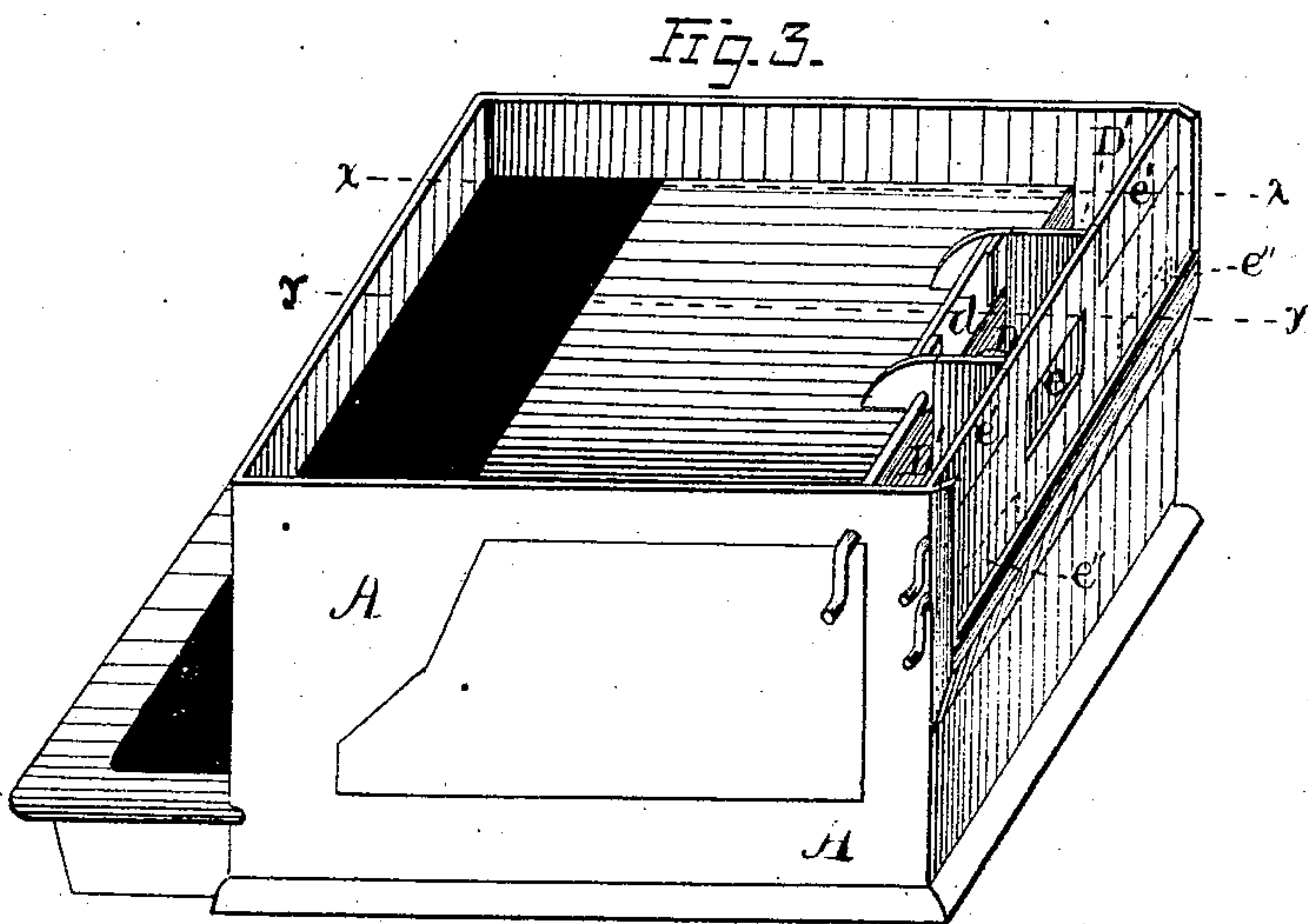
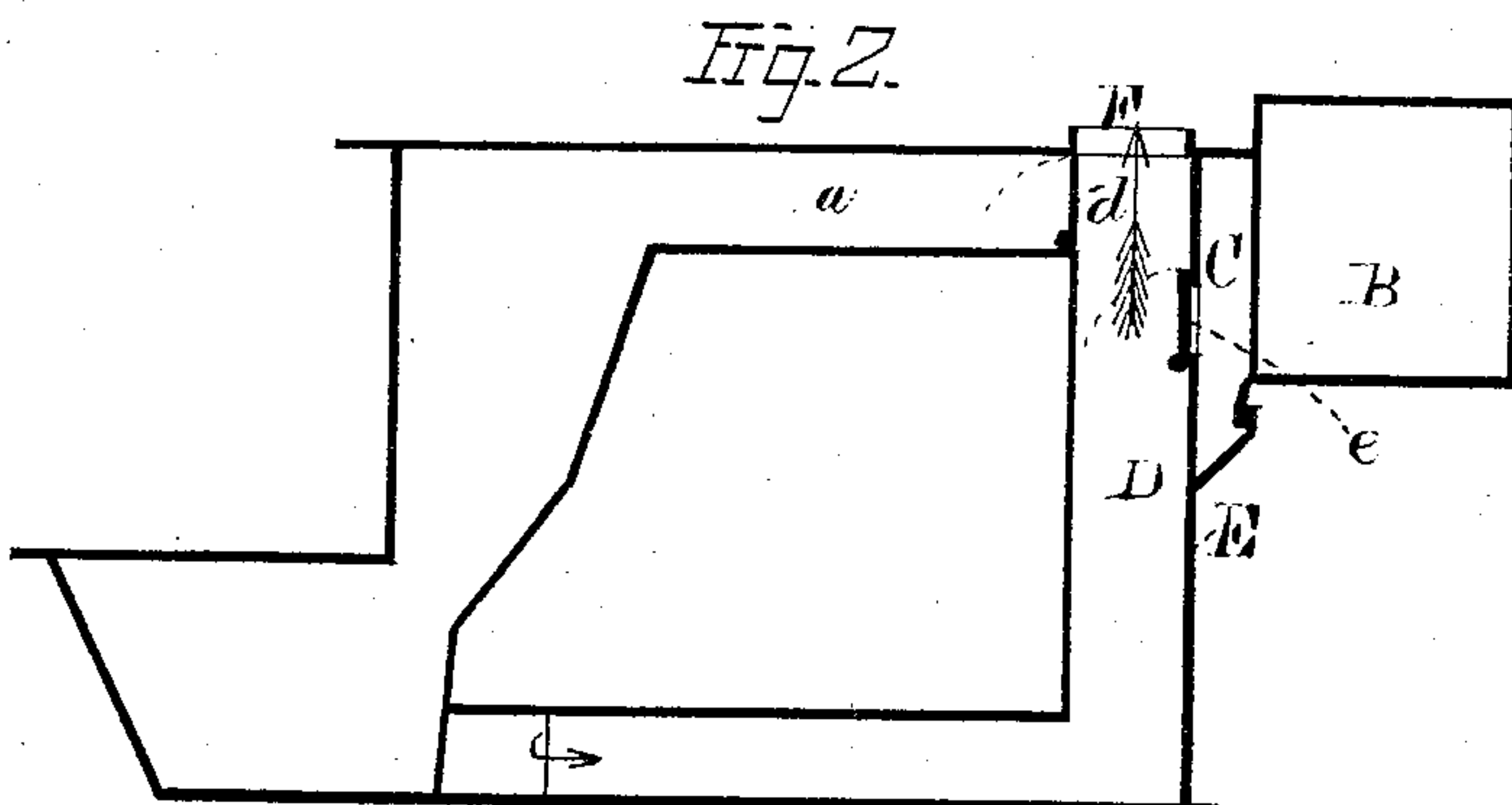
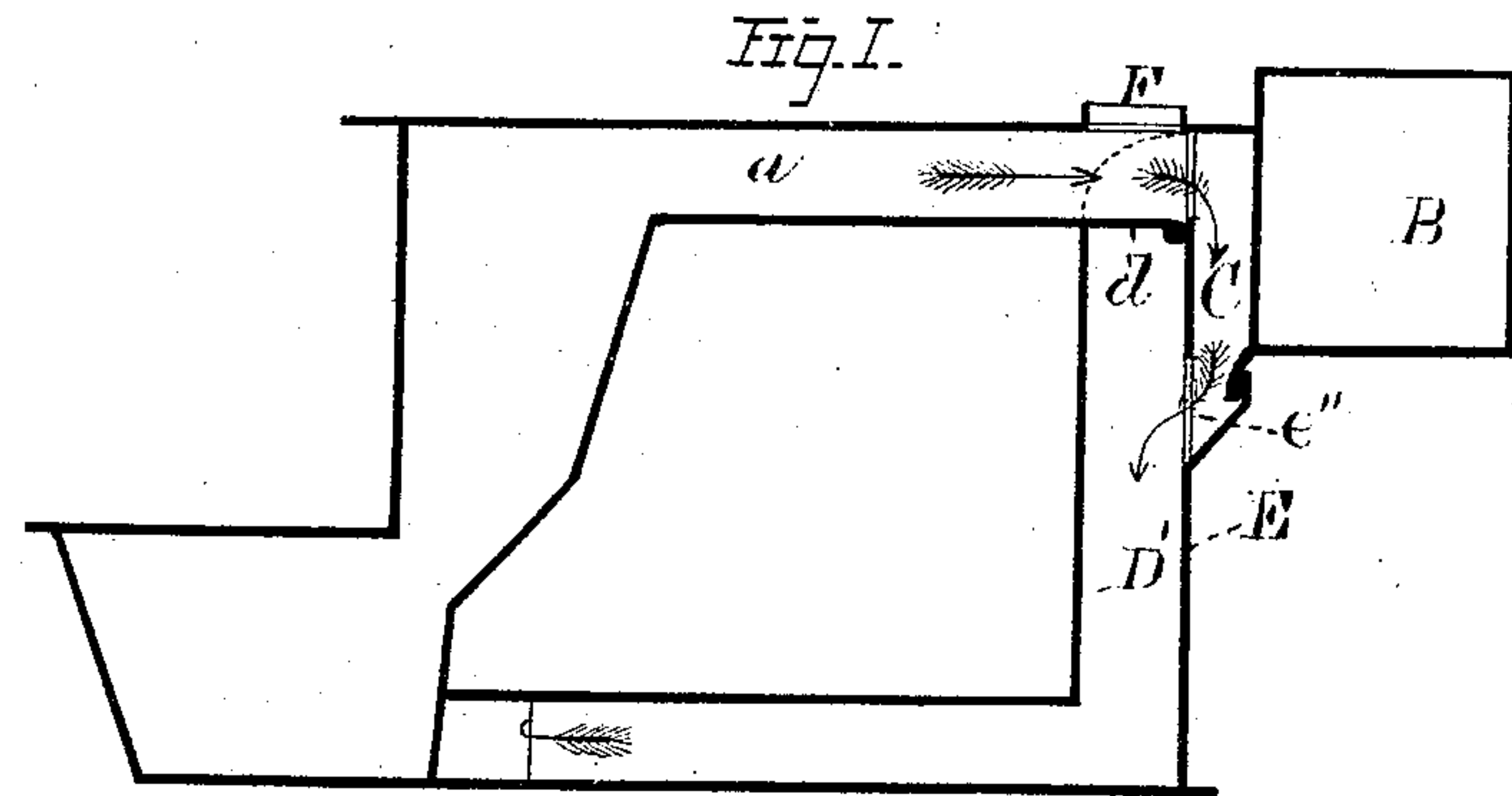


G. G. WOLFE.
Reservoir Cooking-Stoves.

No. 153,144.

Patented July 14, 1874.



WITNESSES-

Gas. E. Hutchinson.
John R. Young

INVENTOR.

Gordon G. Wolfe, by
Crindle and Deane, his Attys

UNITED STATES PATENT OFFICE.

GURDON G. WOLFE, OF TROY, NEW YORK.

IMPROVEMENT IN RESERVOIR COOKING-STOVES.

Specification forming part of Letters Patent No. **153,144**, dated July 14, 1874; application filed February 3, 1873.

To all whom it may concern:

Be it known that I, GURDON G. WOLFE, of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Cooking-Stoves; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical section from front to rear on line *xx* of Fig. 3, showing the products of combustion impinging upon the front of the reservoir and the back of the oven. Fig. 2 is a like section on line *yy* of Fig. 3, showing the reservoir cut off from products of combustion and the rear oven-plate exposed to same. Fig. 3 is a perspective view, showing the stove with top plate and water-reservoir removed and the several rear flues and dampers.

The design of the present invention is to provide suitable passages or flues and apertures therein or communicating therewith in a stove, through and by means of which the products of combustion may be directed by dampers, so as to be thrown upon the inner front of the water-reservoir, or upon the back wall or plate of the oven, or upon both, or upon neither as may be desired; and to this end it consists of a rear chamber or flue having openings in its front wall, which is the rear vertical end plate of the stove, communicating with the descending flue or flues of the stove, and with such arrangement of dampers as will cause the products of combustion in their passage round the oven to be directed into said chamber or flue or excluded thence at will; and it further consists of a chamber or flue passage located at the rear of the vertical end plate of the stove, and communicating with the flues thereof by means of apertures or openings in said plate, the front wall of the water-reservoir, which is attached to the rear of this chamber or flue, constituting the rear wall of said chamber, while, by suitable dampers, the flow of the products of combustion through the said flues, chamber, and apertures is regulated and controlled, in the manner and for the purposes hereinafter more fully explained.

In the drawings, A represents a cooking-

stove, provided, as usual, with a fire-box in front, an oven, &c., and otherwise of the common and ordinary construction well known to the trade, excepting in the details and special arrangements or adaptation of the present invention. B is the water-reservoir, set, placed, or adjusted at the rear of the chamber or flue C, in any convenient and workmanlike manner to make it firm and secure in position. Thus placed and adjusted its front wall constitutes the rear wall of the said chamber or flue. D is the central vertical end flue, and D' D' the side vertical end flues.

By this construction it will be seen that the chamber or flue C is a supplemental or additional chamber at the rear of the stove.

When the damper *d* is in a horizontal position the products of combustion will escape direct from the main top flue *a* through the exit-pipe at F. When dampers *e' e'* and *d* are in vertical position the products of combustion will dive through the end or side passages or flues D' D', and finally escape through the central flue or uptake D and exit-pipe. By this means it will be perceived that the usual functions and operations of the stove can be carried on without heating the water-reservoir B, since there will then be no draft through the apertures *e''*, and consequently the chamber C will constitute in fact a non-conducting medium or space between the hot flues and the said reservoir; but when it is desired to turn the full force of the heat, &c., upon the front of said reservoir the damper *d* is placed in vertical position, the dampers *e' e'* are turned down upon the end or side flues D' D', and the damper *e* is opened or placed in horizontal position; then the products of combustion flowing from the main top flue pass through the side openings in end plate E, caused or made by turning down said dampers *e' e'*, and, entering the chamber C, impinge at first upon the front wall of the reservoir, and then circulate freely in said chamber, heating it thoroughly, and finally escape through the central aperture, where the damper *e* is turned down, into the uptake D and to the exit pipe. In this manner and by this means the said water-reservoir can be quickly heated when desired. When there is occasion to use both the oven and the water-reservoir at the same

time, both can be easily heated by closing the dampers *d* and *e*—that is, placing them in vertical position and turning down or horizontally dampers *e' e'*, the products of combustion will then pass from the main top flue in the first instance into the chamber C, and thence escape by the side openings *e''* into the side diving-flues, and finally pass off through the central passage or uptake D. In this passage the front of the water-reservoir will be heated by the inflowing current of the products of combustion, and, also, the rear wall of the oven will receive a large share of the heat from this current as it impinges upon it in escaping from chamber C.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. The rear chamber or flue C, combined with the descending flues of a cooking-stove by means of dampers at *e'* and apertures *e''*, in the manner and for the purposes set forth.

2. The rear chamber or flue C, provided with dampers at *e* and *e' e'* and openings at *e''*, as and for the purposes set forth.

3. The combination of the water-reservoir B with the chamber or flue C, having apertures dampered, as at *e* and *e' e'*, and otherwise as at *e''*, communicating with the diving and exit-flues, in the manner and for the purposes set forth.

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Witnesses:

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