

No. 789,829.

PATENTED MAY 16, 1905.

F. J. WILLOCK.

PORTABLE ATTACHMENT FOR STOVES, RANGES, &c.

APPLICATION FILED OCT. 31, 1904.

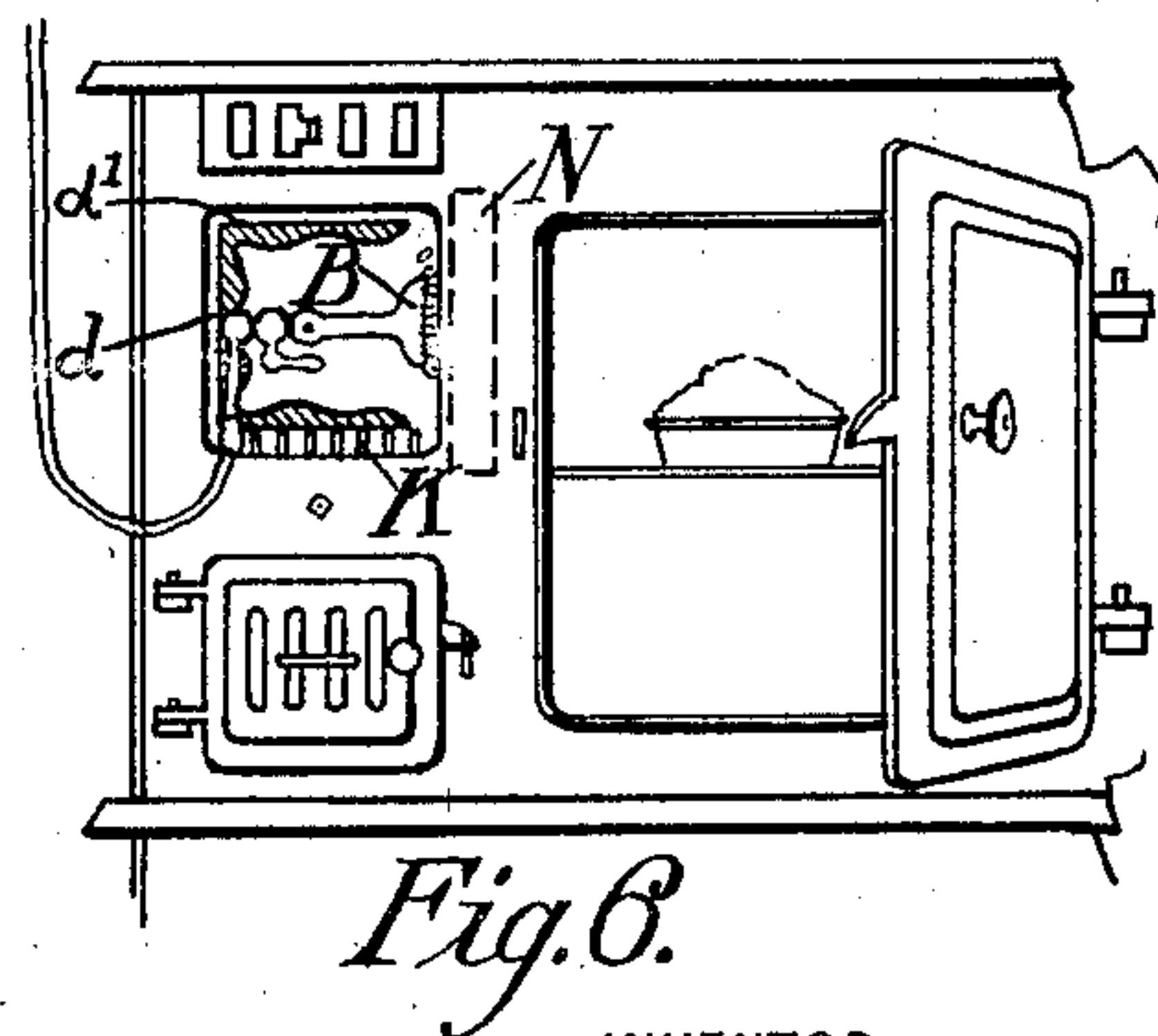
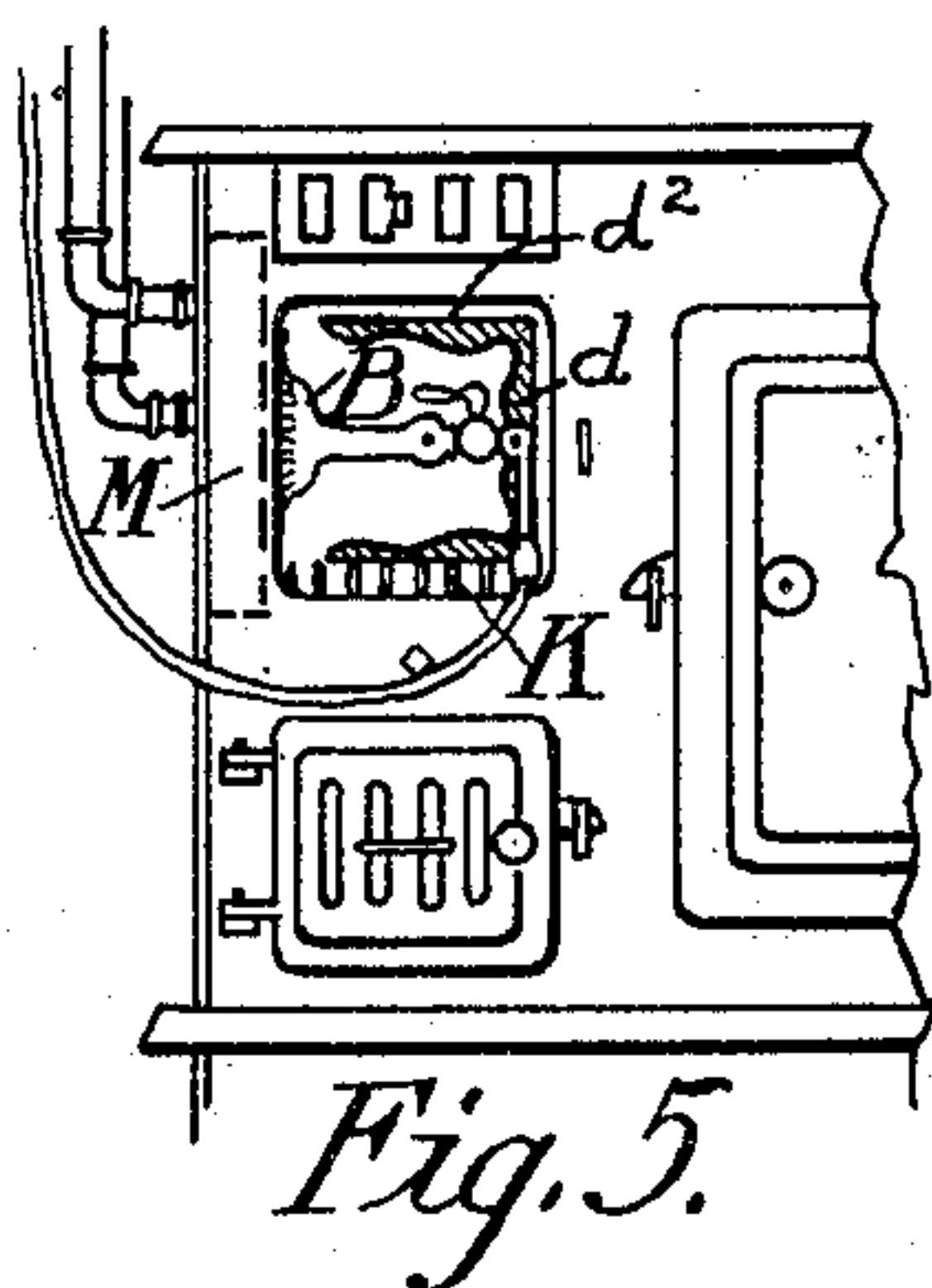
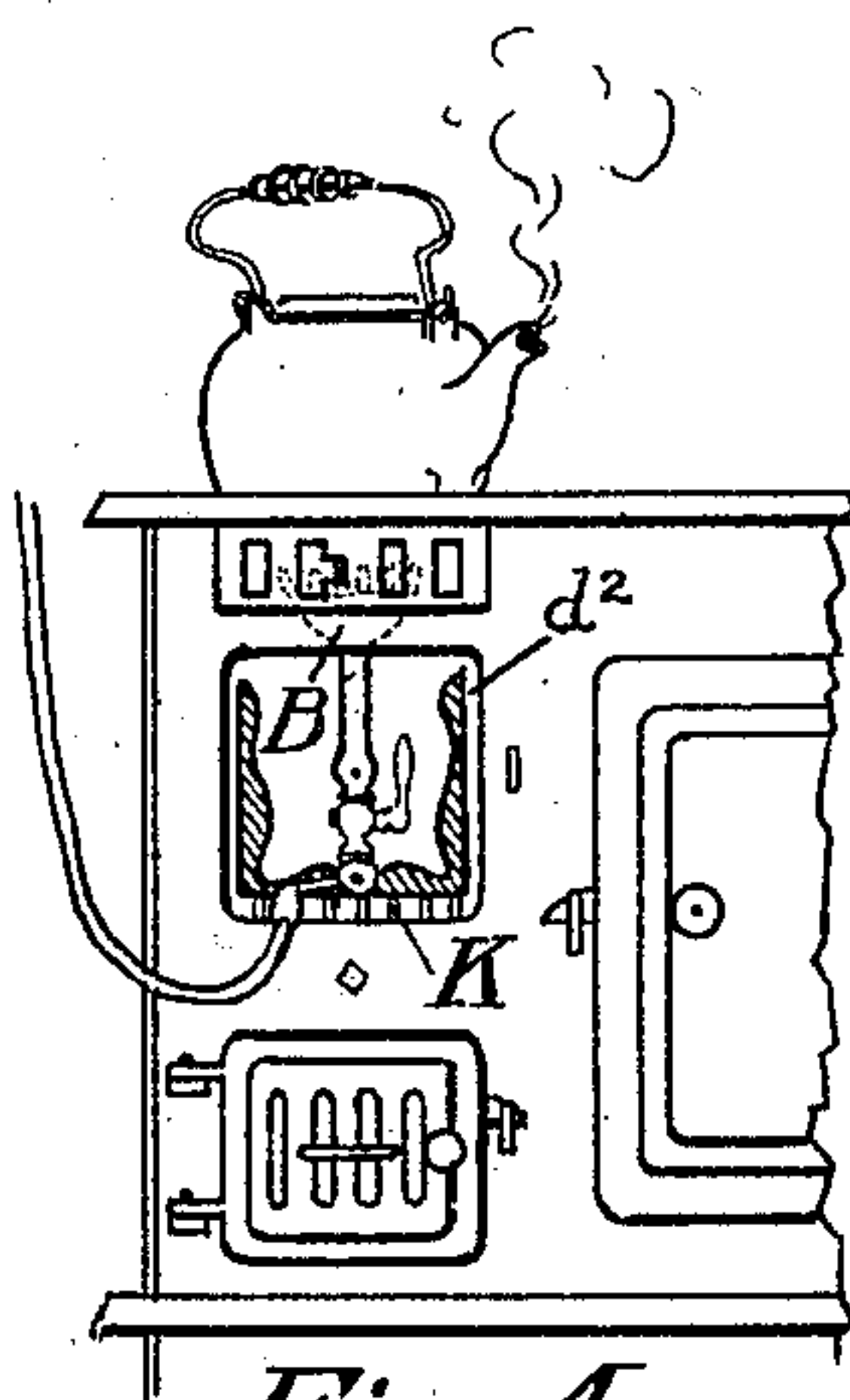
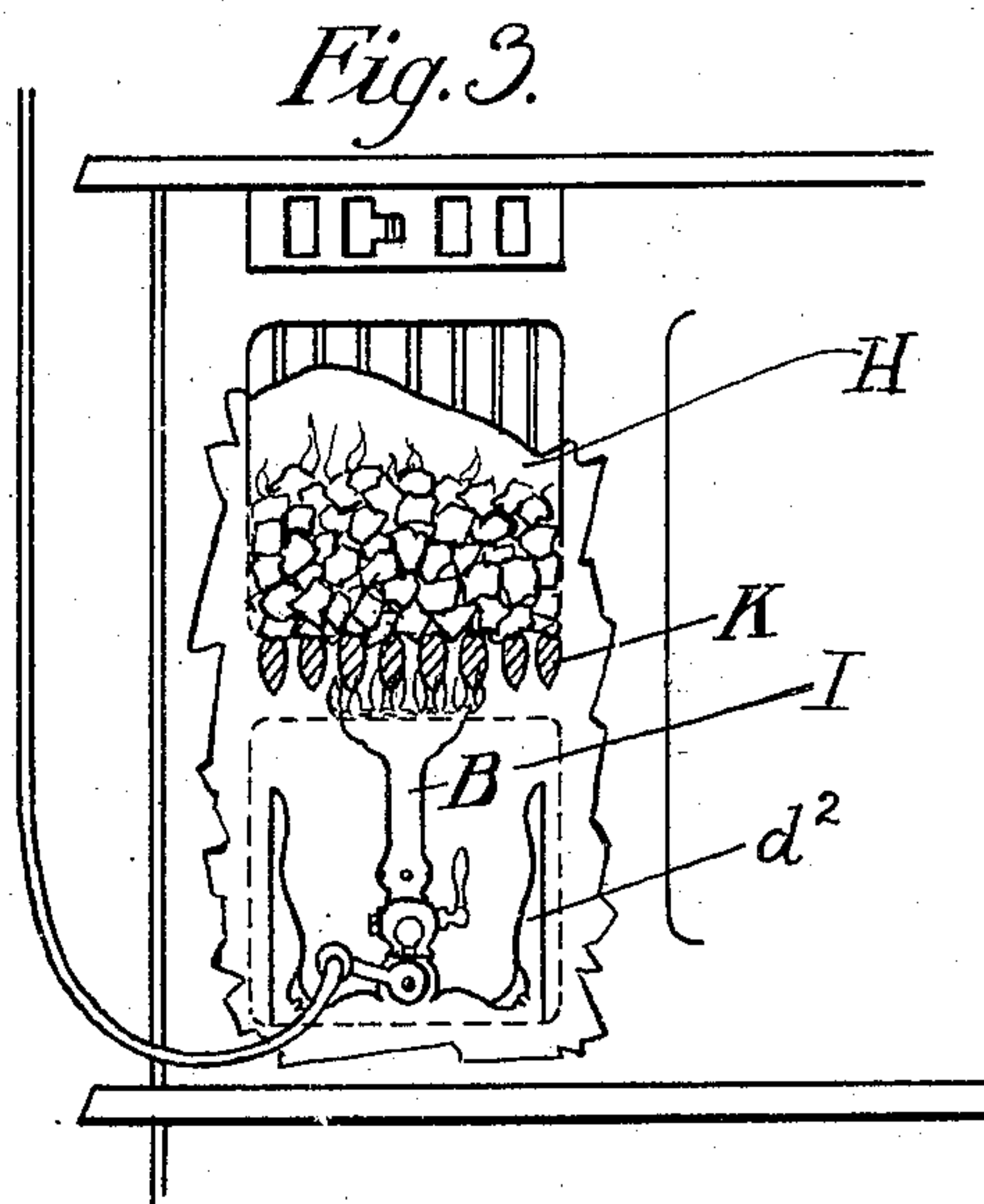
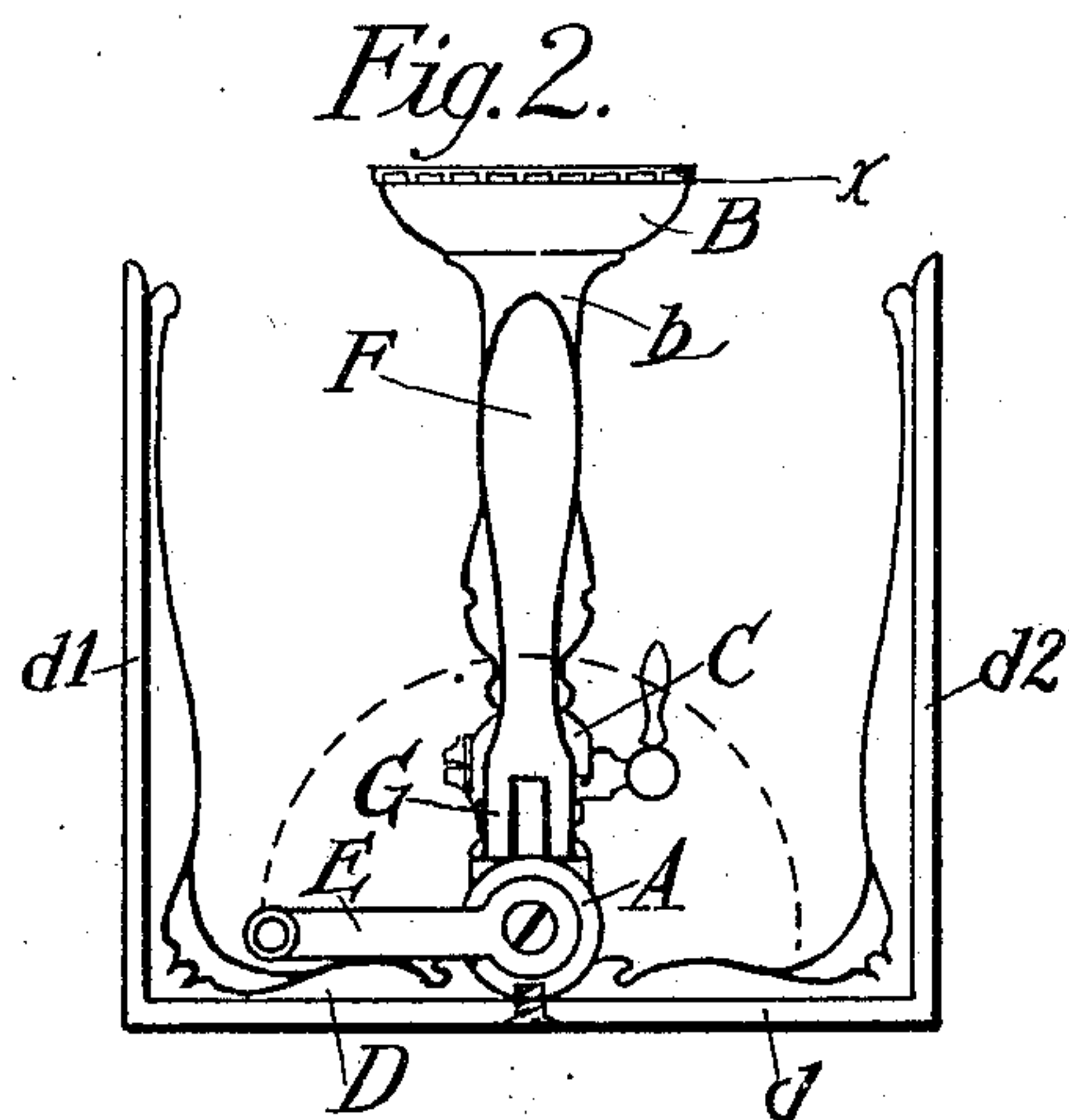
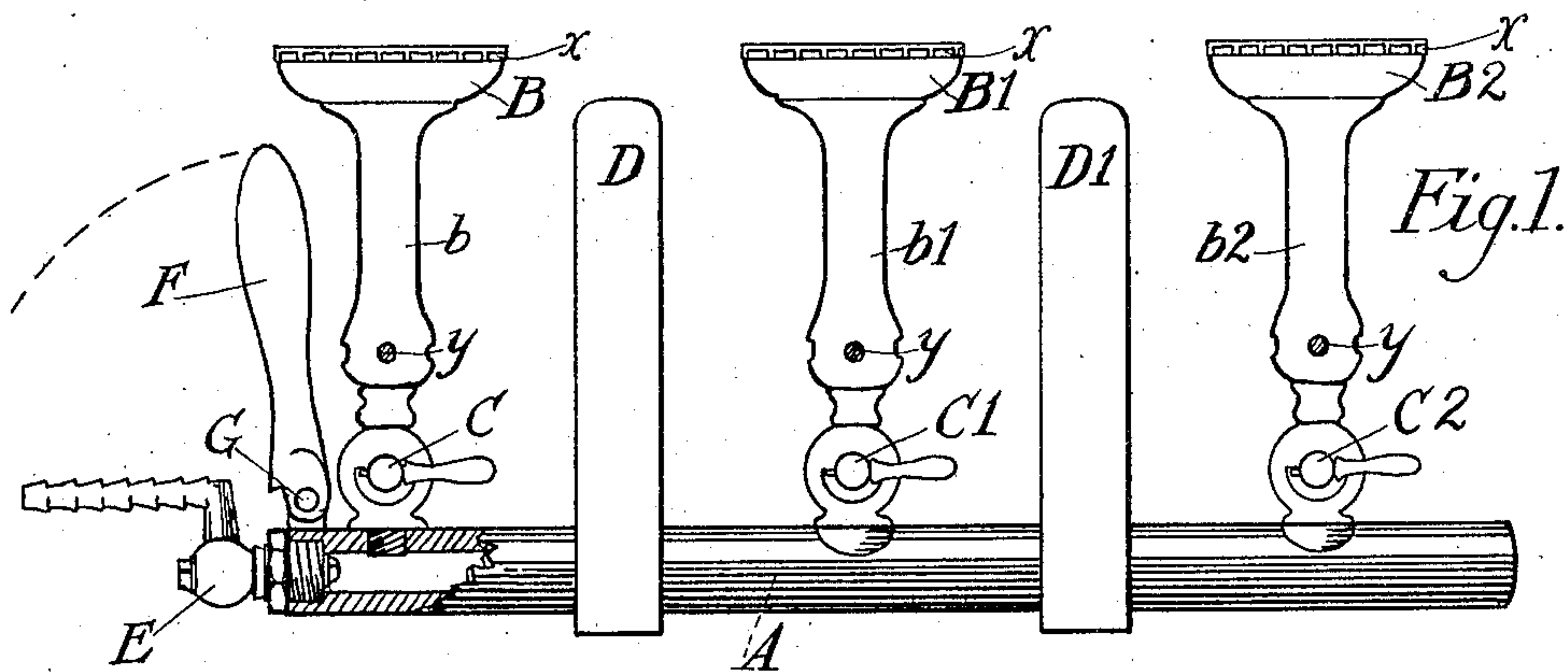


Fig. 4.

Fig. 5.

Fig. 6.

WITNESSES:

*J. Powers.*  
*J. W. Snyder.*

INVENTOR

*Fred J. Willock*  
BY  
*James Rogers*  
ATTORNEY



# UNITED STATES PATENT OFFICE.

FREDERICK J. WILLOCK, OF NEW YORK, N. Y.

## PORTABLE ATTACHMENT FOR STOVES, RANGES, &c.

SPECIFICATION forming part of Letters Patent No. 789,829, dated May 16, 1905.

Application filed October 31, 1904. Serial No. 230,635.

*To all whom it may concern:*

Be it known that I, FREDERICK J. WILLOCK, a citizen of the United States, residing and having a post-office address at No. 432 Bainbridge street, in the borough of Brooklyn, city and State of New York, have invented certain new and useful Improvements in Portable Attachments for Stoves, Ranges, and Furnaces, of which the following is a full and true description, reference being had to the accompanying drawings, showing one embodiment of my invention and some of the uses to which it may be put.

The object of this invention is the production of a device which may be readily thrust into and combined in various positions with the combustion-chamber of a stove, range, or furnace above the grate thereof and which may be easily placed within the ash-pit of a stove, range, or furnace below the grate. This device may be utilized either within and in combination with the combustion-chamber as a substitute for the coal or wood fire or may be employed in the ash-pit below the grate as a fire-kindling device or for igniting fuel placed on the grate.

The device constituting the subject-matter of this invention is adapted to be placed within the ash-pit of a stove, range, or furnace and underneath the grate in such position as to ignite the wood, coal, or other fuel above the grate. It is adapted to be retained in and combined with the fire-box or combustion-chamber above the grate, so as to have the hereinafter-mentioned burner or burners in a horizontal position, thus assuring that the flames from the burner or burners shall be directly impinged against the water-box or against the oven-wall, as desired, to heat or hasten the heating of water, &c., or render more speedy the cooking in the oven. It is adapted to also rest in and be combined with the combustion-chamber or fire-box above the grate, so as to maintain the burner or burners in an upright position, whereby the flames will directly impinge against the bottom of a boiler, kettle, or other article, device, or chamber or cooking utensil.

In the accompanying drawings I have shown views of one form of my new portable attach-

ment for stoves, ranges, and furnaces and of its various applications to and combinations with a household stove or range. It will be understood, however, that my new portable attachment for stoves, ranges, and furnaces may be of any suitable form and may be used or combined with any of the usual stoves, ranges, or furnaces.

Referring to the drawings, Figure 1 is a side view of one form of my invention. Fig. 2 is an end view thereof. Fig. 3 is a front view of a household cooking-stove with the device employed on the ash-pit below the grate as an igniter. Fig. 4 shows the device located in the combustion-chamber above the grate and employed as a substitute for a wood fire or a coal fire for heating purposes. Fig. 5 shows the device located in the combustion-chamber above the grate and turned toward a water-box to heat water therein, and Fig. 6 shows the device located in the combustion-chamber above the grate and turned toward an oven-wall to heat the oven.

The illustrated form of my new portable attachment, which is a preferred form combining lightness in weight and economy in manufacture, comprises a pipe A and one or more burners B B' B<sup>2</sup> in open connection with said pipe. Said burners are mounted upon the supply-tubes *b b' b<sup>2</sup>*, which are provided with openings *y* for regulating the air mixed with the combustible gas or agent in the tubes in order to give an intense flame at the burner-ports *x*. Cocks C C' C<sup>2</sup> are provided for regulating and shutting off the supply of gas or other combustible agent to the burners.

One end of the pipe A is closed by a cap in the usual way, and the other end is provided with a tubular plug and is in open connection with an angular tube E, one leg of which is provided with exterior ribs for gripping the interior of a flexible supply-tube and having its other leg passing through the tubular plug aforesaid and communicating directly with the interior of pipe A. The angular tube is freely movable about an axis coincident with the central axis of pipe A, the inner leg of the angular tube being threaded to assure a close fit with the plug.

At opposite sides of the burner B' the pipe



A carries rigidly-attached plates or frames D and D' of any suitable form and adapted to retain the device, so as to have the burner or burners extend vertically or horizontally.

5 The frames are shown as being directly and firmly attached to the pipe A and independently of the burners. As clearly illustrated in Fig. 2, the plates DD' may be forked frames having a base  $d$ , through which pipe A passes, 10 and side bars  $d'$  and  $d''$ , though any other suitable means may be employed provided it will retain the burner or burners in any desired position.

In order to afford a means for readily grasping the attachment, I may provide a handle 15 F, and this handle may be pivoted at G, as shown in Fig. 1, in order that the handle may be folded, thus economizing space. The handle may be directly connected with one end 20 of the pipe A, as shown.

It is obvious from the foregoing description and from the drawings that the described attachment may be connected with any suitable source of combustible agent or gas-supply 25 and that one, two, or all of the burners may be put into use, as desired. It is also obvious that the attachment will be retained by the plates D and D' in either a vertical position when resting upon the base-bar  $d$ , as 30 shown in Figs. 1 and 2, or in a horizontal position to the left when resting on side bar  $d'$  or to the right when resting on side bar  $d''$ .

As heretofore stated, the new attachment may be used either for igniting coal or wood 35 on the grate of the house stove, range, or furnace or as a substitute for the fire usually contained in the grate. In Fig. 3 I have shown a front view of an ordinary household-stove with a body of fuel in the combustion-chamber H upon the grate K, and in the ash-pit I 40 my new portable attachment rests upon the base-bars  $d$  of the plates D, and the burners B, B', and B'' are maintained in an upright position. The flames issuing from the burners 45 will quickly ignite the fuel within the combustion-chamber above the grate, and a mass of coal may be quickly brought to a red heat without the necessity of using wood or other kindling material, thus assuring a material 50 economy of fuel as well as hastening the fire.

When used as a substitute for a coal fire or a wood fire, my new attachment is placed in the combustion-chamber above the grate, resulting in economy and a saving of time when 55 the ordinary stove or range is used for heating purposes.

As shown in Fig. 4, the portable attachment may be used to heat water in a kettle and for 60 cooking, &c., and for this purpose the base-bars  $d$  will rest upon the grate K and the flames from the burner or burners will come in direct contact with the bottom of the kettle, the stove-lid having been removed. Obviously two kettles or other kitchen utensils

may be simultaneously heated by the stove attachment, or, if desired, a large wash-boiler or other article may be placed in position above the burner or burners. 65

Many forms of household stoves or ranges are provided with water backs or tanks, having a circulatory connection with a large water-tank, heated by the fire in the stove. 70 When my stove attachment is used as a substitute for a coal fire or a wood fire, it may be turned as shown in Fig. 5, so as to have the side bars 75  $d'$  rest upon the grate, thus directing the flames from the burner or burners against the water-back M and effecting a speedy heating of the water therein and in the connected tank. My new portable attachment may also, as herein- 80 after stated, be used as a substitute for the usual fire when baking or cooking is to be carried on in the oven of the household stove or range. For this purpose the attachment may be turned as shown in Fig. 6, so as to have the 85 side bars  $d'$  rest upon the grate, with the flames from the burner or burners in direct contact with the oven-wall N.

In order to have my new attachment seat firmly within the combustion-chamber and yet 90 permit the supply-tube to be entirely outside of the stove, the angular tube E is swung about its axis, so as to permit the forward leg of the angular tube to pass between the front grate-bars of the stove and project entirely 95 outside of the stove. A flexible supply-tube may then be connected with the projecting end of the angular tube. It is obvious that with this arrangement of parts there is no liability to burn the supply-tube, the attachment 100 will be firmly seated in the combustion-chamber, and, if desired, the lids may be tightly closed, so as to confine the heat to the points desired.

From the foregoing it is obvious that when 105 my new portable attachment is used below the grate of a stove, range, or furnace the fuel will be ignited more quickly and uniformly than heretofore, inasmuch as the maximum flame may be applied immediately and directly 110 to the fuel and all parts thereof. It will also be apparent that when my device is employed for the purposes stated it will not be necessary to use paper or kindling-wood in order 115 to ignite the coal. Whenever the coal fire becomes low or uneven, it will not be necessary to rake the fire and wait until the old or the added coal becomes ignited. The result 120 sought may be secured by thrusting my device into the ash-pit and applying the maximum flame directly underneath the fuel immediately.

It is a matter requiring constant care and attention when a coal fire is used to keep the fire even, which is of the utmost importance 125 in baking or to apply the desired amount of heat to each particular part of the stove. Thus, for instance, it is sometimes quite im-



possible to quickly heat the water-back or the oven. With my device, however, when used as a substitute for a wood fire or a coal fire the flames may be directly and immediately applied to any part of the stove or range and the heat maintained constant or regulated exactly as desired. It is also obvious that the heat may be concentrated upon the particular part to be heated. The new attachment devised by me will also decrease the expense of heating and cooking with the stove, range, or furnace, since the flames will be immediately cut off when the work is completed, and it will not be necessary, as heretofore, to let the fire die.

While I have herein shown and described one form of my new portable attachment and some of the many uses to which it may be put, resulting in material economy of fuel and a saving of time in building a fire, I do not desire to be understood as limiting my invention to the form illustrated nor as having described all of its uses.

What I claim is—

1. As a new article of manufacture, a portable attachment for stoves, ranges and furnaces, adapted to fit within or below the fire-box or combustion-chamber thereof, comprising a pipe and a burner connected therewith, and provided with means for retaining the burner in a vertical or a horizontal position as desired, while within or below the fire-box or combustion-chamber aforesaid, substantially as described.

2. As a new article of manufacture, a portable attachment for stoves, ranges and furnaces, adapted to fit within or below the fire-box or combustion-chamber thereof, comprising a pipe and a burner connected therewith, and provided with plates carried upon said pipe, at opposite sides of the burner, for retaining the latter in a vertical or a horizontal position as desired, while within or below the

fire-box or combustion-chamber aforesaid, substantially as described.

3. As a new article of manufacture, a portable attachment for stoves, ranges and furnaces, adapted to fit within or below the fire-box or combustion-chamber thereof, comprising a pipe and a burner connected therewith, the attachment being provided with a handle for moving the same as desired and with means for retaining the burner in a vertical or a horizontal position as desired while within or below the fire-box or combustion-chamber aforesaid, substantially as described.

4. As a new article of manufacture, a portable attachment for stoves, ranges and furnaces, adapted to fit within the fire-box or combustion-chamber thereof, comprising a pipe provided with a rotatable supply connection having a projecting tubular end, a burner connected with said pipe and means for retaining the burner, while within the fire-box or combustion-chamber aforesaid, in position to direct the flames therefrom forwardly, upwardly or rearwardly as desired, substantially as described.

5. The combination with the fire-box or combustion-chamber of a stove, range or furnace, of an attachment adjustably fitted thereinto and above the grate, and provided with a burner and with means for retaining the same in position to direct the flames therefrom forwardly, upwardly or rearwardly as desired, and a tubular connection pivoted upon and leading into the attachment and projecting through the grate aforesaid to the exterior of the stove, substantially as described.

In witness whereof I have hereunto signed my name this 27th day of October, 1904.

FRED. J. WILLOCK.

In presence of—

WALTER S. JONES,  
JAMES J. COSGROVE.