

(No Model.)

4 Sheets—Sheet 1.

C. E. KING.

SELF FEEDING COOKING STOVE.

No. 384,207.

Patented June 5, 1888.

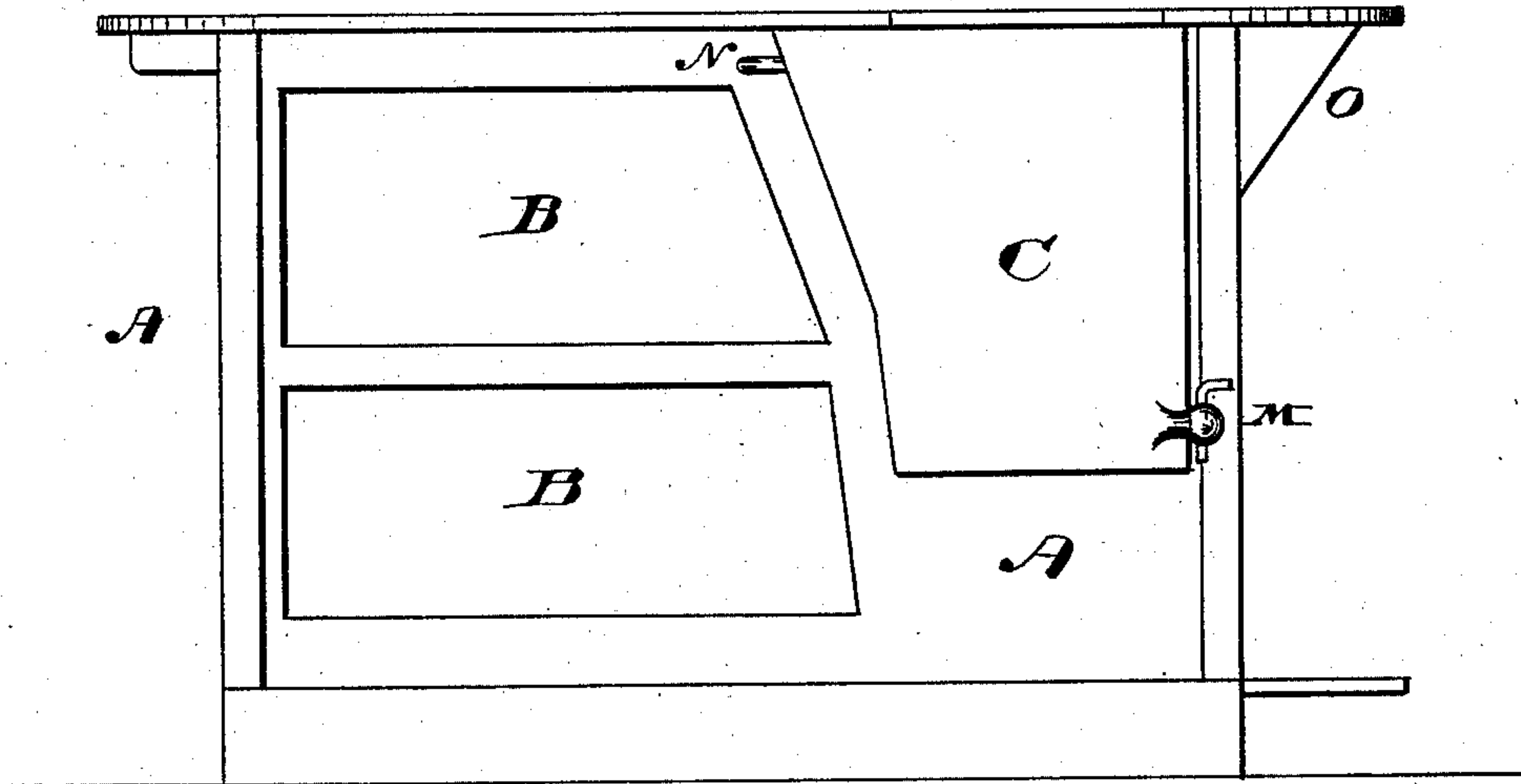


Fig. 1.

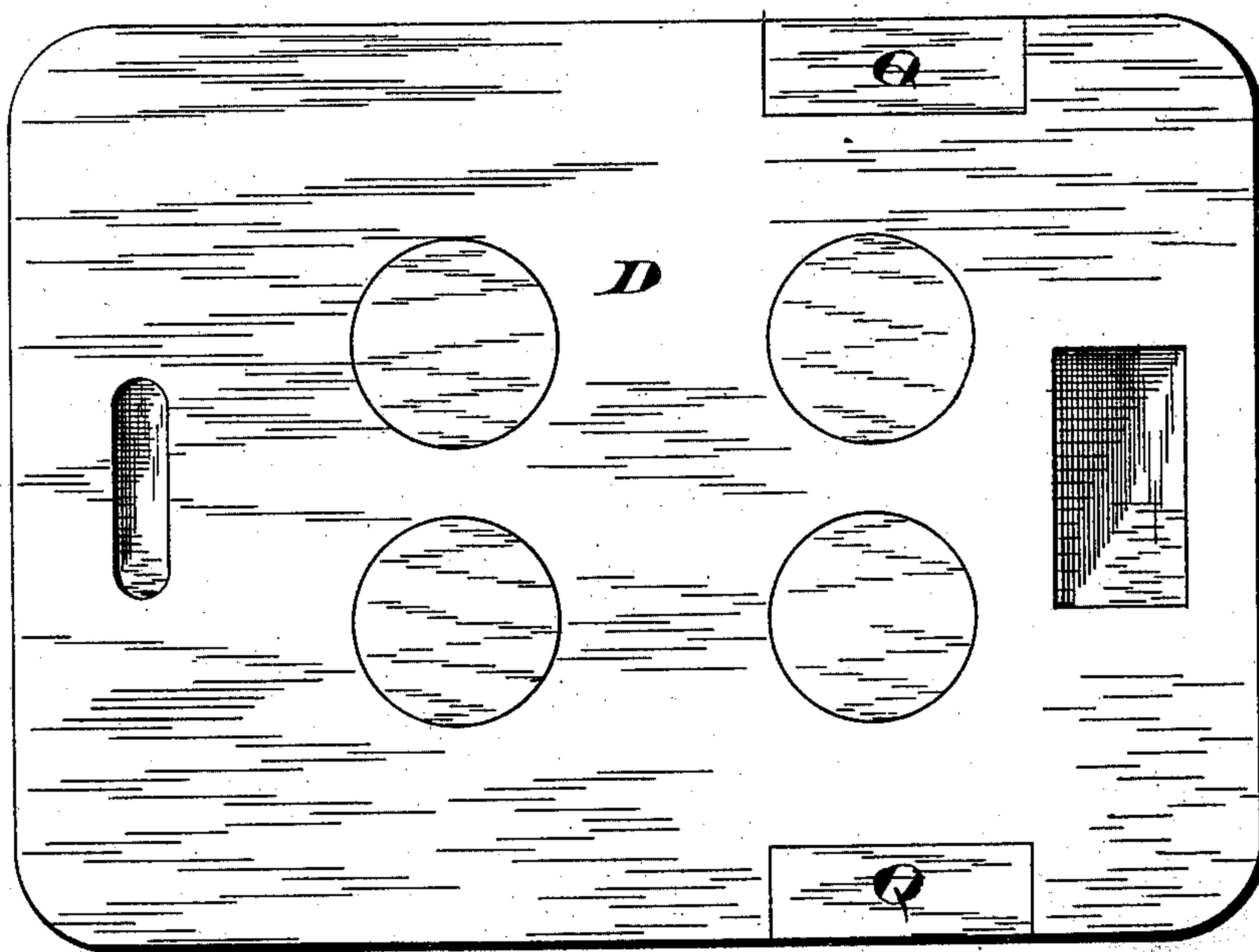


Fig. 2.

— WITNESSES: —

— INVENTOR —

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BY Drake & Co ATT'YS.

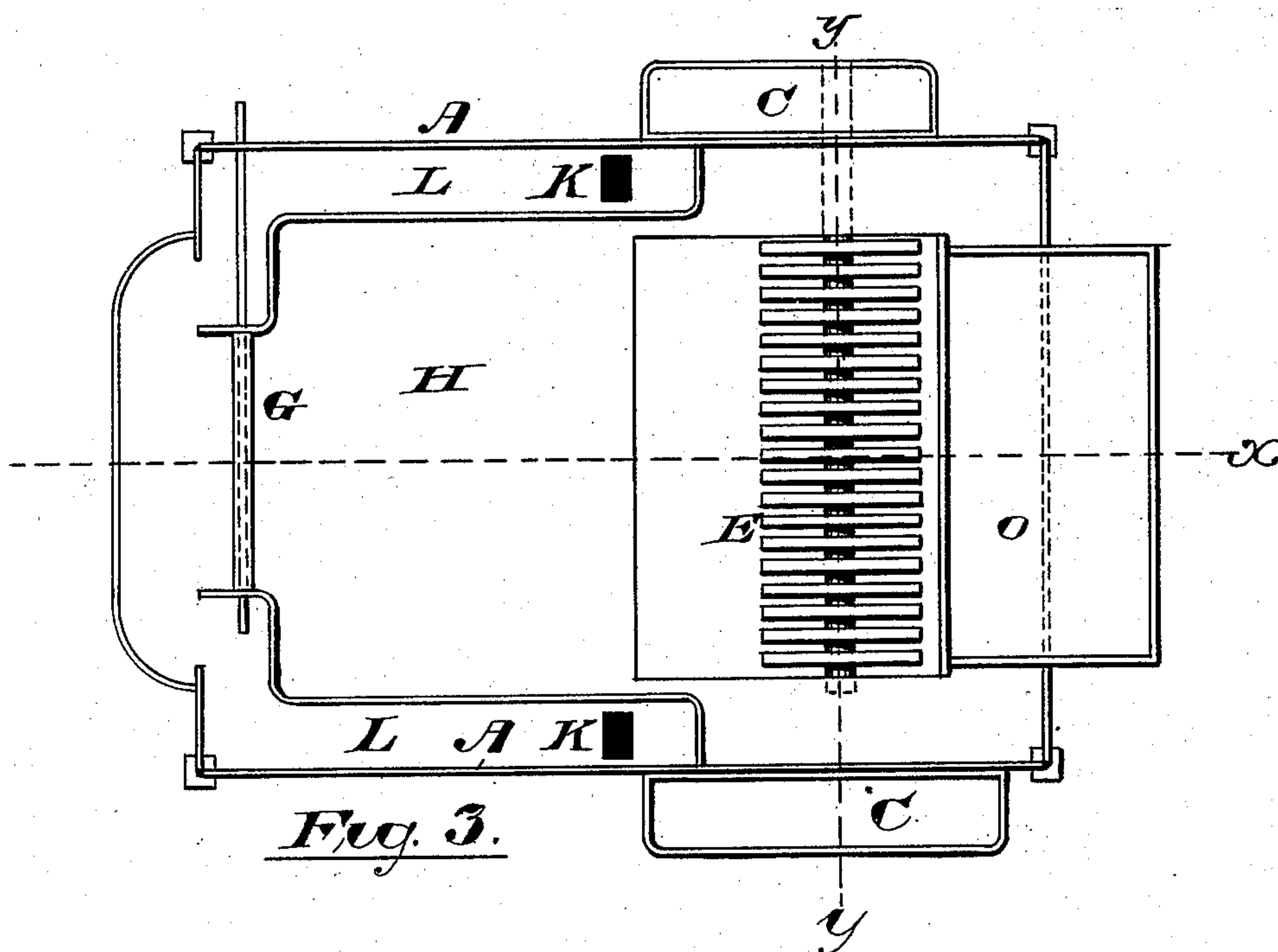
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— WITNESSES: —

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(No Model.)

4 Sheets—Sheet 3.

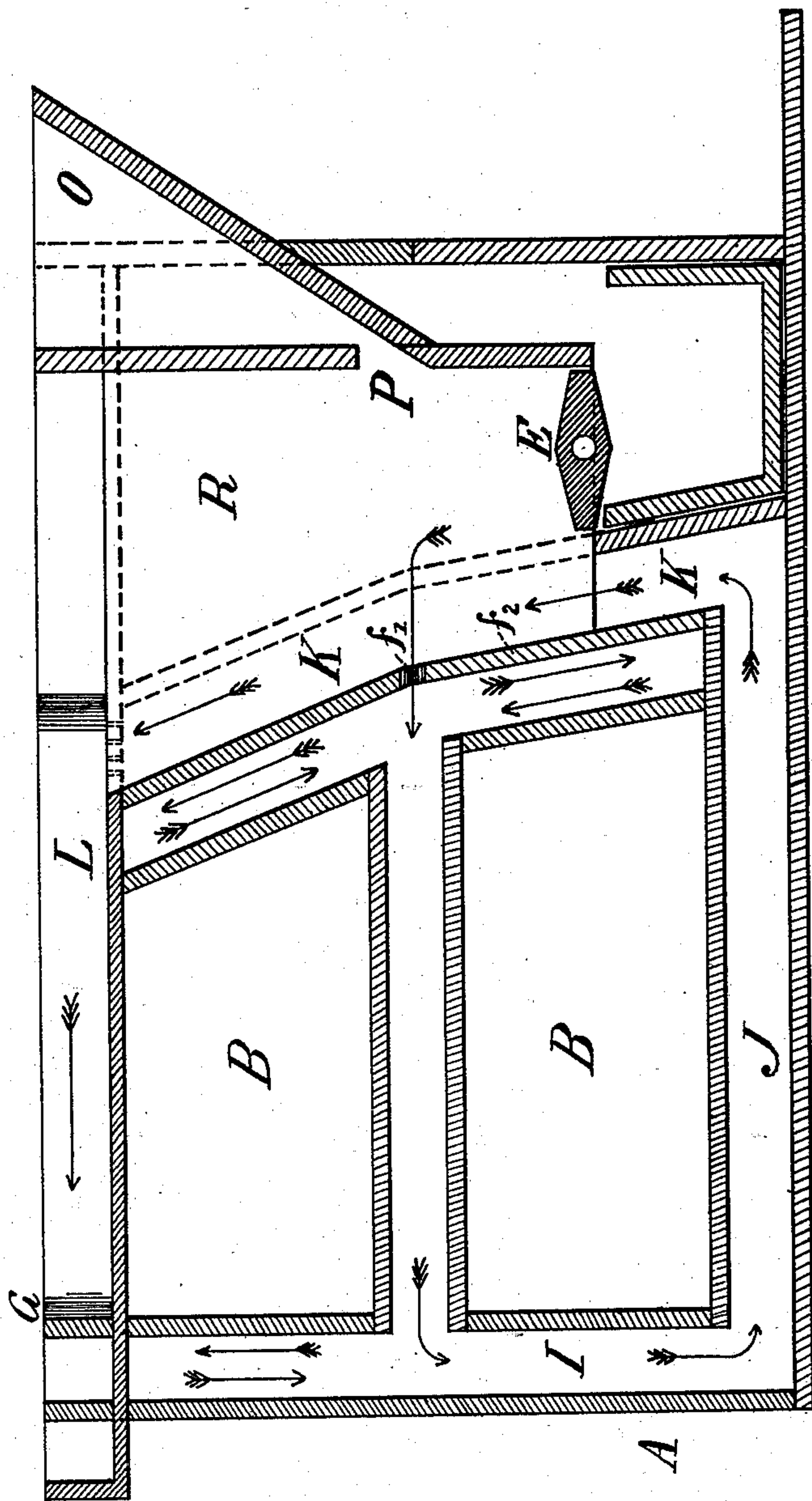
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Fig. 4.



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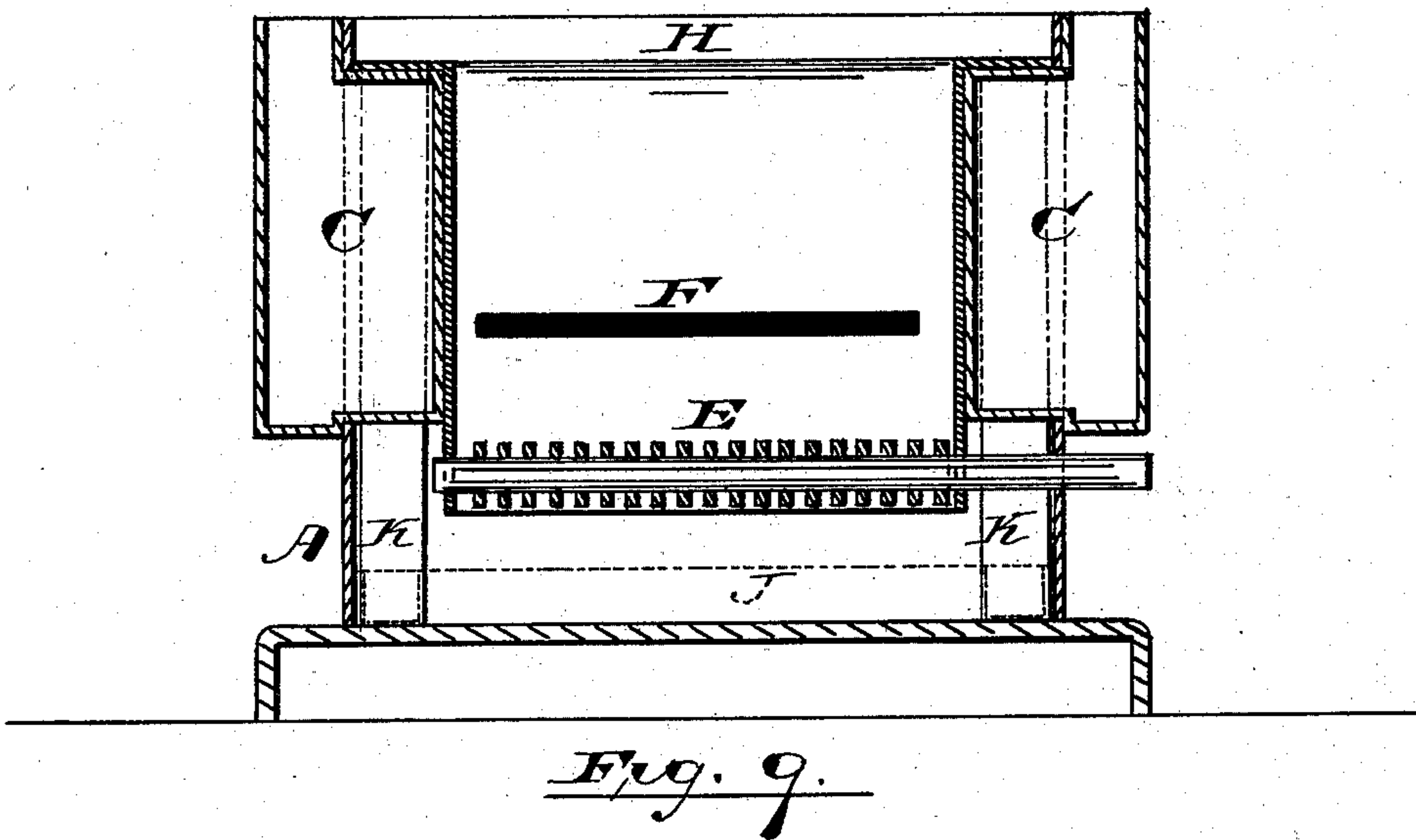
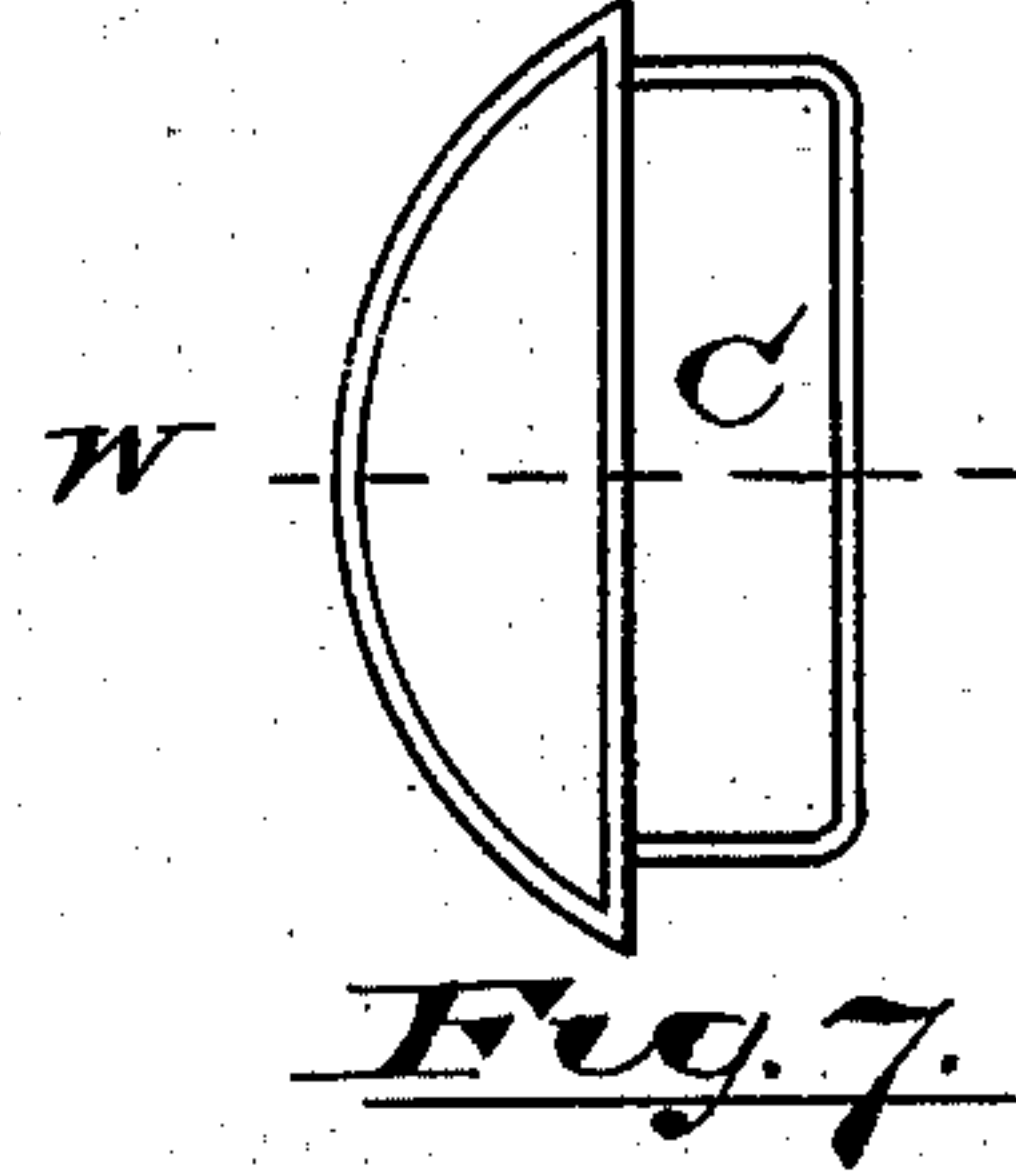
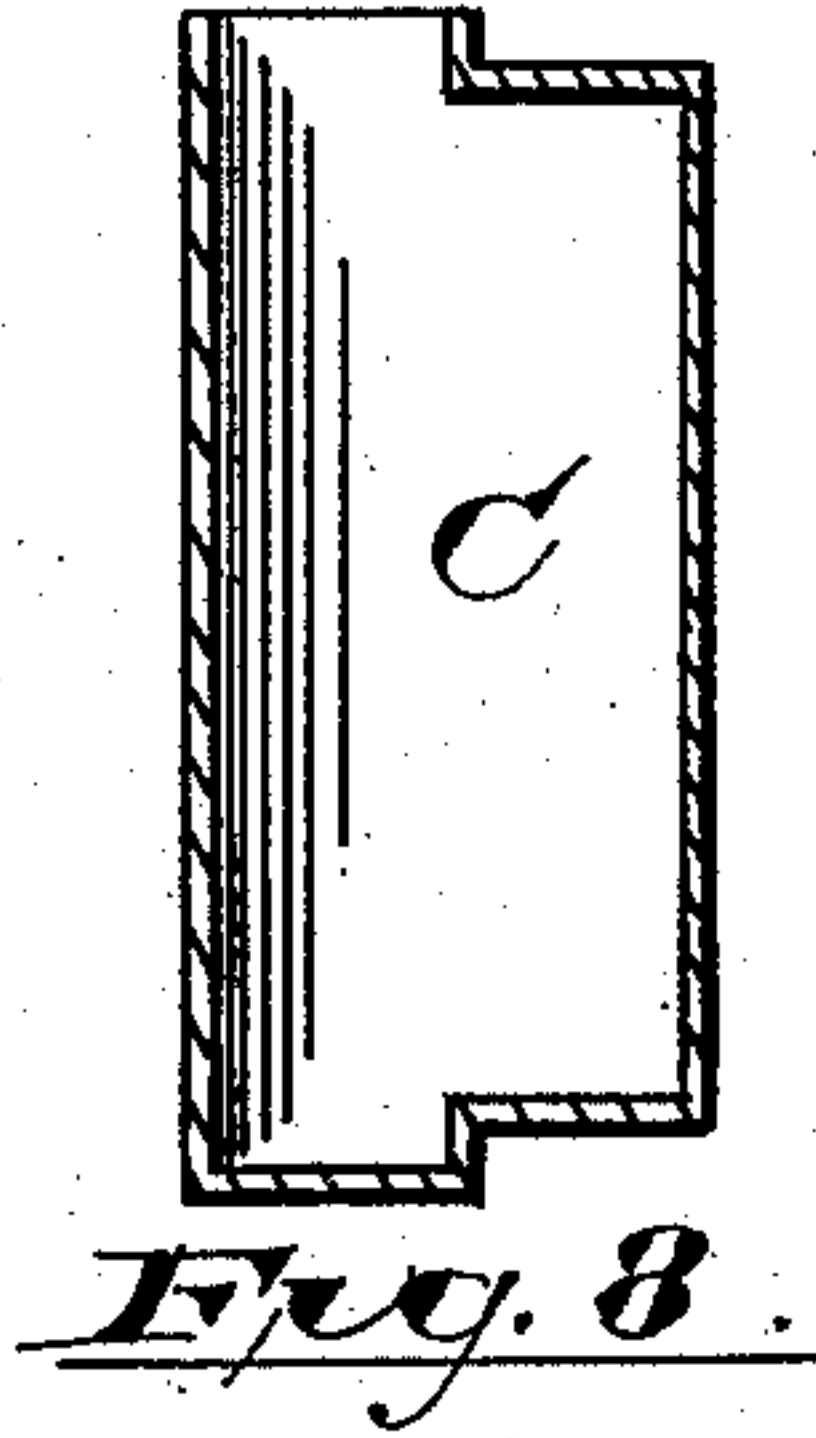
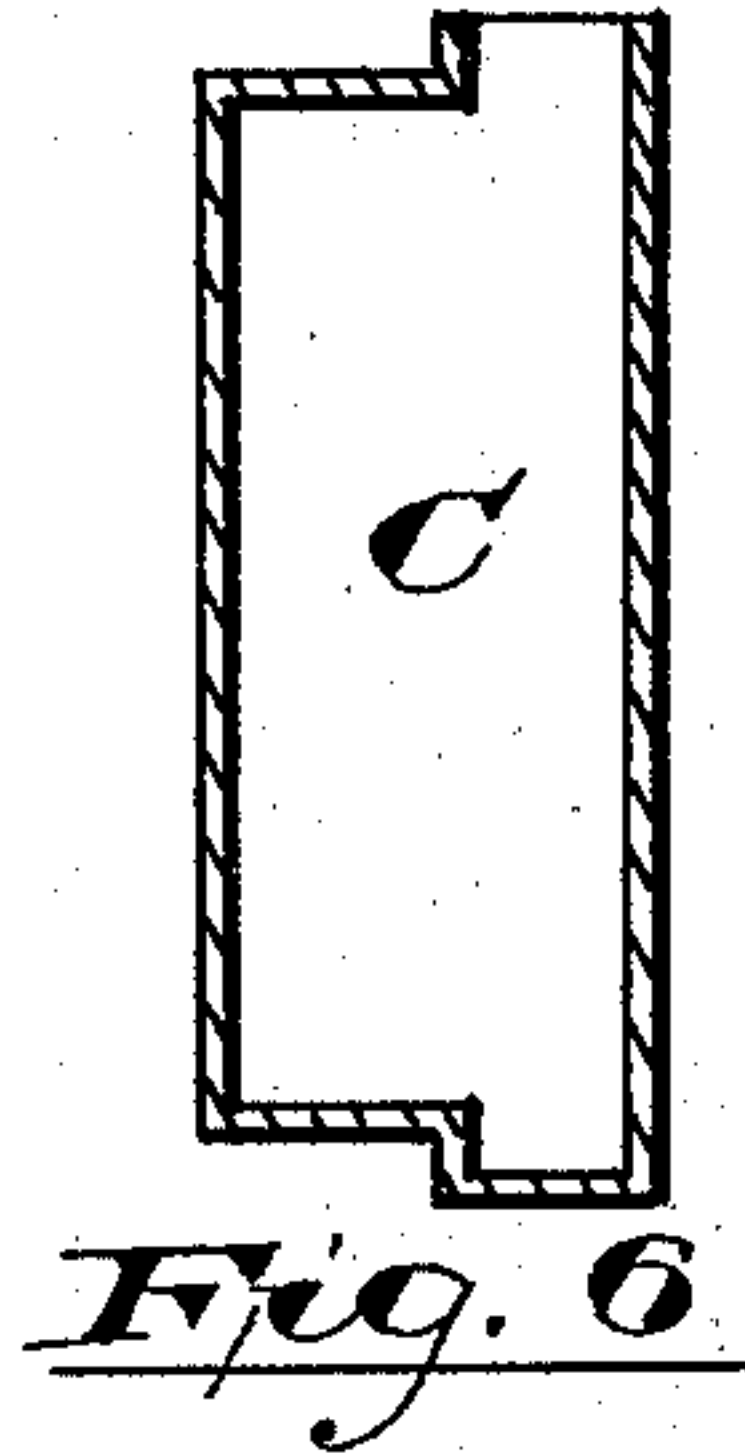
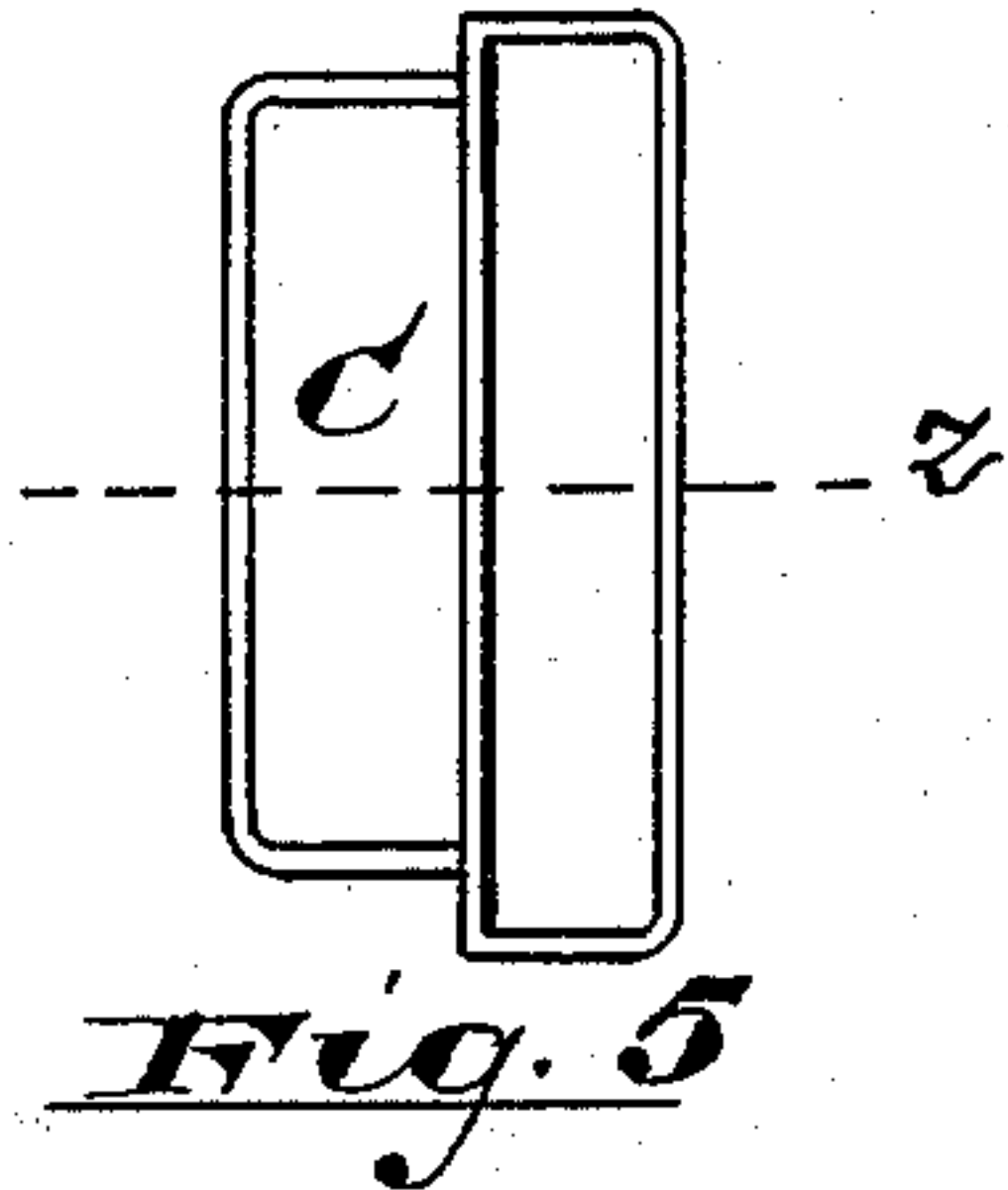
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— WITNESSES: —

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# UNITED STATES PATENT OFFICE.

CHARLES E. KING, OF NEWARK, NEW JERSEY.

## SELF-FEEDING COOKING-STOVE.

SPECIFICATION forming part of Letters Patent No. 384,207, dated June 5, 1888.

Application filed February 21, 1887. Serial No. 233,315. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. KING, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Self-Feeding Cooking-Stoves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as 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 letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a cheap, durable, and convenient cooking-stove; to circulate the draft in the most efficient manner to supply heat to the ovens, and to provide the stove with a water-heating device which will utilize the waste heat at the sides of the grate.

The invention consists in an improved cooking-stove and in the arrangements and combinations of parts, substantially as will be hereinafter set forth, and finally embodied in the clauses of the claim.

Referring to the accompanying drawings, in which like letters indicate corresponding parts in each of the several figures of the three sheets thereof, Figure 1, Sheet 1, is a side elevation, and Fig. 2 a plan view, of a cooking-stove embodying my improvements. Fig. 3 is a plan view of the stove, the top or cover being removed to show the grate, damper, &c. Fig. 4 is a transverse vertical section through line X, Fig. 3. Fig. 5, Sheet 3, is a detail in plan of a certain tank for heating water. Fig. 6 is a vertical section through line Z, Fig. 5. Fig. 7 is a detail in plan of a modification of the same. Fig. 8 is a vertical section through line W, Fig. 7, and Fig. 9 through line Y, Fig. 3.

In said drawings, A represents the standard or frame of the stove; B B, the ovens; C C, water-tanks, and D the top portion or cover. The said ovens B run longitudinally through said stove and are above and behind the grate E, and a space or passage, F, is formed between said ovens, opening directly through to the fire box or chamber R, so that the flame from the body of coals which lies below the opening  $f'$  in the partition  $f^2$ , forming one of

the walls of said fire box or chamber, will pass directly from said coals between the ovens and deposit a large proportion of heat on both of the main ovens while at its greatest heat. The products of combustion from the fire will pass through the said passages  $F f'$  when the damper G is regulated so as to close the passage H. The products of combustion, after passing through the passage F, pass downward below the lower oven, through the passages I J, and from thence enter passages or tubes K at the sides and forward ends of the ovens, as indicated in Figs. 3, 4, and 9. From the tubes K, where the gaseous products are again brought into close relation to the fire-chamber and are a second time heated, said products are led through the passage L, over the upper oven at the opposite sides of the stove, and from thence into the chimney or stove-pipe.

When a quick draft is desired, the damper G is turned down, thus allowing the products of combustion to pass directly up the chimney, giving a hot fire on top of the stove, but keeping the ovens comparatively cool. The opening  $f'$  may be provided with a damper to entirely shut off the heat from the ovens when desired, as will be understood.

At the sides of the grate are disposed water-tanks C. These are exposed to the fire and heat above the grate, avoiding the necessity for the ordinary water-kettle, which is always more or less in the way when arranged on top of the stove. Said tanks may be provided with spigots, as M, to draw off the water when desired, and vent-pipes N, to allow the steam to escape, and may be made removable, so as to facilitate cleaning, &c. They may be filled by raising the lid Q on top of the stove.

At the upper and forward part of the stove is arranged a hopper-shaped coal-receptacle, O, having at the lower end thereof, at or above the level of the bed of coals, an opening, P, through which the coal may be fed automatically into the fire box or chamber as the fire burns away and the upper surface of the bed of coals is lowered.

The feed-receptacle is made funnel or hopper shaped, so that the coal cannot be lodged or held fixedly in the receptacle and fail to supply the fire.

The hopper-shaped receptacle is arranged forward of the fire-chamber, so that the usual



kettle or pot openings may be formed directly over the fire-chamber in the usual way, and the top thereof is brought on a level with the top of the stove, so that its cover may be employed in connection with the top of the stove in cooking or warming.

The grate may be made of parallel bars disposed on a central support, or of any other construction, and may have an ash-pit thereunder, or an ash-pan or other ash-receptacle, as will be understood.

Having thus fully described my invention, what I claim as new is—

1. The improved cooking-stove herein described, combining therein a fire-chamber, R, ovens B B, a passage, F, between said ovens, a flue,  $f'$ , formed in the wall  $f^2$  in line with passage F, leading into the passage F, and passages I J, leading below the lower oven, an upward passage, K, leading from the passage J and lying adjacent to the fire-chamber, and

a passage, L, leading to the chimney, said chambers and passages being arranged and adapted to operate substantially as and for the purposes set forth.

2. The improved cooking-stove combining therein a fire box or chamber, ovens B B, with passage F between, a flue,  $f'$ , formed in the wall  $f^2$  in line with passage F, leading into said passage F, passages I J, and lateral tubes or passages K, adjacent to the fire-box, passage L to the chimney or smoke-pipe, an upper passage, H, over the upper oven, and a damper, G, said parts being arranged and adapted to operate substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of February, 1887.

CHARLES E. KING.

Witnesses:

CHARLES H. PELL,  
WM. S. CORWIN.