with reference to the drawings as follows: At each end of the fire-pot *K* a rectangular chamber, *c*, is formed, which communicates with the register-box *e* through the intermediate oval flue, *d*, which inclines inwardly over the fire-pot and within the combustion-chamber *L*. The air to be heated is drawn into the air-ingress chambers *c c* through apertures or dampers in their front doors, (not shown in the drawings,) coming in direct contact with the ends of the fire-box *K*; thence it passes up through oval flues *d d* and enters the register-boxes *e e*. These register-boxes extend from the front of the stove back into the hot-air chamber *n*, and are provided each with a sliding damper or door, *g*, by means of which the air heated in passing through the auxiliary chambers *c c* and oval flue *d d* may be admitted into the room in which the stove is located, or (when each door *g* is drawn forward) it will pass into the hot-air chamber *n*, to be conveyed to upper rooms.

It will be observed that, while all the general features and advantages common to this class of heaters are retained, auxiliary air-heating flues are so located in my improvement as to augment the volume of heated air without enlarging the heater and without essentially diminishing the fire-pot and combustion-chamber. The dotted line *x* and facing Syndicate the respective portions of the heater to occupy the fire-place and project in front thereof.

I am aware that neither the air-chambers *a* nor auxiliary air-chambers and flues extending through the fire-pot are new; but in existing heaters these flues connect with the
5 main hot rear air-chamber, while in my construction they open into register-chambers or boxes provided with movable slides or dampers, by means of which the hot air is passed through the flues and deflected through the
10 front of the stove into the room, or is allowed to pass into the rear hot-air chamber, as desired.

I claim as my invention—

In a fire-place heater, the combination, with
15 the air-ingress chambers *a a*, leading to the

back hot-air chamber, *n*, the combustion-chamber *L*, and register-boxes *e e* above the combustion-chamber, of separate auxiliary air-ingress chambers *c c*, inclined flues *d d*, leading from the said auxiliary chambers through the combustion-chamber to the said register-boxes, and dampers *g g*, for deflecting the heated air through the register-boxes into the room or into the rear hot-air chamber, *n*, substantially as and for the purpose
25 herein set forth.

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Witnesses:

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