

(No Model.)

J. IREDALE.  
OIL STOVE.

No. 259,546.

Patented June 13, 1882.

Fig. 3.

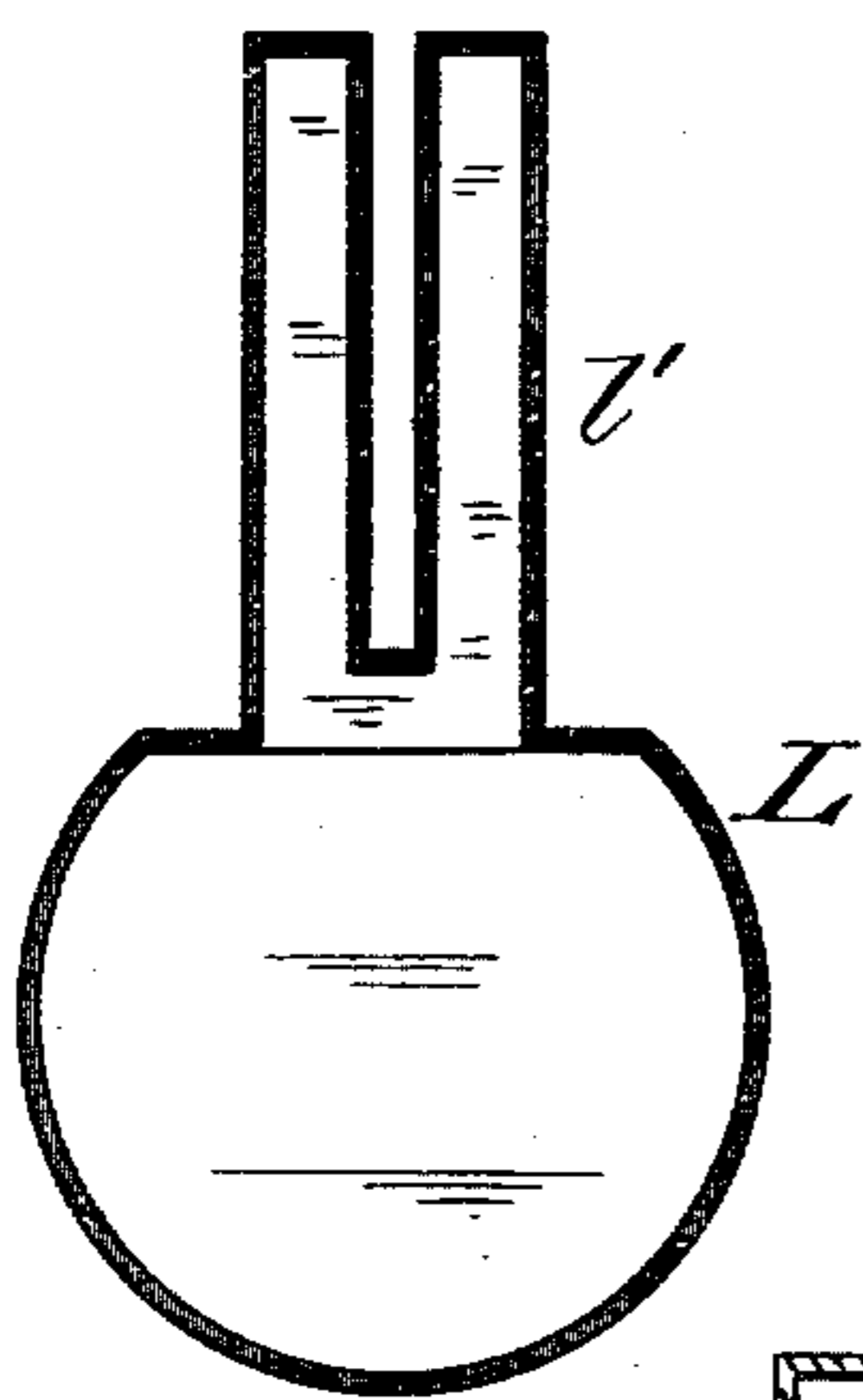


Fig. 1.

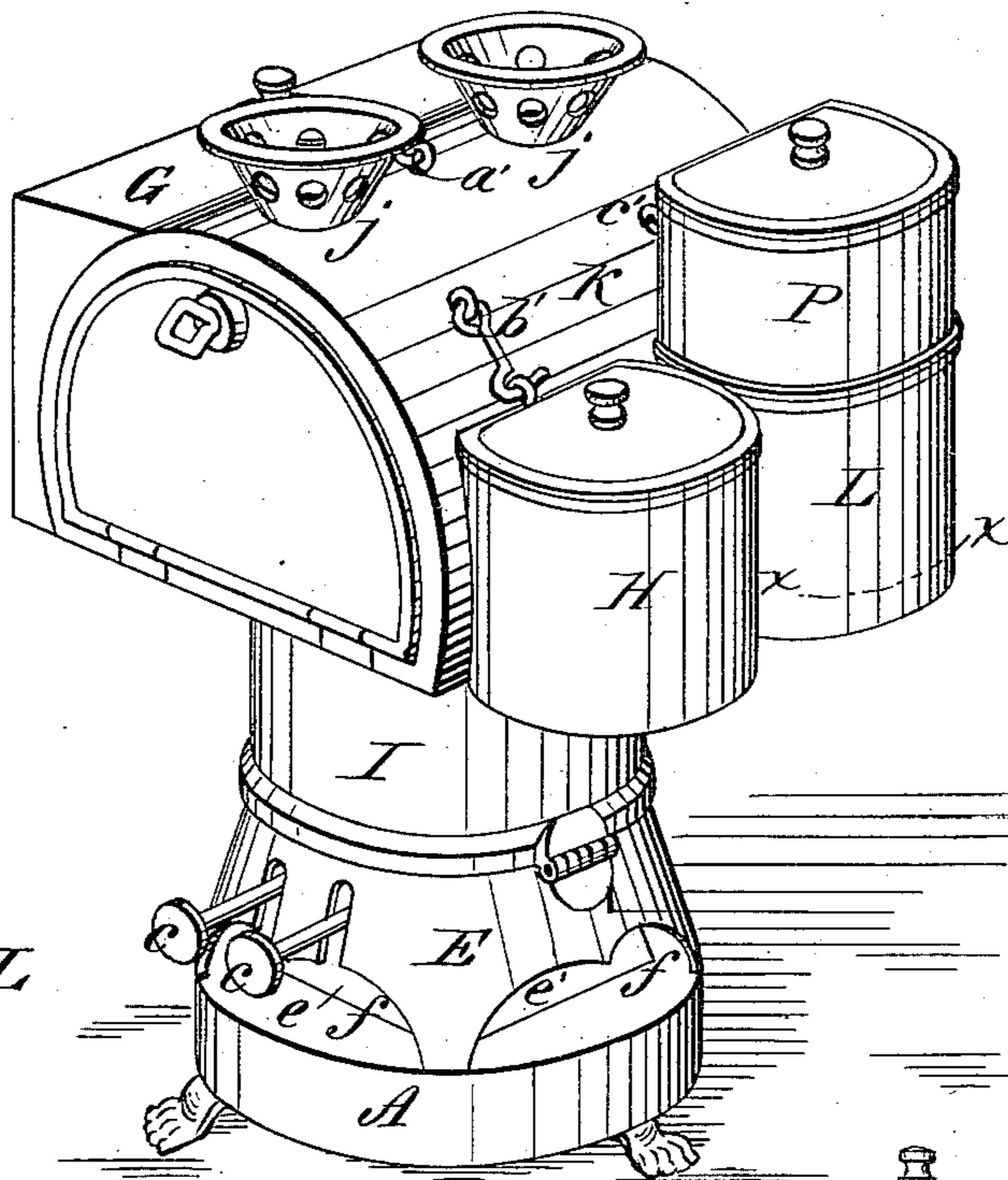


Fig. 2.

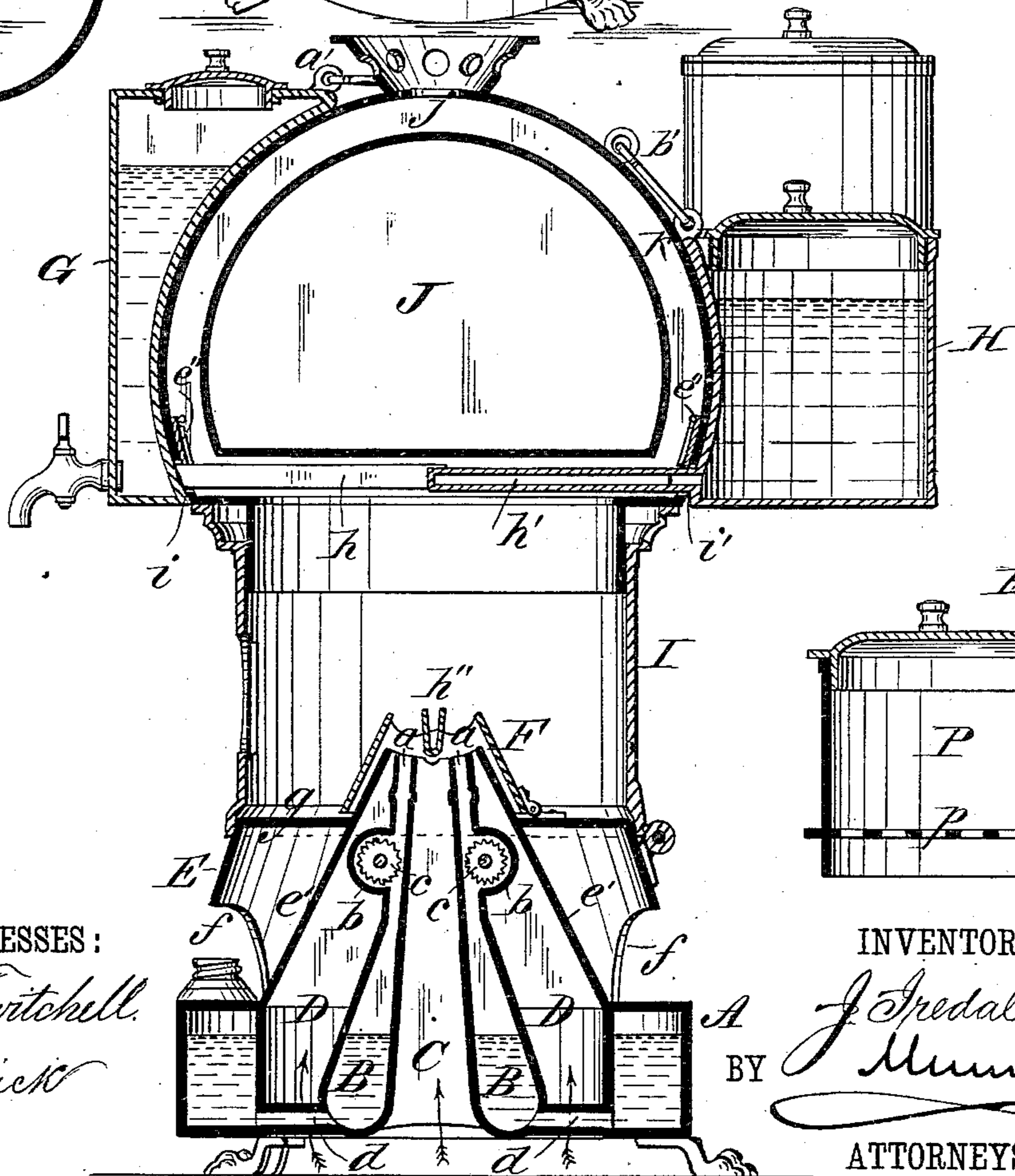
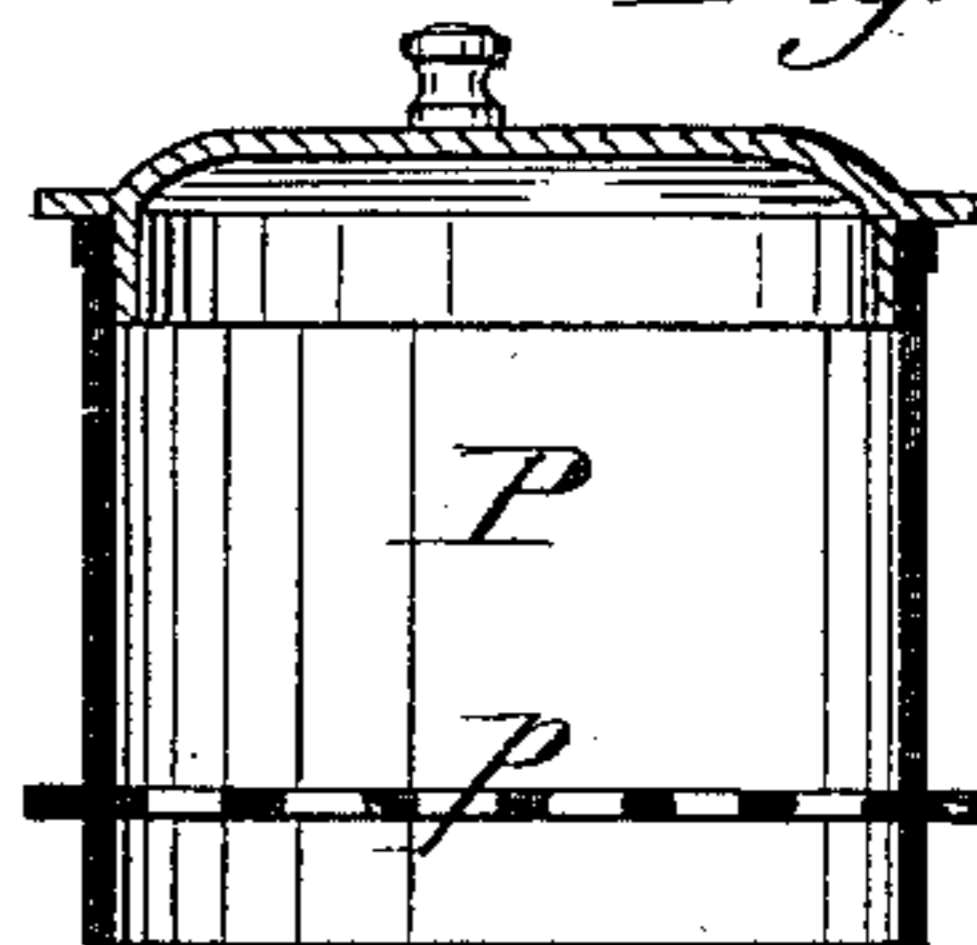


Fig. 4.



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# UNITED STATES PATENT OFFICE.

JAMES IREDALE, OF TORONTO, ONTARIO, CANADA.

## OIL-STOVE.

SPECIFICATION forming part of Letters Patent No. 259,546, dated June 13, 1882.

Application filed November 4, 1881. (No model.) Patented in Canada November 10, 1881, No. 13,661.

*To all whom it may concern:*

Be it known that I, JAMES IREDALE of Toronto, in the Province of Ontario, Canada, have invented a new and useful Improvement in Oil-Stoves, of which the following is a full, clear, and exact description.

My invention consists of the general construction and arrangement of the oven and combustion-chamber, and of the same in combination with the improved heating and cooking utensils, whereby the stove is made complete and efficient for its purpose.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my improved oil-stove. Fig. 2 is a sectional elevation of the same. Fig. 3 is a sectional view of one of the cooking utensils, taken in the line *xx* of Fig. 1; and Fig. 4 is a sectional elevation of the removable steaming-pan.

The main oil-receptacle A of my improved oil-stove is annular in form, and serves as a supply to the smaller central wick-chambers, B B, through the pipes *dd*, which connect the said oil receptacles or chambers at the bottom of the chambers, as shown in Fig. 2. The chambers B B receive the wicks at the narrow openings *aa*, and the wick-chambers are enlarged at *bb* to receive the wick-wheels *cc*.

Between the wick-chambers is formed the central flue or draft-passage, C, and by means of the triangular plates *ee* and the sloping plates *e'e'*, which are secured at their lower ends upon the annular oil-receptacle A and form a pyramidal chamber surrounding the wick-chambers, are formed the side flues or draft-passages, D D.

Surrounding the plates *ee* is the circular housing E, which is cut away at *ff*, as shown clearly in Fig. 1, and is bent so as to form the shelf *g*, which stands a short distance below the narrow openings *aa* of the wick-chambers.

Upon the shelf *g* is hinged the cap F, which is adapted to fit over the upper ends of the wick-chamber, as shown in Fig. 2. In the central opening in this hinged cap is secured the central strip, *h''*, which is immediately over the central draft-passage, C, and serves to divide the draft and make it equal to each wick.

To the outside of the housing E is hinged the large rim or collar I, which incloses the combustion-chamber, and upon this rim or collar is placed the oven J, which is provided with the jacket K, which surrounds the oven and forms a passage for the products of combustion issuing from the combustion-chamber to pass to the outlet-openings *jj*, and retains the heat in contact with all parts of the oven.

Upon the sides of the jacket K are placed the water-heating kettle G and the cooking utensils H and L. The water-heating kettle G is formed at its bottom with the chamber, hollow arm, or pipe *h*, which, when the kettle is in place, passes through the slot or opening *i* made in the jacket, and reaches into the combustion-chamber under the horizontal bottom of the oven, and each of the utensils H and L is formed with the chambers, hollow arms, or pipes *h'* and *l'*, which are adapted to pass through the slots or openings *i' i'* made in the jacket, and to reach into the combustion-chamber under the oven, as clearly shown in Fig. 2.

The water-heating kettle and the cooking utensils are held in place upon the stove by means of the hooks and eyes *a'*, *b'*, and *c'*, as shown in the drawings. When the utensils are in place and filled with water or other substance desired to be heated a quantity of the water or other substance will be contained in the chambers, hollow arms, or pipes, and will be in close contact with the flame in the combustion-chamber, and will be rapidly heated, which will cause rapid circulation of the water or other substance from the chambers, arms, or pipes to the main body of the utensils, and will thus cause the whole quantity to be quickly heated. The openings or slots formed through the jacket for the passage of the arms, chambers, or pipes of the utensils are provided with the sliding doors *e'' e''*, which close the openings when the utensils are taken off, so that the stove may be used with or without the utensils, or with any of them, as desired. If only baking is to be done, the utensils should all be removed, as then the heat from the burner will come in direct contact with the bottom of the oven.

It will be observed that the construction of the burner furnishes double draft-passages from the bottom of the stove to the flame, which

insures perfect combustion of the oil without smoke or disagreeable smell, besides increasing the intensity of the heat, and it will be understood that the draft-passages, being made  
5 within the annular oil-reservoir, serve also to keep the main body of the oil cool, which prevents the formation of gases in the reservoir, and thus renders the stove free from all danger of explosion.

10 The utensil L is provided with the removable steaming-pan P, which is provided with the perforated bottom *p*, as shown in Fig. 4.

It will be understood that the hollow arm or pipes of the heating utensils may be made  
15 in various forms. They may be made a plain chamber or hollow arm, as shown in Fig. 2; or they may be divided, as shown in Fig. 3; or they may be made in the form of a pipe, straight or coiled, as may be found most expedient.

20 Instead of having the side draft-passages pass through the center of the oil-reservoir, as above described, they may be made to take the air from the sides of the reservoir or above it, as may be desired.

25 Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In an oil-stove, the combination, with the wick-tubes B, the air-passages D, and the housing E, provided with the shelf *g*, of the hinged  
30 cap F, substantially as and for the purposes set forth.

2. In an oil-stove, the combination, with the housing E, of the collar I and the oven J, provided with the jacket K and outlet-openings  
35 *j*, substantially as and for the purpose set forth.

3. In an oil-stove, the combination, with the jacket K, provided with the openings *i i'*, of the vessel H, provided with the hollow arm *h'*, and projecting into the combustion-chamber  
40 under the oven, substantially as and for the purpose set forth.

4. In an oil-stove, the combination, with semicircular jacket K, provided with the openings *i*, of the water-vessel G, made to conform  
45 in shape on one side to the said jacket, and provided with the hollow arm *h*, and secured thereto by the hooks and eyes *a'*, substantially as and for the purpose set forth.

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Witnesses:

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