

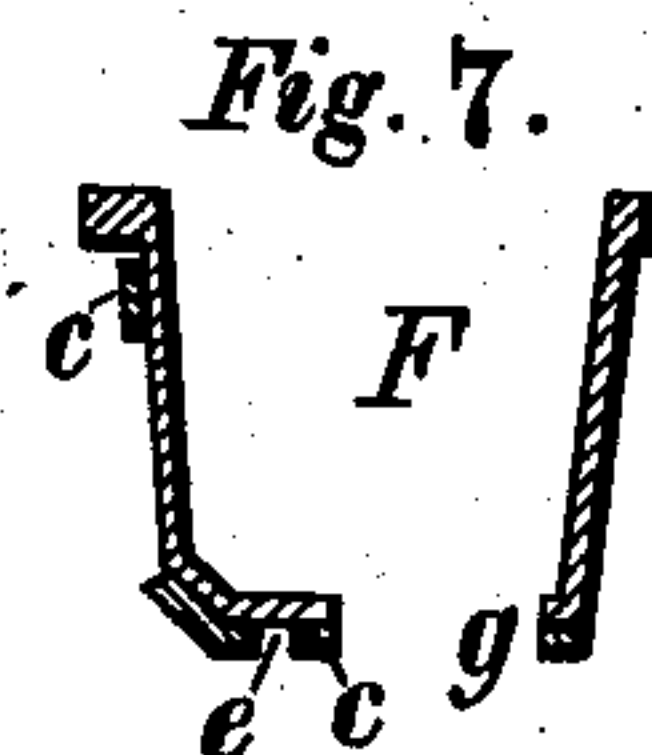
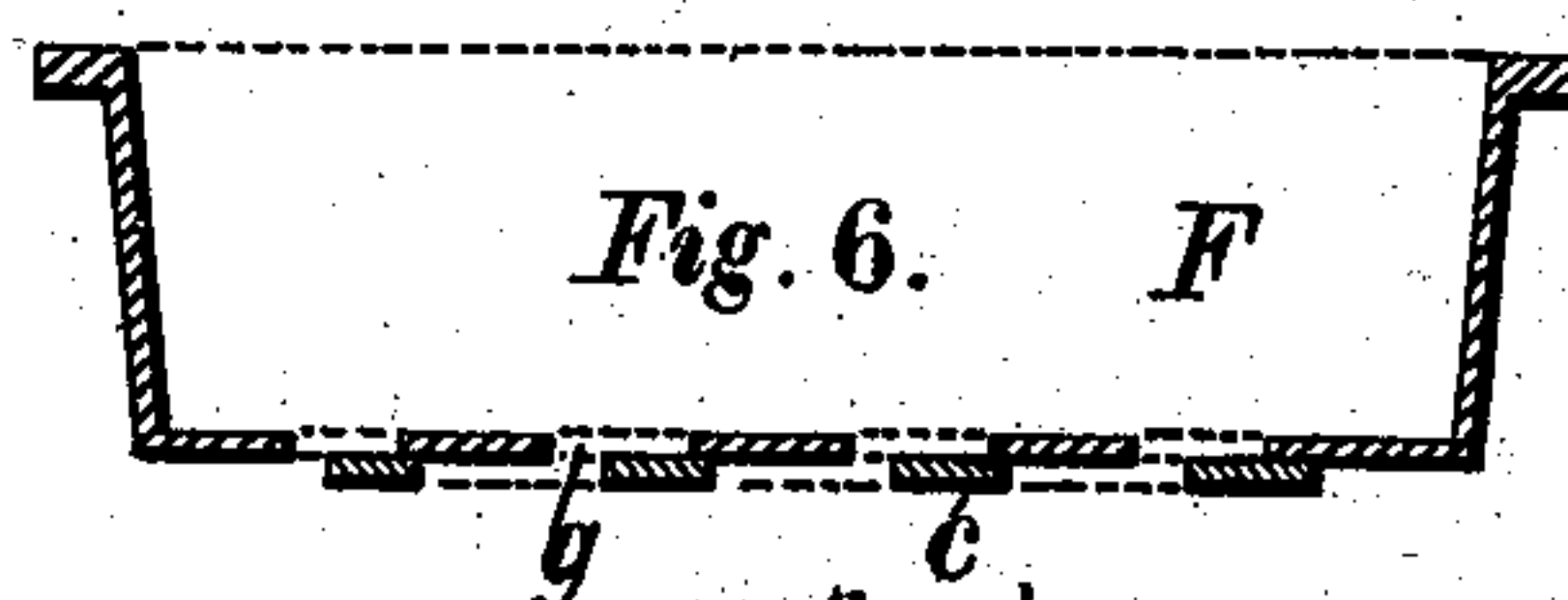
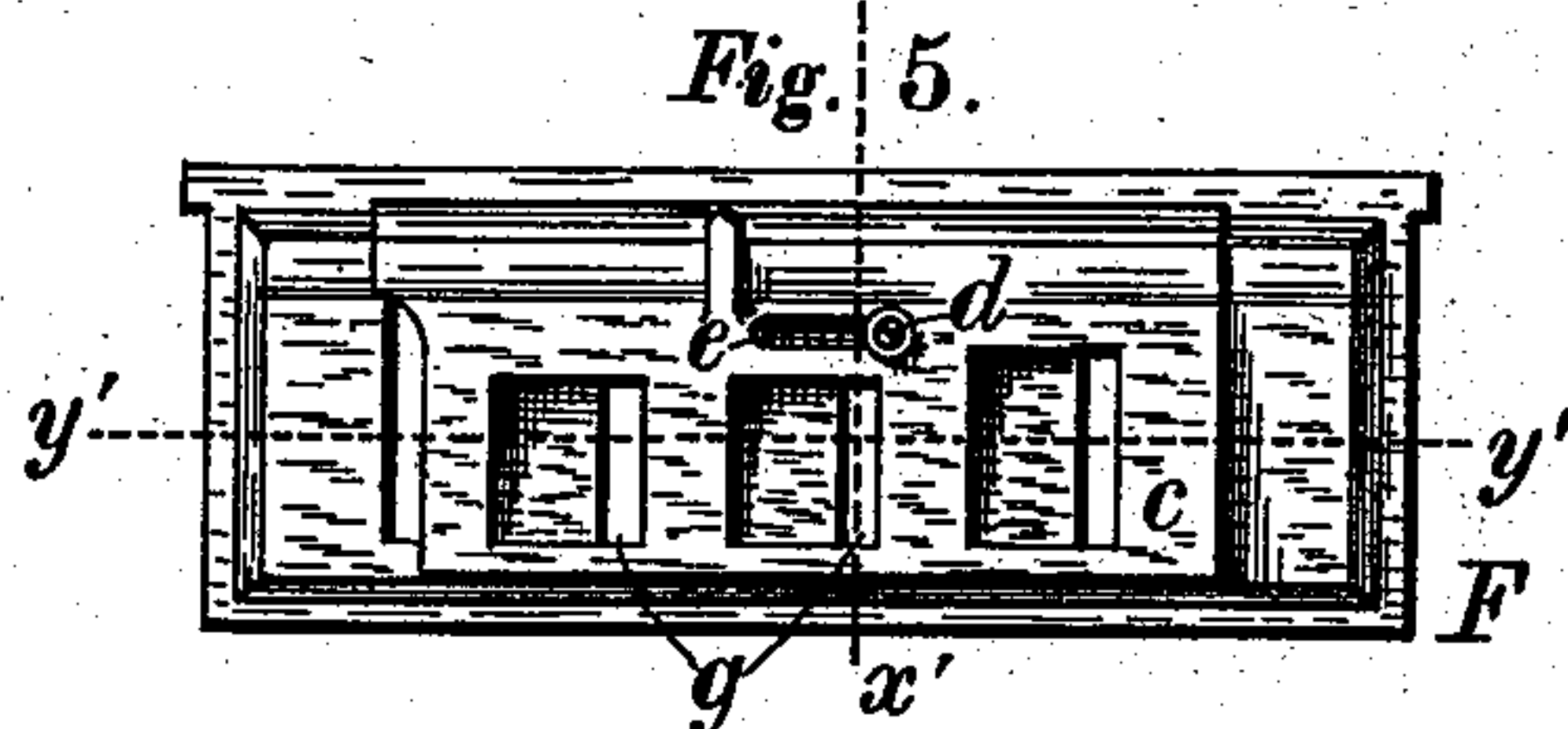
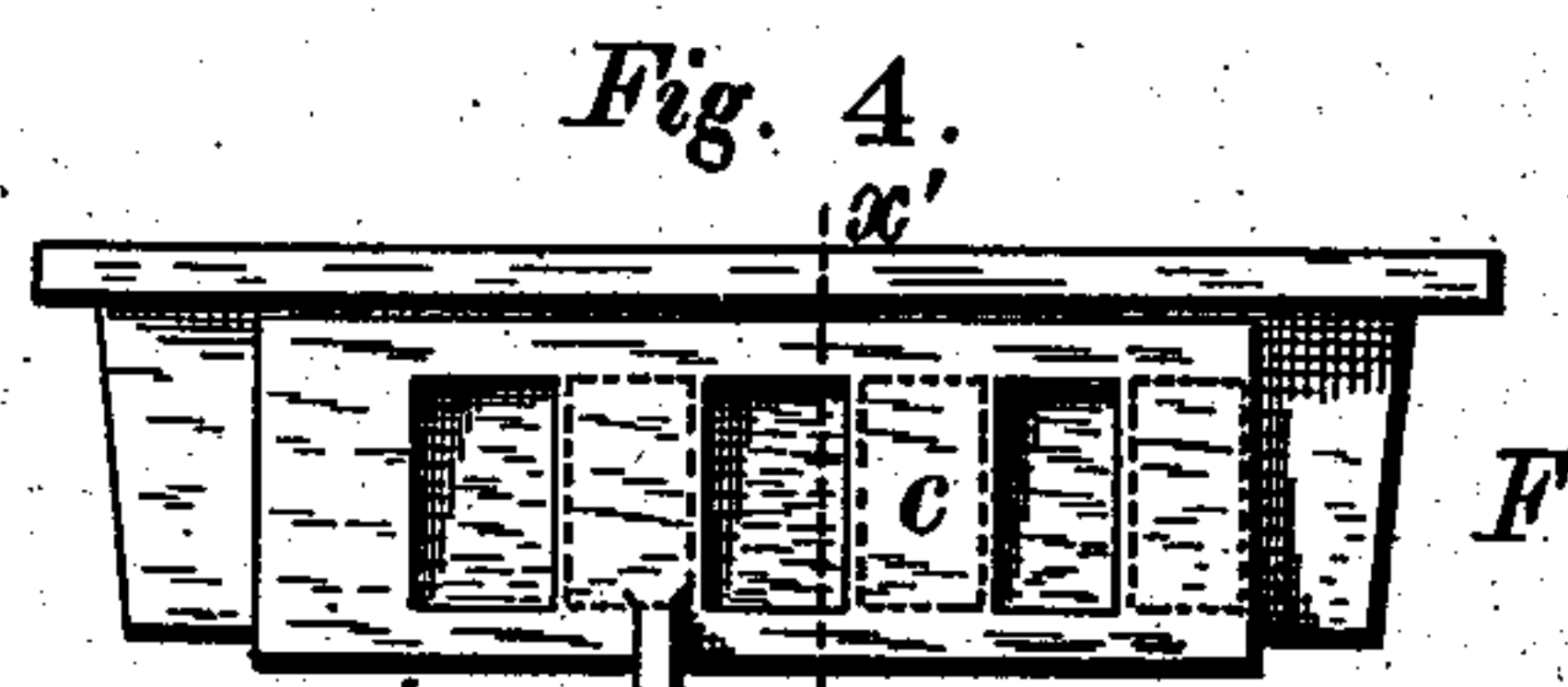
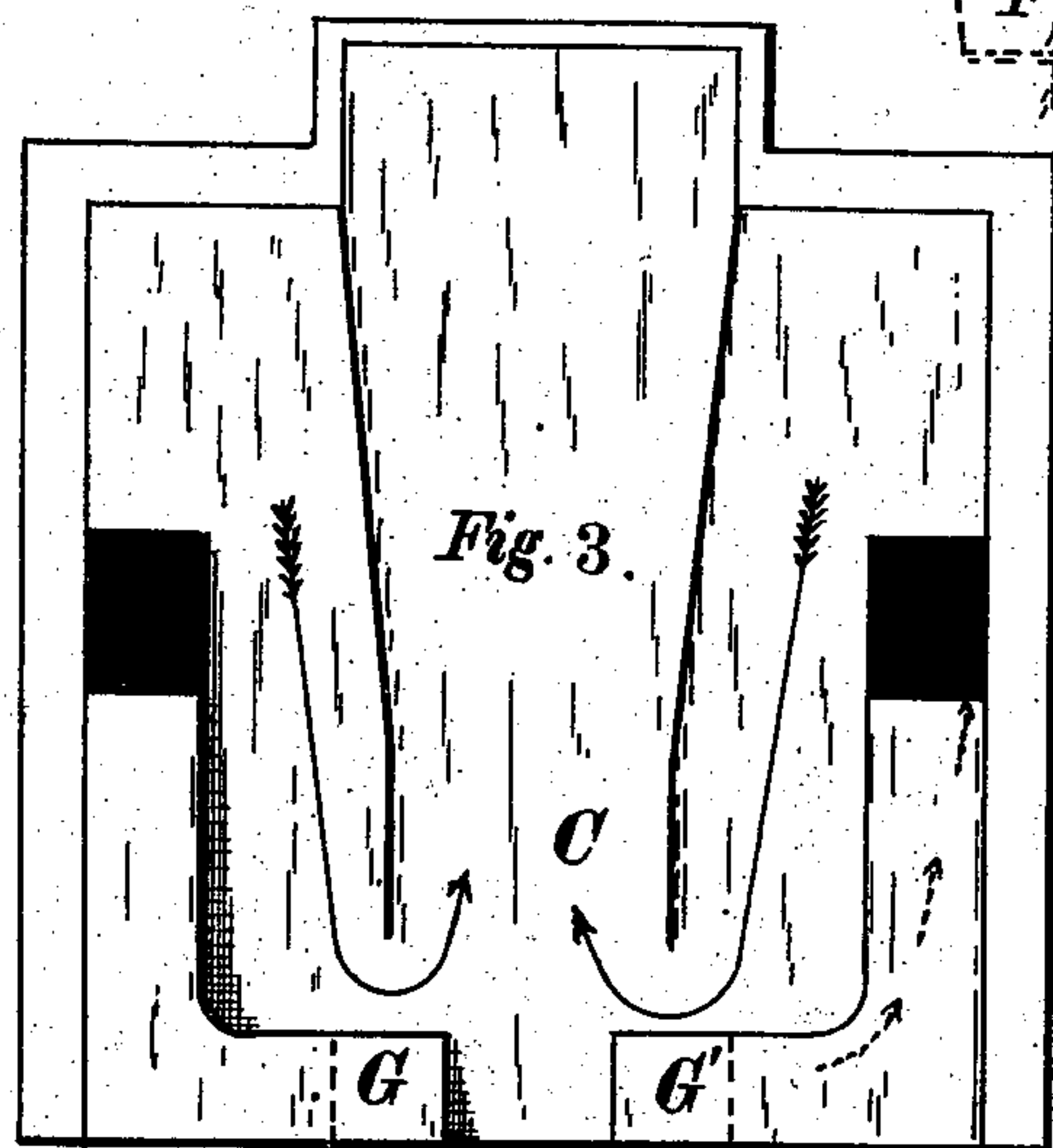
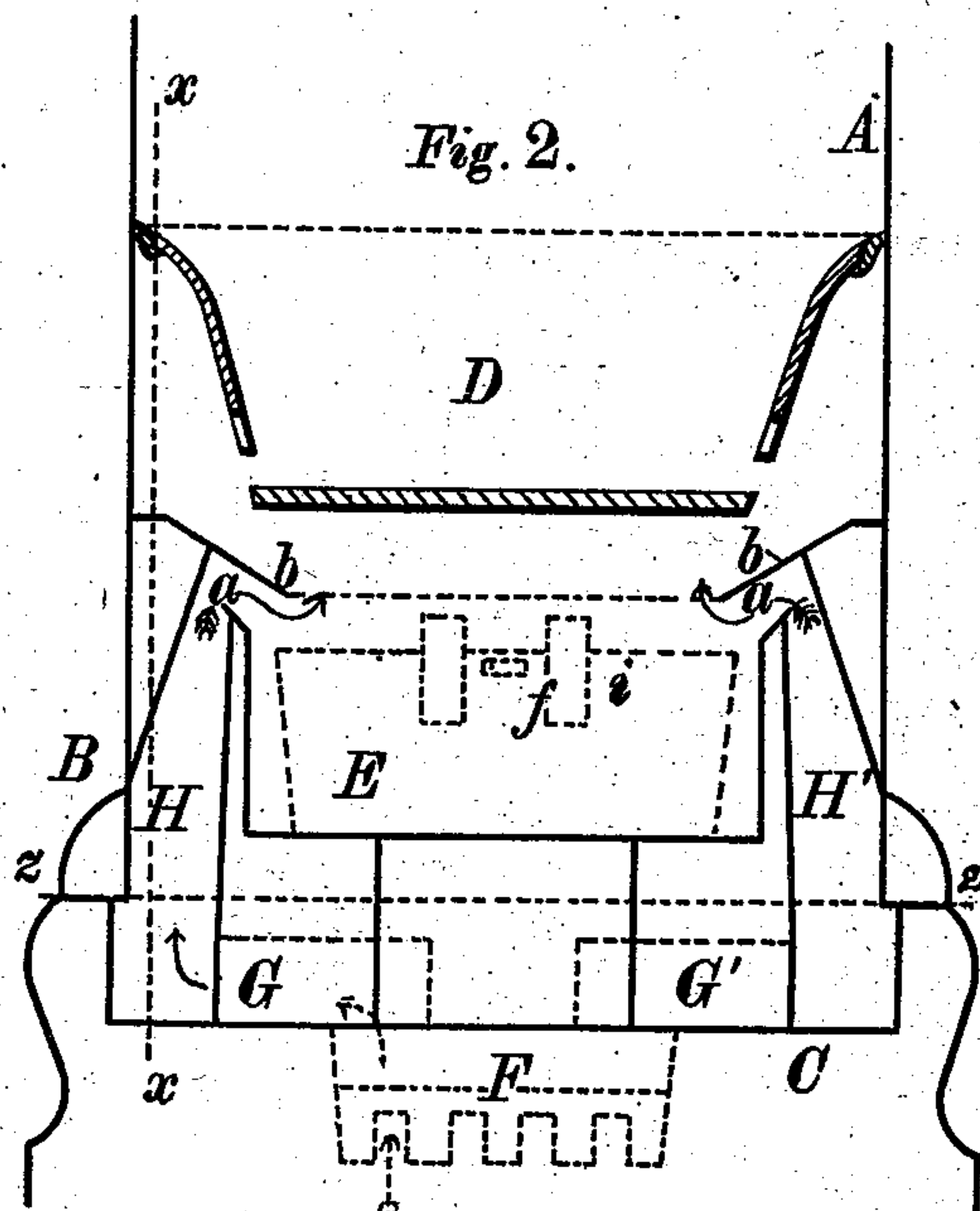
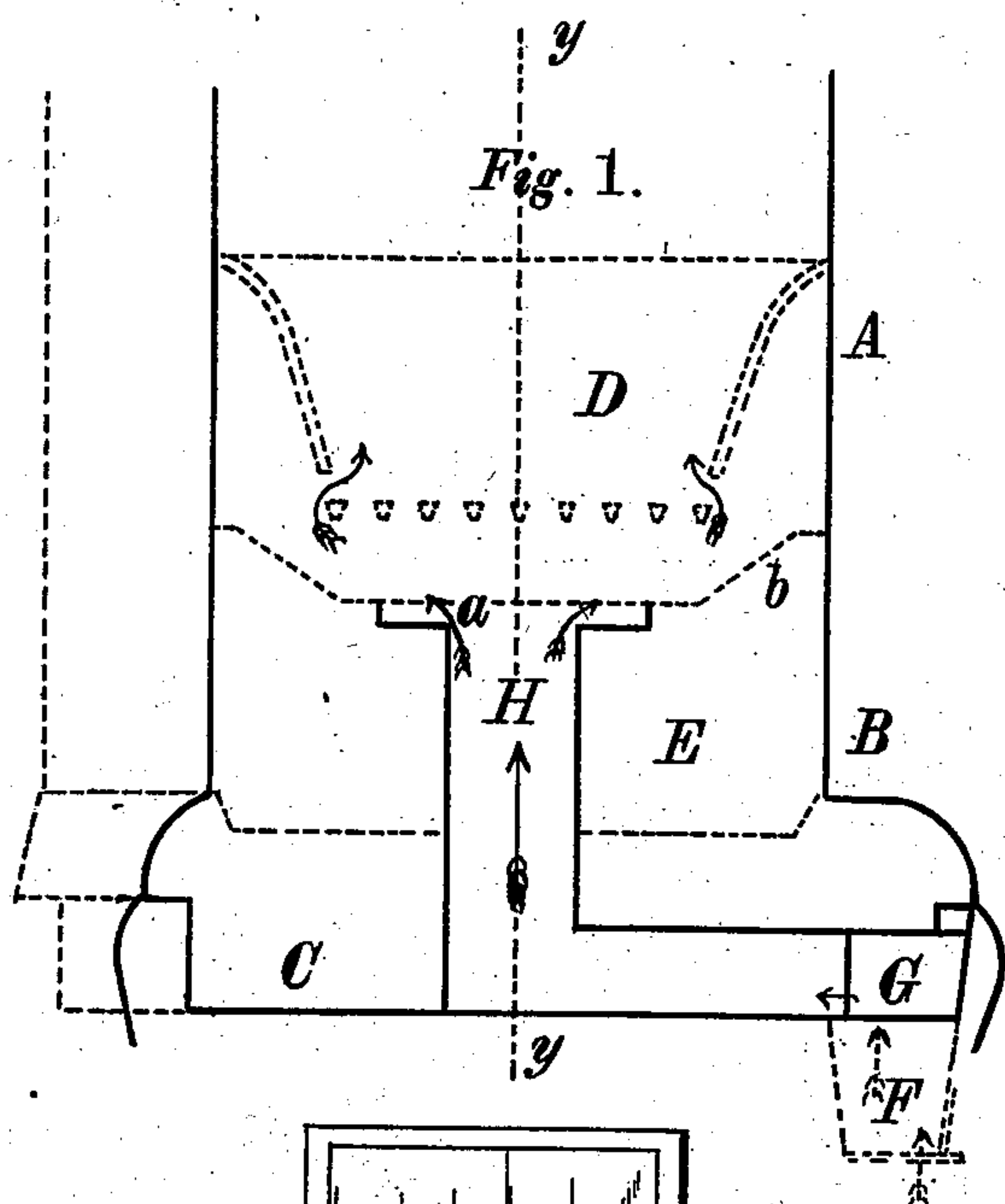
(No Model.)

J. V. B. CARTER.

STOVE.

No. 382,511.

Patented May 8, 1888.



WITNESSES-

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Atty -



# UNITED STATES PATENT OFFICE.

JOHN V. B. CARTER, OF ROCHESTER, NEW YORK, ASSIGNOR OF ONE-THIRD  
TO THE CO-OPERATIVE FOUNDRY COMPANY, OF SAME PLACE.

## STOVE.

SPECIFICATION forming part of Letters Patent No. 382,511, dated May 8, 1888.

Application filed July 30, 1887. Serial No. 245,747. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN V. B. CARTER, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Stoves, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to certain improvements in the draft and flues of a stove; and it consists in the construction and arrangement hereinafter described, the novel points of which are specified in the claims hereunto annexed.

In the accompanying drawings representing my invention applied to a heating-stove, Figure 1 is a sectional side view on the line  $x x$ , Fig. 2. Fig. 2 is a section on the line  $y y$ , Fig. 1, the parts each side of the line of section being indicated by dotted lines. Fig. 3 is a plan view of the bottom, looking down from line  $z z$ , Fig. 2. Fig. 4 is an elevation of the front draft. Fig. 5 is an inverted view of the same. Fig. 6 is a section on the line  $y' y'$ , Fig. 5. Fig. 7 is a section on the line  $x' x'$ , Figs. 4 and 5.

My improvements are represented in the accompanying drawings, in which A is the body or case of a heating-stove, B is the base-section, D is the fire-pot, and E the ash-pit.

Over the front draft, F, of the stove are formed two openings through the bottom-plate into the air-flues G G', which are cast in the bottom C and follow the contour of the front and sides, extending outward along the front each way from the middle, turning at or nearly at right angles at the corners, and being carried back to, or about to, the middle of the sides, where they are turned upward to make connection with the vertical passages H H' in the sides of the base-section. These passages H H' extend upward to the middle part of the base-section, where they open under the grate at  $a$ . The openings  $a$  may be expanded or made T-shaped, as shown in Fig. 1, to afford freer access of the air to the grate. These openings are protected from falling coals and ashes by the ash-chute  $b$  extending over them.

The draft-box F has openings for the passage of air both in front and below, and is provided with a right-angled slide,  $c$ , to cover both sets of draft-openings. A pin or stud,  $d$ ,

in the bottom of the draft-box F passes through a slot,  $e$ , to hold it in place and limit its motion. The openings  $g$  in the under side of the slide  $c$  are so proportioned that there always remains a slight passage, as illustrated in the drawings, where the slide is represented at its closed position, the draft-openings in front being fully closed, while those below are still slightly open. The object of this is to keep a slight current of air always passing through the fire, for the purpose of affording a constant ventilation to the room in which my improved stove is placed.

The course of the air in passing through the stove is shown by the arrows on the various figures. Entering through the openings  $g$  on the underside of the draft-box F, the air passes through the flues G G' in the bottom of the stove to the side flues, H H', up these flues and through the openings  $a$  to the lower side of the grate.

The products of combustion rising from the fire may be carried to the smoke-flue in any preferred manner.

The longer arrows in Fig. 3 indicate the course of products in the base of the stove after having been carried down from the combustion-chamber in customary manner.

It will be seen that they pass around the ends of partitions in the base in a well-known manner, and in so doing they have the effect to heat the base and also the incoming fresh air in the exteriorly adjacent air-inlet flues G G', which latter flues serve to obviate excessive heating of the exterior of the base on the front thereof, with which portion of the stove the feet or clothing are most liable to come in contact. Thus the air to support combustion is preheated by a construction which prevents objectionable heating of the front of the stove-base.

A suitable check-draft opening (indicated by the dotted lines  $i$ , Fig. 2,) may be provided in the back ash-pit wall establishing communication between the smoke-flue and the ash-pit. This opening is provided with a sliding damper  $f$ .

I claim—

1. The combination, with the base of a base-heating stove and with a conduit or chamber for products of combustion with the air-inlet flues,



of the air-inlet chamber F, and air-flues G G', extending along the front and side walls of the stove and between said walls and conduit, and the vertical flues H H', arranged to deliver the  
5 air immediately below the grate, substantially as specified, whereby the exterior of the stove-base is kept comparatively cool and the air-supply is warmed.

2. The combination, with the base of a base-  
10 heating stove, of an air-inlet chamber provided with air-inlet openings on its side and bottom, a suitable damper or slide provided with parts that entirely close the inlets at the side, and others that partially close those at the bottom  
15 when said damper is in its shut position, and air-flues extending from said chamber to the space beneath the grate.

3. The combination, with the base of the stove, having an air-inlet, of a damper for  
20 such inlet, the damper being of such size relative to the inlet that in its shut position it partially closes said inlet, and a check-draft opening, i, provided with damper f, substantially as set forth, whereby the stove will always ven-  
25 tilate the room and may be made at will to ventilate it without passing air through the fire.

4. The combination, with the base of a stove, of an air-inlet, exterior front air-flues, G G', the adjacent interior conduit or chamber for products, and a fuel-chamber in communica- 30 tion with said flues and also with the conduit, substantially as set forth, whereby air is pre-heated and excessive heating of the front of the base is obviated.

5. The combination, with the perforated 35 bottom of the base of a stove, of the chamber F, secured under the bottom and having its interior in communication with the perforations in the bottom, a damper for air-inlets in the chamber, flues G G', extending from the per- 40 forations in the bottom around the exterior of the front and sides of the base immediately above its bottom and adjacent to a conduit for products of combustion, and flues H H', extending to the space beneath the grate, substantially as set forth.

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Witnesses:

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