

No. 726,189.

PATENTED APR. 21, 1903.

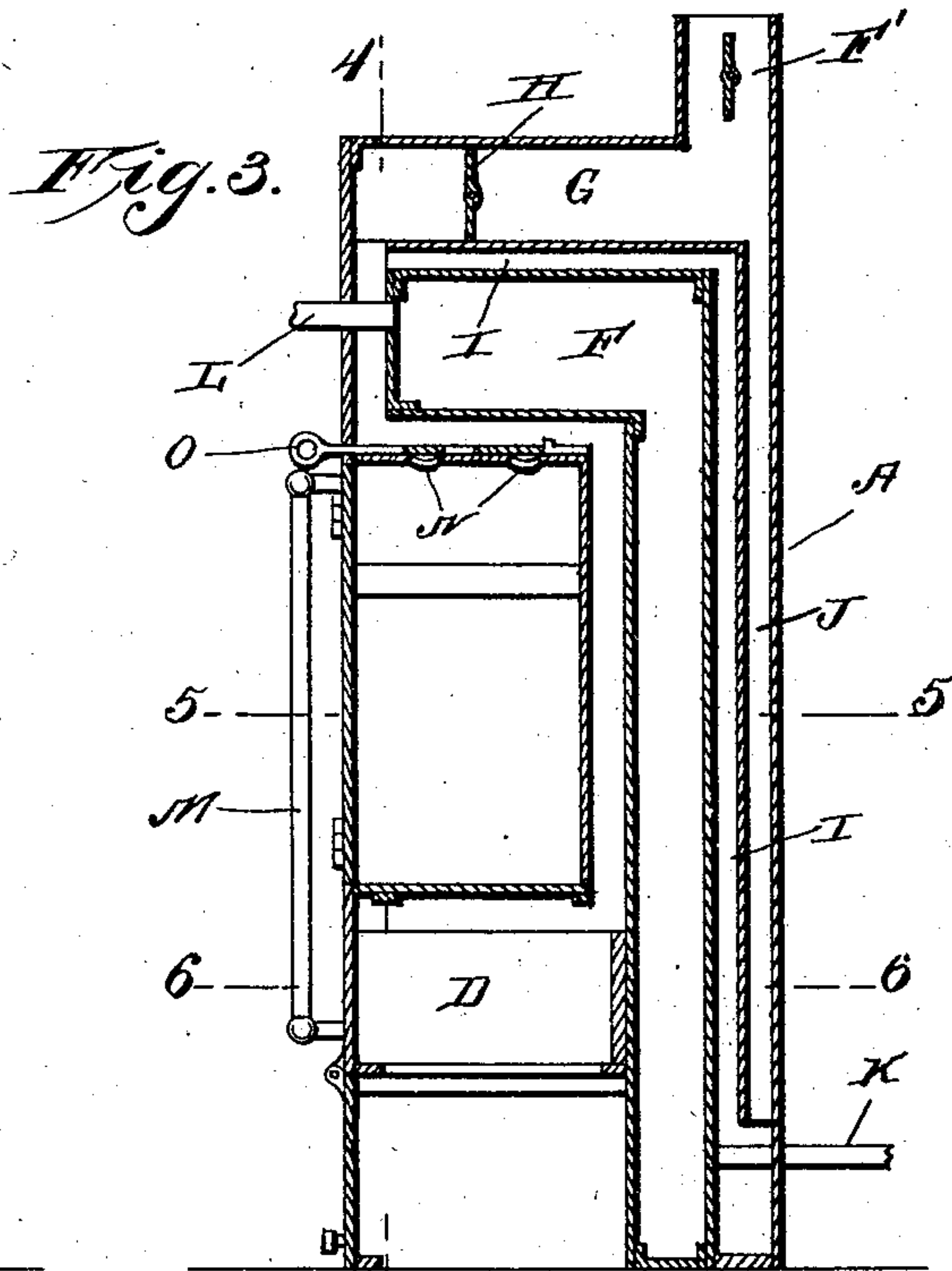
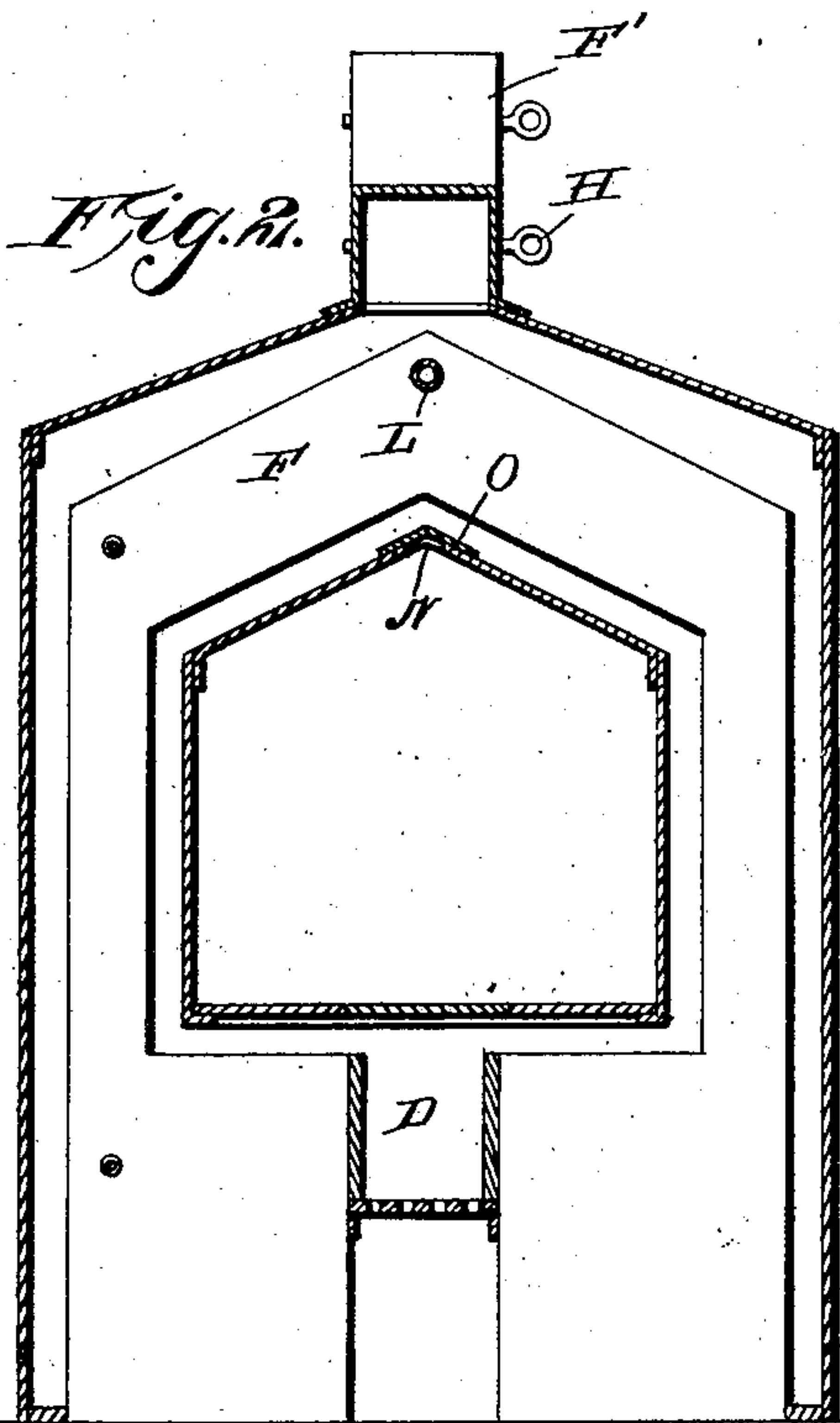
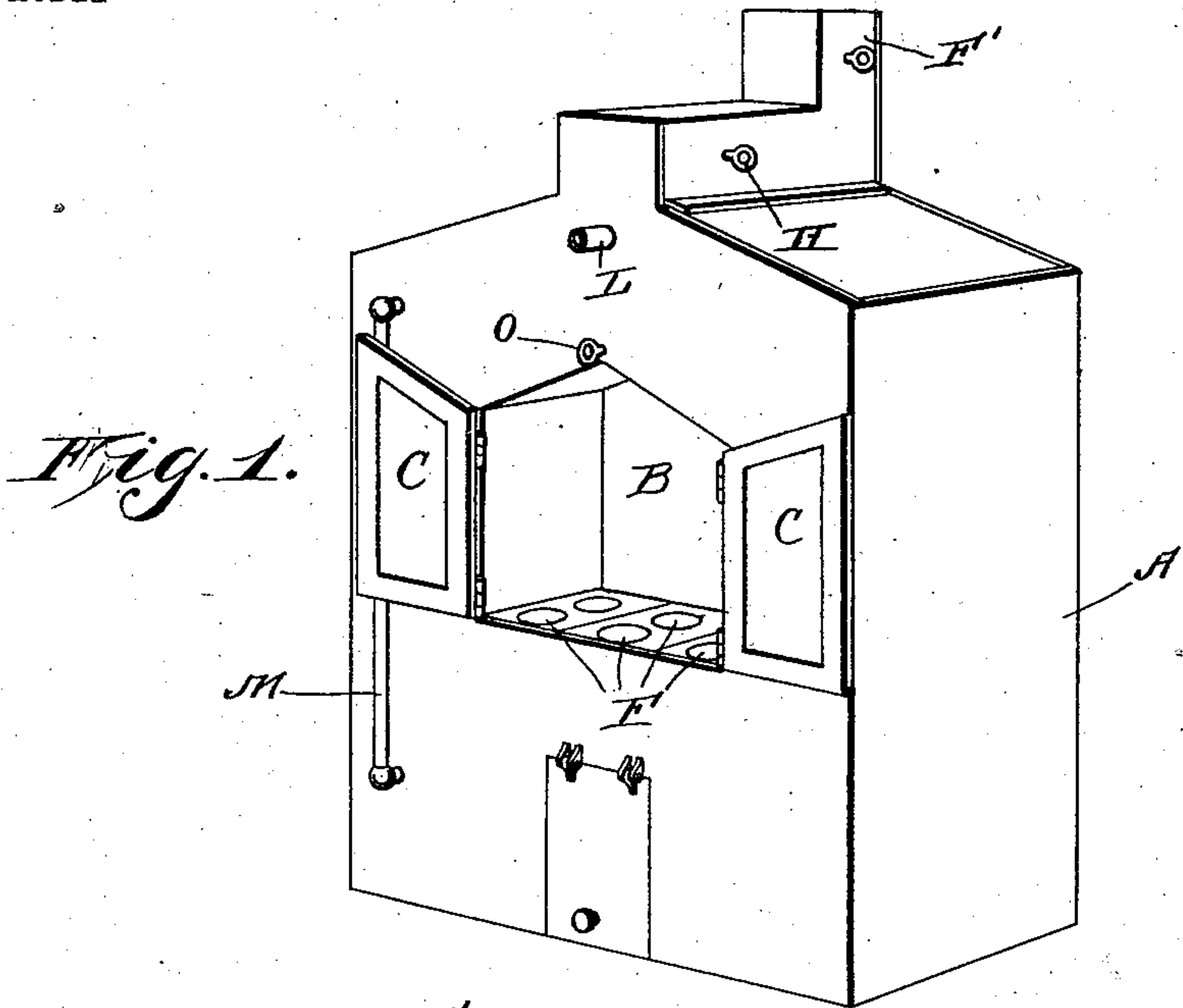
R. PURDY.

COMBINED COOKING STOVE AND HOT WATER HEATER.

APPLICATION FILED JULY 30, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
Louis D. Heinrichs
H. B. Hallack

Inventor
Robert Purdy
By his Attorney
W. P. Williams

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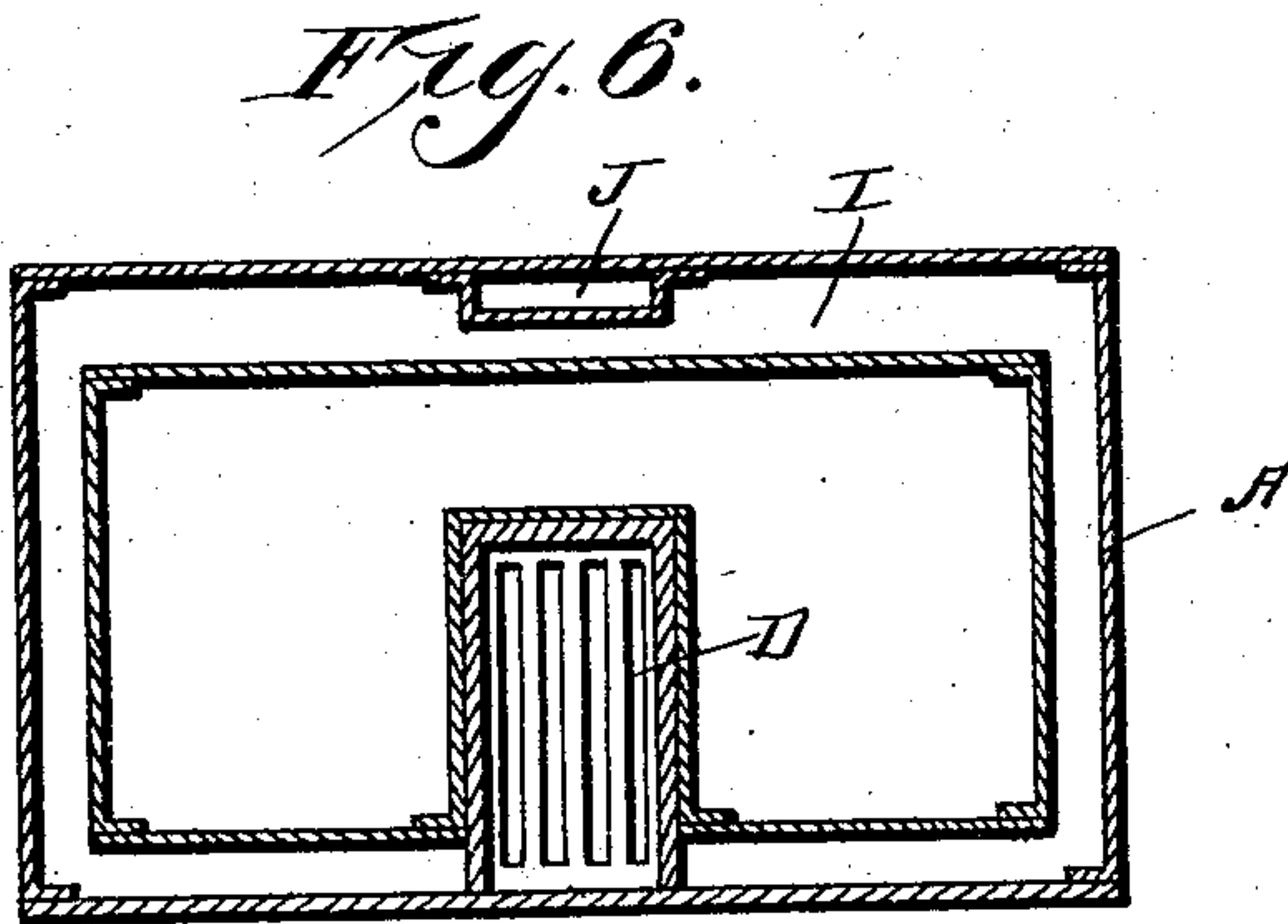
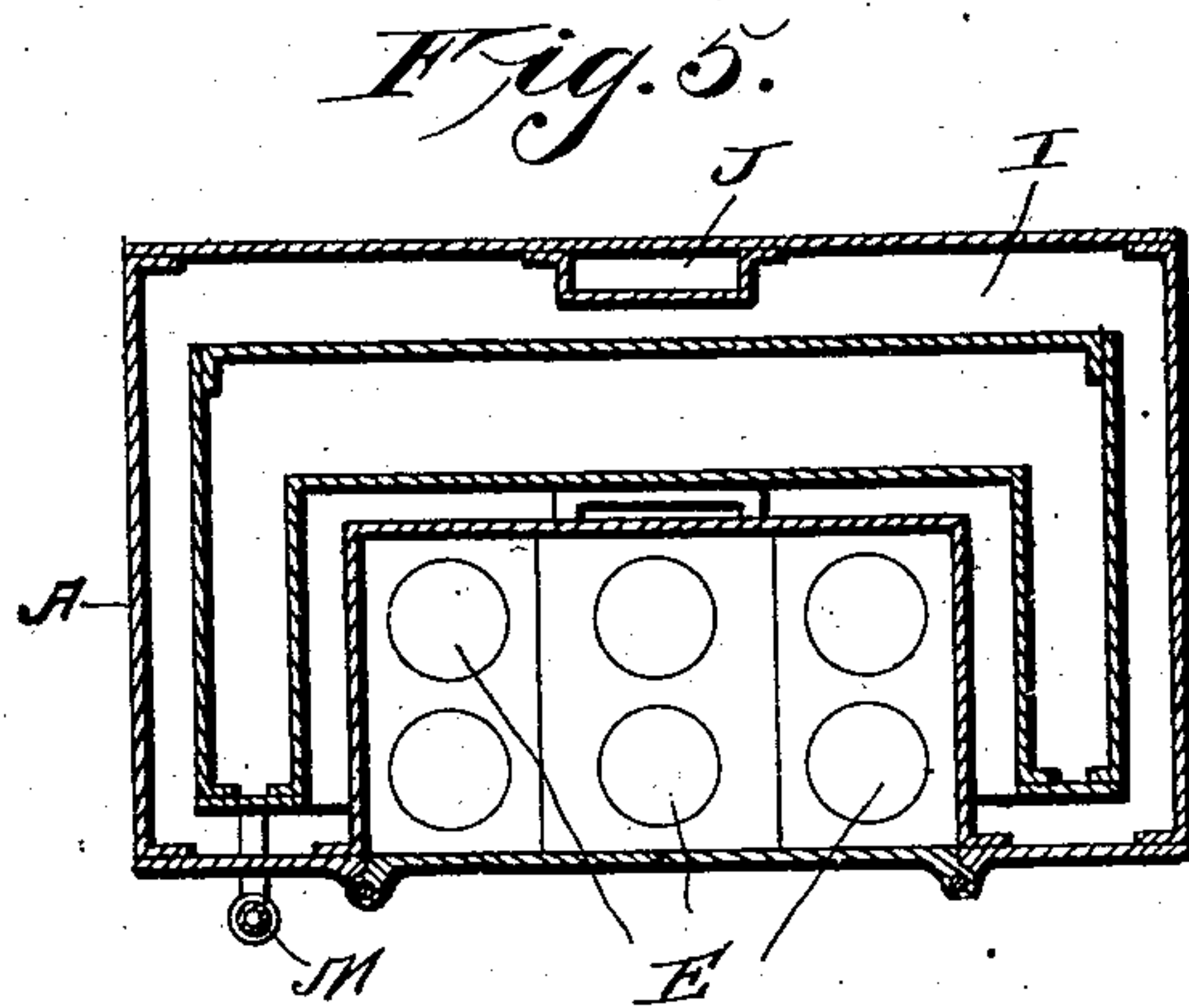
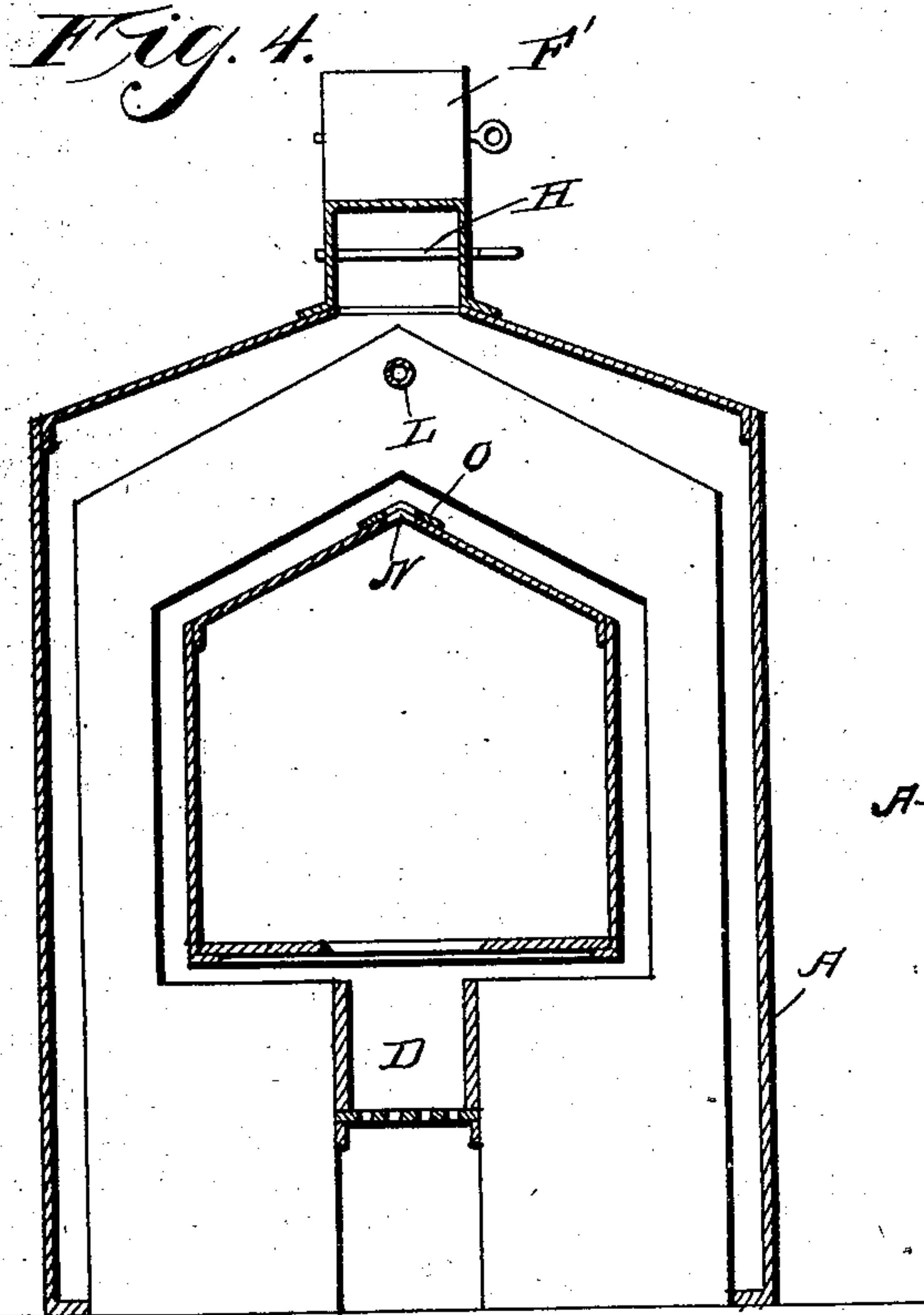
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UNITED STATES PATENT OFFICE.

ROBERT PURDY, OF PHILADELPHIA, PENNSYLVANIA.

COMBINED COOKING-STOVE AND HOT-WATER HEATER.

SPECIFICATION forming part of Letters Patent No. 726,189, dated April 21, 1903.

Application filed July 30, 1902. Serial No. 117,601. (No model.)

To all whom it may concern:

Be it known that I, ROBERT PURDY, a subject of the King of England, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in a Combined Cooking-Stove and Hot-Water Heater, of which the following is a specification.

My invention relates to a new and useful improvement in combined cooking-stoves and hot-water heaters, and has for its object to provide a stove which will combine a cooking-stove and also a heater for heating water to supply a system of pipe extending through the dwelling; and a further object of my invention is to so construct the stove as to take advantage of the greatest amount of heat possible for heating the water and also to provide for a direct draft when desired.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective view of the stove; Fig. 2, a vertical longitudinal section of the same; Fig. 3, a vertical cross-section; Fig. 4, a section on the line 4 4 of Fig. 3; Fig. 5, a section on the line 5 5 of Fig. 3; Fig. 6, a section on the line 6 6 of Fig. 3.

A represents the exterior casing of the stove, which is recessed at B to form the oven. This oven is provided with hinged doors C, so that said oven may be entirely closed. The floor of the oven lies directly over the fire-box D; but the fire-box is not the entire width of the oven, but is only underneath the middle of the same. The floor of the oven is provided with movable lids E, so that by leaving the doors C of the oven open the floor of the oven can be used the same as the top of an ordinary stove for frying, boiling, and the like.

F is the boiler, which surrounds the oven on the top, rear, and both sides and also surrounds the fire-box at the rear and upon each

side; but said boiler is located at a slight distance from the oven on all sides and also a slight distance rearward of the front wall of the casing A, so that the products of combustion may pass from the fire-box upward and around the oven to the flue F', which leads from the upper end of the casing A.

G is a passage formed in the upper part of the casing A, which leads from the space between the front of the boiler and the front wall of the casing to the flue, and in this passage is arranged a damper H, and when this damper is turned horizontally, so as not to obstruct the passage, the products of combustion will pass upward from the fire-box and directly to the flue through the passage G; but when the damper is turned in the position shown in Fig. 3, so as to close the passage G, the products of combustion will then pass through the passage I rearward and downward at the rear of the floor to a point near the bottom, then up through the passage J to the flue, thus forcing the same to take a circuitous route, which while it will decrease the draft somewhat will cause a greater amount of heat to be radiated than if the products of combustion pass directly to the flue.

K is an inlet water-pipe leading to the lower end of the boiler, and L is an outlet leading from the upper end. These pipes lead to the hot-water system throughout the dwelling and cause the water to be circulated through the apartment.

M is a water-gage upon the front of the stove to indicate the amount of water in the boiler.

In starting a fire or when the fire is low it is desirable to allow the fire to have as direct draft as possible to the flue, and for such purpose I have provided through the upper wall of the oven orifices N, which are adapted to be opened or closed by a sliding valve O. Thus when it is desired to give a very direct draft to the fire the covers E in the oven-floor are removed, the oven-door C closed tightly, and by opening the orifices N in the upper wall of the oven and opening the bottom H the products of combustion can pass directly up through the oven, through the orifices N, and through the passage G to the flue, thus greatly increasing the draft.

The advantage of my invention is that by the use of my improved stove the heater, generally located in the cellar, is dispensed with, as the one stove will answer for both cooking
 5 and heating the house, and the stove is so constructed that the same may be manufactured at a comparatively small cost and yet a great amount of surface will be exposed to the heat of the fire, and while I have shown
 10 my invention in a crude form it illustrates my principle sufficiently for the purpose of obtaining a patent thereon; but it is obvious that the same might be manufactured in a different shape or form and ornamentations
 15 added to make the same more pleasing to the eye without departing from the spirit of my invention. Therefore I do not wish to be limited to the exact construction here shown.

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

1. In a combined stove and water-heater, an exterior casing, said casing being provided with a recess, said recess forming an oven, doors for closing said oven, a fire-box located
 25 underneath the floor of the oven, removable lids or covers normally closing openings through the floor of the oven, a boiler surrounding the oven at a slight distance on the top, rear and two sides, said boiler also surrounding the fire-box at the rear and two sides,
 30 said boiler so located as to leave a space between the front wall of the casing and the front of the boiler, a direct-draft passage arranged above the boiler, a damper for controlling said passage, an indirect-draft passage extending from the space between the floor and the front wall, rearward above the boiler, downward at the rear of the boiler to a point near the base, and there connecting
 35 with a passage leading upward to the flue, an inlet water-pipe extending into the boiler, an outlet-pipe extending out of the boiler, as and for the purpose specified.

2. In a stove of the character described, a
 45 casing, a flue extending out of the upper end of said casing, an oven recessed in the casing,

doors for closing said oven, openings formed through the floor of the oven, covers adapted to normally close said opening, a fire-box arranged below the floor of the oven, a boiler
 50 surrounding the oven at a slight distance therefrom at the top, rear and two sides, and also surrounding the fire-box at the rear and two sides, said boiler so located as to leave a space between the front of the boiler above
 55 the oven and the front wall of the casing, a direct-draft passage extending from this space to the flue, a damper located in said passage, a passage I leading from the space between the front of the boiler and the front wall and
 60 extending rearward and downward behind the boiler to a point near the base, a passage J with which the passage I connects extending upward to the flue, an inlet-pipe leading into the lower end of the boiler, an outlet-
 65 pipe leading out of the upper end of the boiler, the roof of the oven provided with orifices, a valve for opening or closing said orifices, and a water-gage located upon the exterior of the stove, as and for the purpose specified. 70

3. In an apparatus of the character described, an outer casing, an oven recessed in the casing, doors adapted to close said oven, a fire-box arranged below the oven, the floor of the oven provided with openings, covers
 75 normally closing said opening, a boiler arranged around the oven and the fire-pot, a flue extending upward from the upper end of the casing, a direct passage connecting with said flue, a damper for opening or closing said
 80 passage, a circuitous passage also connecting with said flue, an inlet water-pipe extending in the lower end of the boiler, and an outlet water-pipe extending from the upper end of the boiler, as specified. 85

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

ROBERT PURDY.

Witnesses:

H. B. HALLOCK,
 L. W. MORRISON.