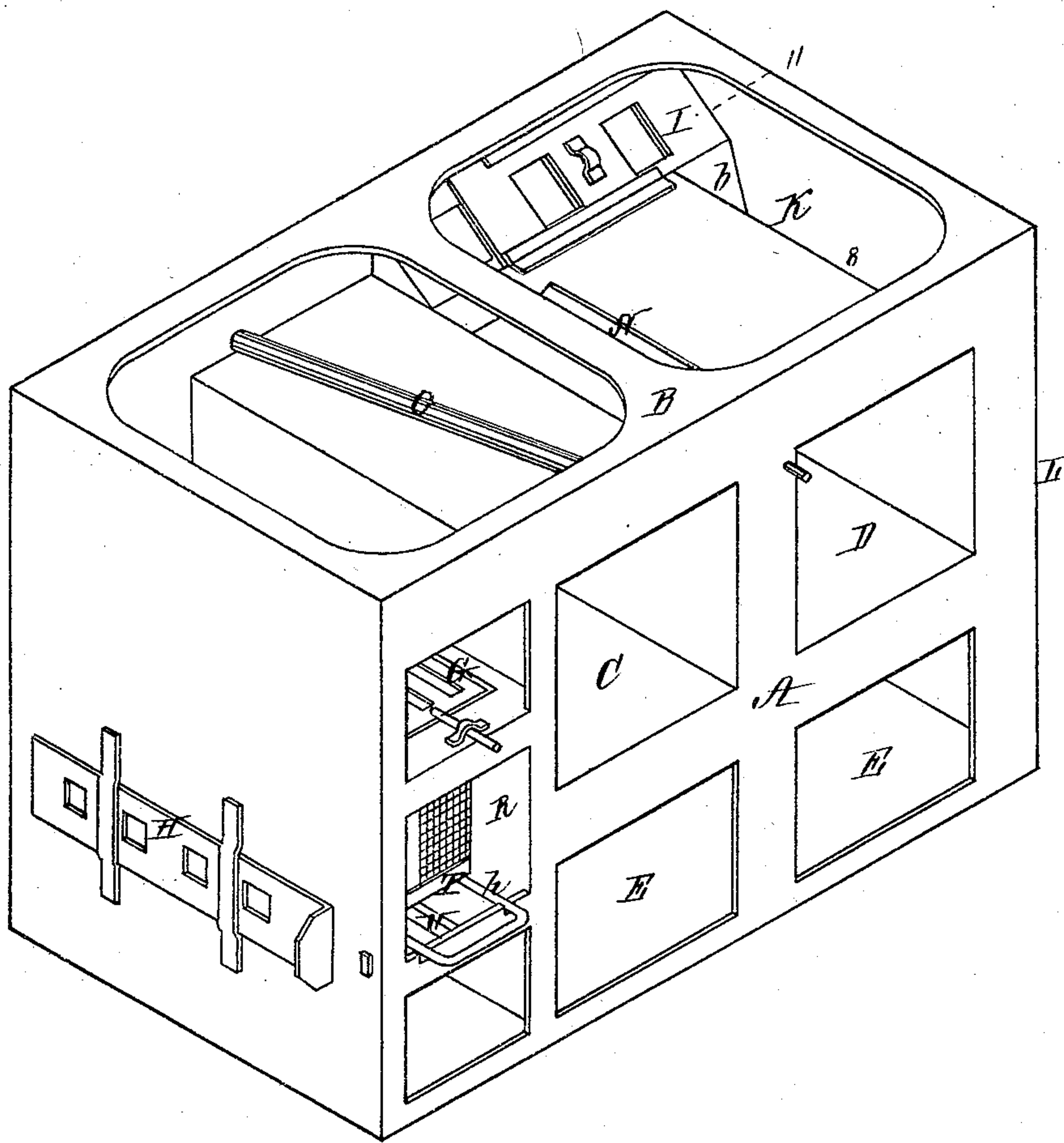


W. A. GREENE.
Cooking-Stoves.

No. 135,273.

Patented Jan. 28, 1873.

Fig. 1.



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W. J. Cambridge

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Fig. 2.

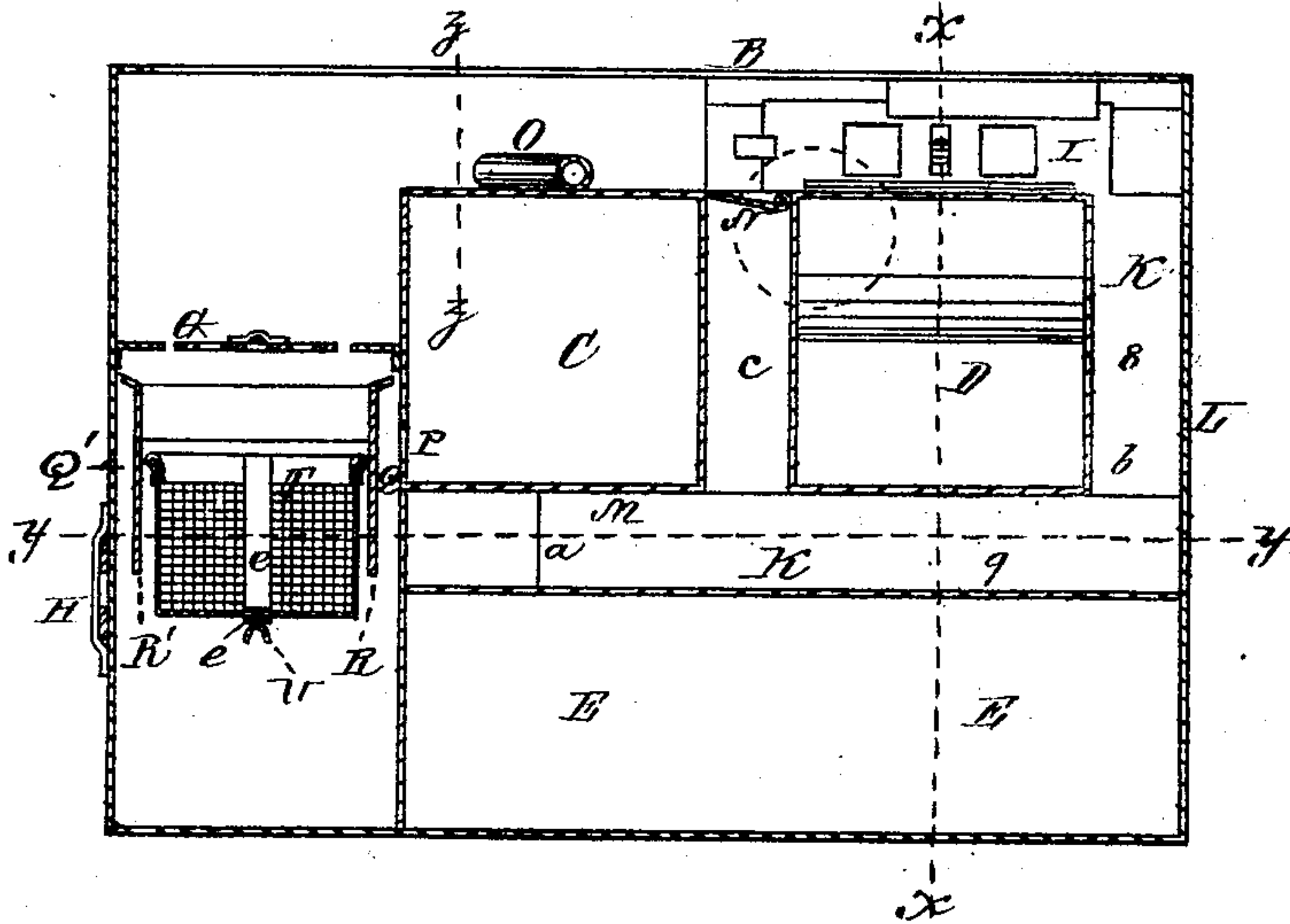
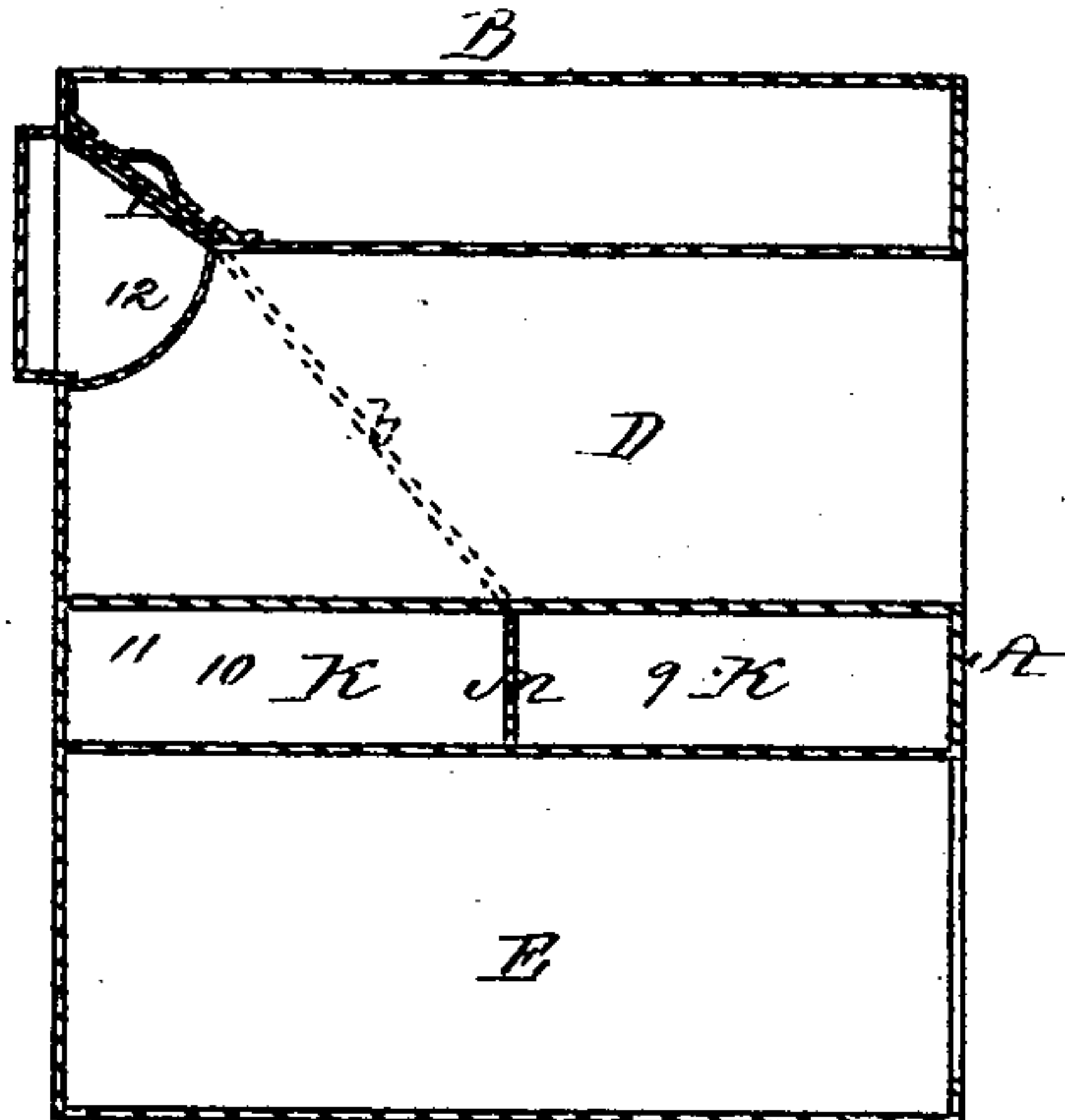


Fig. 3.



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Fig. 4.

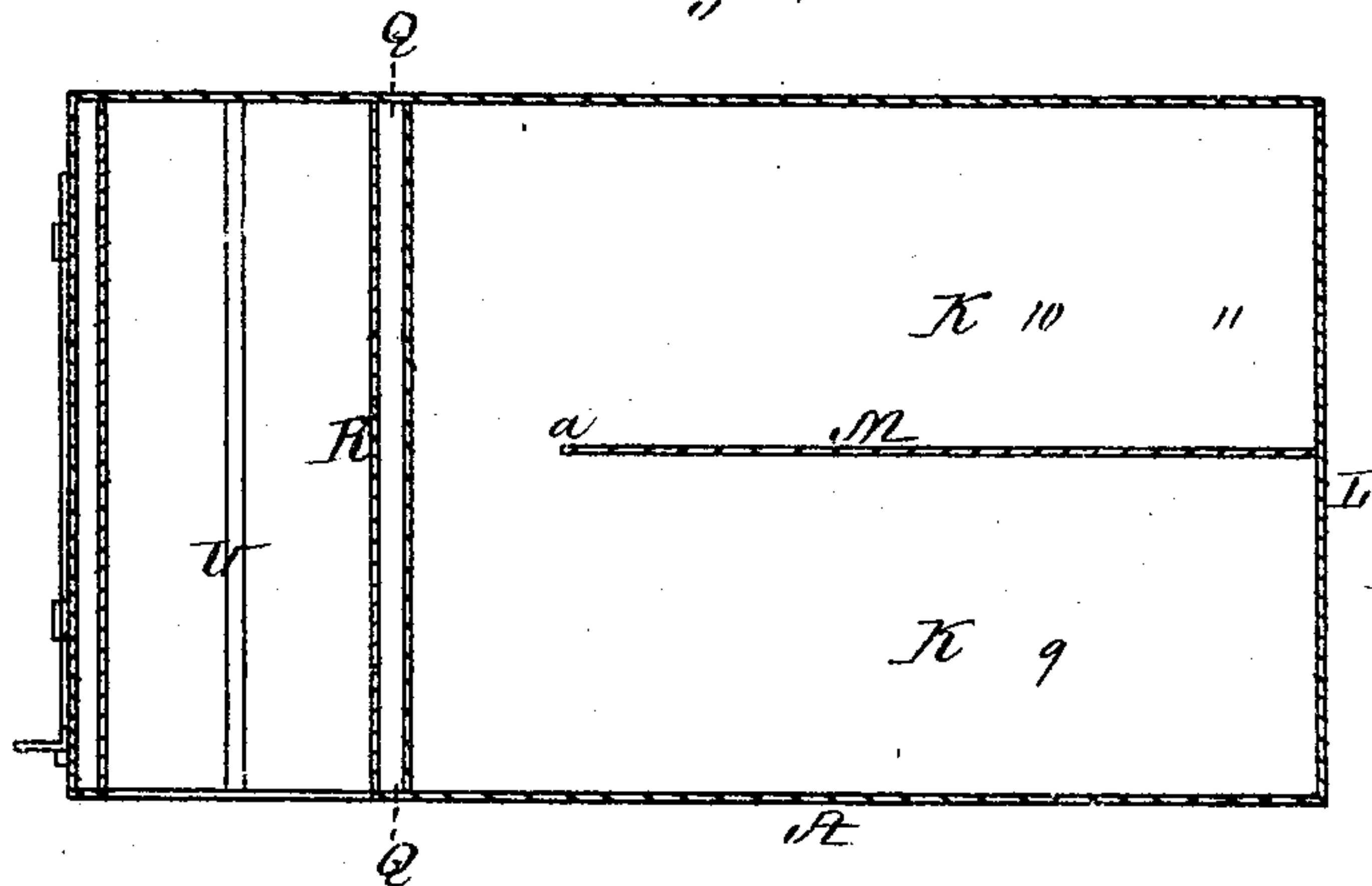


Fig. 5.

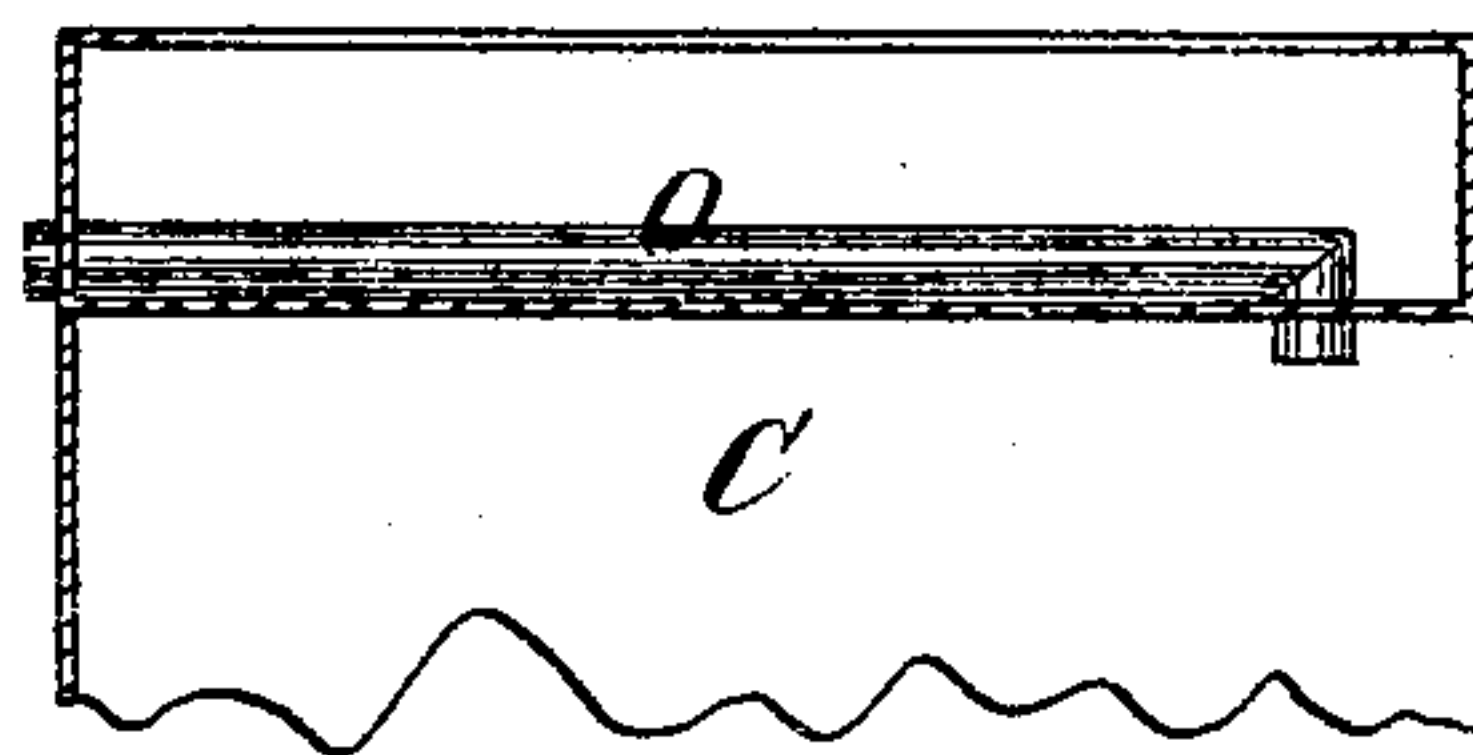
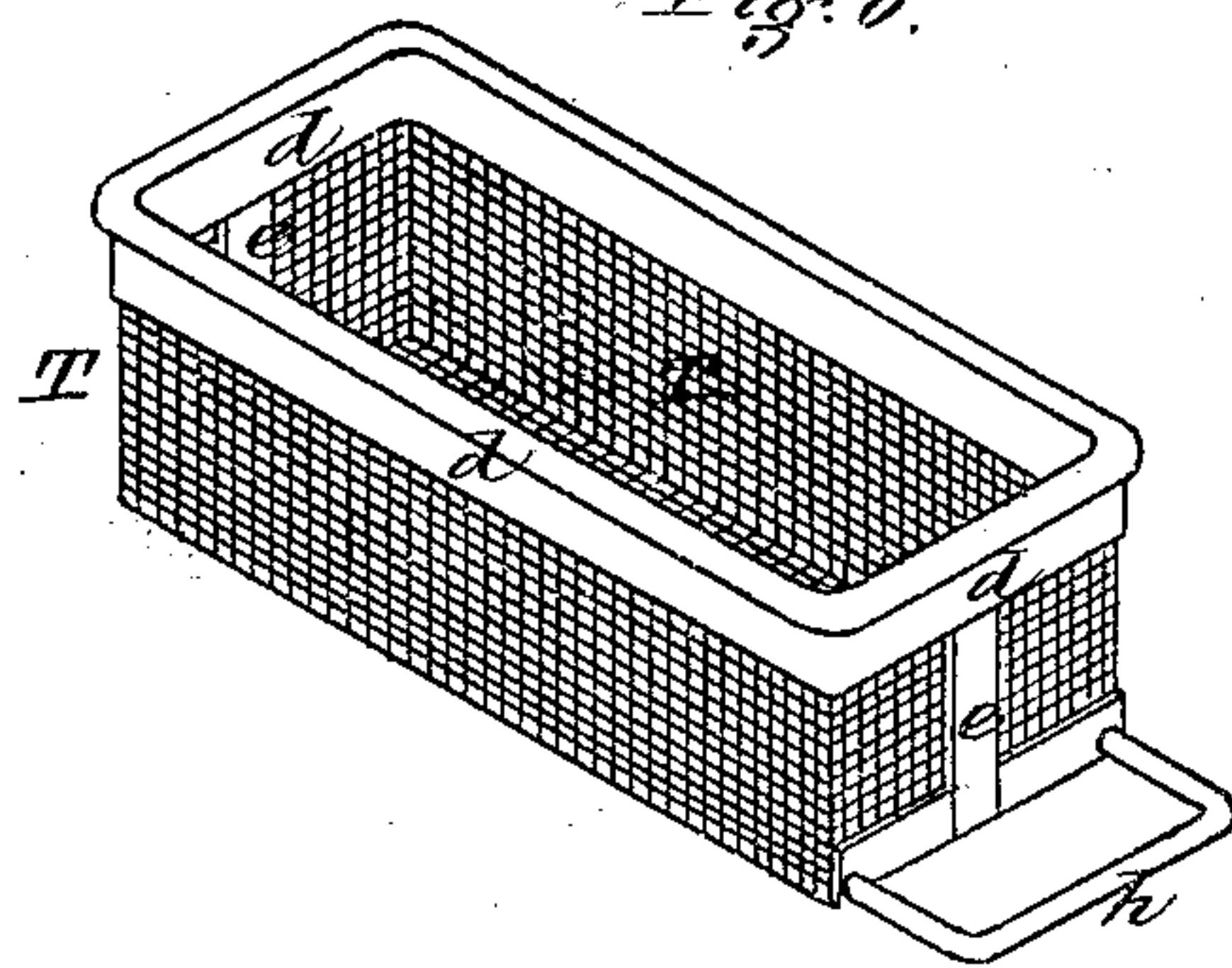


Fig. 6.



Witnesses,
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UNITED STATES PATENT OFFICE.

WILLIAM A. GREENE, OF MEDFORD, MASSACHUSETTS.

IMPROVEMENT IN COOKING-STOVES.

Specification forming part of Letters Patent No. 135,273, dated January 28, 1873.

To all whom it may concern:

Be it known that I, WILLIAM A. GREENE, of Medford, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Cooking-Stoves and Ranges, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a perspective view of a cooking-stove having my improvements applied thereto. Fig. 2 is a vertical longitudinal section through the same. Fig. 3 is a vertical transverse section on the line *x x* of Fig. 2. Fig. 4 is a horizontal section on the line *y y* of Fig. 2. Fig. 5 is a section on the line *z z* of Fig. 2. Fig. 6, detail in perspective.

My invention consists in a peculiar arrangement of flues for conducting the currents of hot air and products of combustion around and at the back of an auxiliary oven situated beyond the ordinary oven, and used when additional cooking is required, the space occupied by the outer end of the flue being taken out of the back of one or both ovens; and my invention furthermore consists in an ash-sifter of wire netting placed immediately under the grate, and resting on a bar extending longitudinally over the ash-pit, the sifter being so constructed that it can be slid back and forth on the bar by means of a handle projecting outside the stove, by which arrangement the ashes may be shaken and sifted without the escape of dust into the apartment.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawing, A is the front, and B the top, of a stove or range, provided with an ordinary oven, C, and an auxiliary oven, D, with a warming-closet, E, under each. G is the grate of the ordinary construction. When the fire is started, the damper H outside and the damper I inside are both opened to allow the passage of smoke directly over the oven to the chimney. After the fire is kindled the damper I is closed, and when the auxiliary oven is to be used, the heat and products of combustion pass over the tops of both ovens down the portion 8 of the flue K, formed be-

tween the outside of the auxiliary oven and the outer shell or casing L; thence through the portion 9 of the flue under the front of both ovens, and around the end *a* of a division-plate, M, into the portion 10 of the flue extending under the back of both ovens; thence up the vertical portion 11 of the flue, (which is separated from the portion 8 by a division-plate, *b*,) into the horizontal or outer portion 12, and through a suitable opening into the chimney. This horizontal portion 12 is formed at and occupies a part of the back of the oven D, by which construction I am enabled to economize space and make the stove more compact. This portion 12 of the flue may, if desired, extend across and occupy a part of the back of both ovens. *c*, Fig. 2, is a flue or space formed between the ovens C D, controlled by a damper, N, and communicating at its bottom with the portion 9 of the flue K. When the oven proper only is to be used, and it is not required to heat the auxiliary oven, the damper N is opened, when the heat will be diverted down the flue *c* into the flue K, and thence to the chimney, whereby the heat is concentrated around the oven C, as required. O is a circular tube, which is made independently of and extends over the top of the oven C. One end of this tube is open and it projects through the back of the stove, and the other end passes through the top of the oven and communicates with its interior. P is an aperture or outlet, which forms a communication between the oven and a flue, Q, between the outside of the oven and a vertical plate, R, parallel thereto, and situated in the chamber in which the ash-sifter T is placed. This plate R is bent over at its top and is provided with a series of apertures, through which the air which enters the bottom of the flue together with that from the oven passes to the fire. Opposite to the plate R is a similar plate, R', also provided with apertures at its top, through which the air passes from the flue Q' to the fire. From the foregoing it will be seen that fresh external air enters the tube O, and in its passage through it becomes intensely heated before passing into the oven, the gases and fumes of the article being cooked escaping through the opening P into the flue Q, and thence impinging directly under and against

the base of the fire where they are consumed, a constant current of hot air being thus caused to circulate through the oven, which ventilates it, as required, and also increases the draft of the fire, the entrance of ashes into the oven incident to the former construction of ventilating-flues being at the same time avoided. The ash-sifter *T* is composed of wire-netting, the upper edge of which is inclosed or covered by strips of sheet-iron *d* folded over it, a wire being inserted to form the line on which to fold the strip, the opposite sides of which are secured together, and to the wire-netting by rivets or otherwise, by which means the sifter is rendered stiff and durable. Extending longitudinally across the inside and outside of the bottom and ends of the sifter are metal bands *e*, which give additional stiffness and strength thereto. The outside band rests directly on an inverted V-shaped bar, *U*, extending longitudinally through the center of the ash-chamber, and the sifter is made to slide back and forth thereon directly under the grate, by means of a handle, *h*, projecting outside the stove, small holes or openings being made in the door for the reception of the handle, by which construction the sifter may be operated without the escape of ashes into the room. The sifter is kept in an upright position by means of the side plates *R R'*, against which the sheet-iron upper rim *d* of the sifter bears. These plates also serve to prevent any small pieces of coal which may be thrown up in sifting, from dropping down into the ash-pan below, and the flues *Q Q'* al-

low of the free passage of air to the fire should the draft through the sifter be obstructed by ashes contained therein. The tops of the plates *R R'* are inclined so as to prevent any pieces of coal from lodging thereon, and obstructing the apertures through which the air passes to the fire.

It will be seen that the flue *K* extends under the entire surface of the top plate, so that the bottoms of all of the utensils are exposed to the direct action of the heat, causing their contents to boil equally as well, whether the damper *I* be open or closed.

Claims.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The flue *K*, consisting of the portions 8, 9, 10, 11, and 12, constructed and arranged substantially in the manner and for the purpose described.

2. A horizontal flue, formed at and occupying a portion of the back of an oven, substantially as and for the purpose described.

3. The sifter *T*, composed of wire-netting, and provided with a handle, *h*, and metallic bands *e*, in combination with the bar *U* and side plates *R R'*, substantially as described.

Witness my hand this 12th day of December, A. D. 1872.

WM. A. GREENE.

In presence of—

NORMAN W. STEARNS,
W. J. CAMBRIDGE.