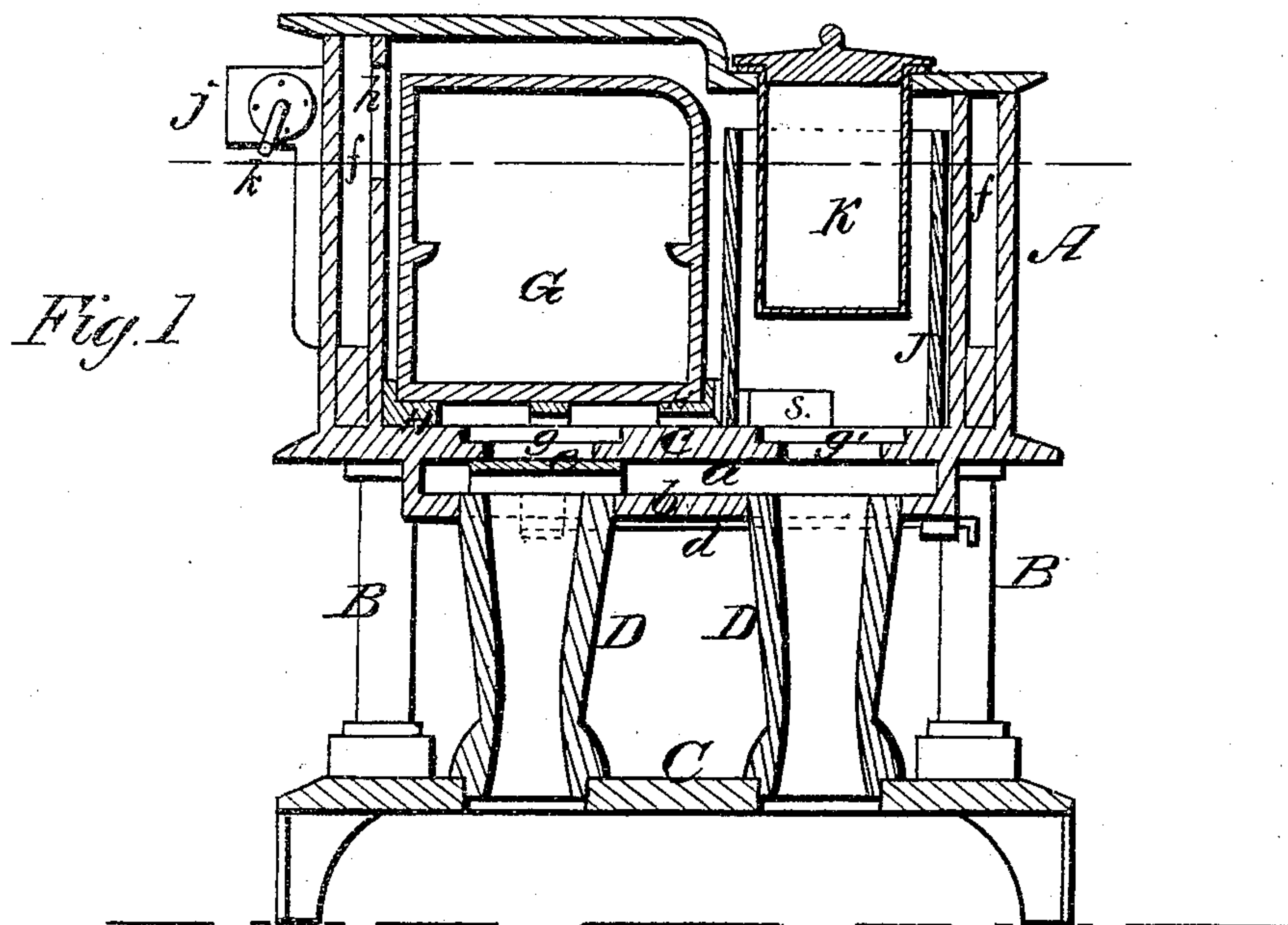


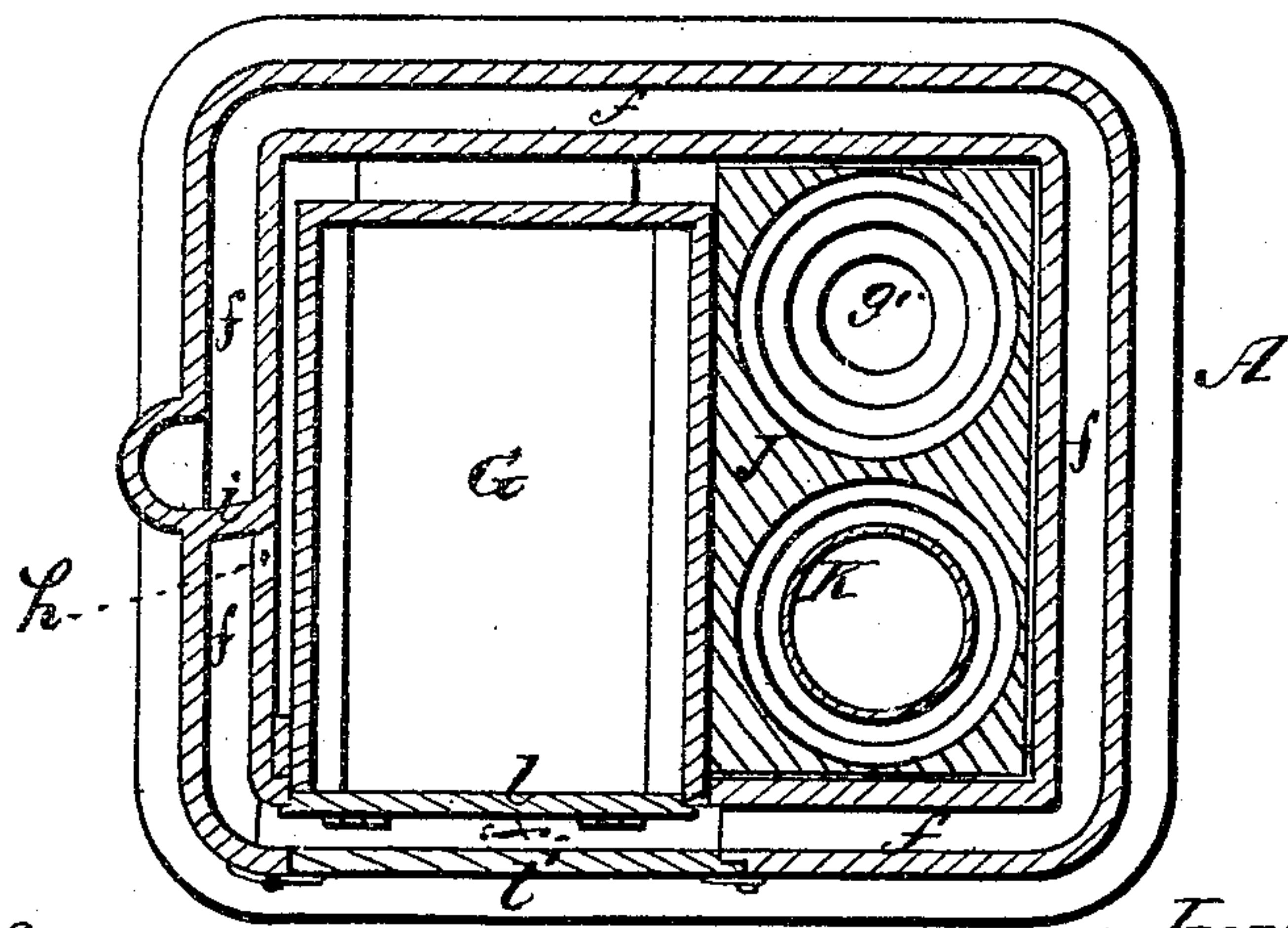
W. J. LAVAL.  
Lamp or Gas Stoves.

No. 153,351.

Patented July 21, 1874.



*Fig. 2*



Witnesses:  
E. H. Bates  
F. J. Massi

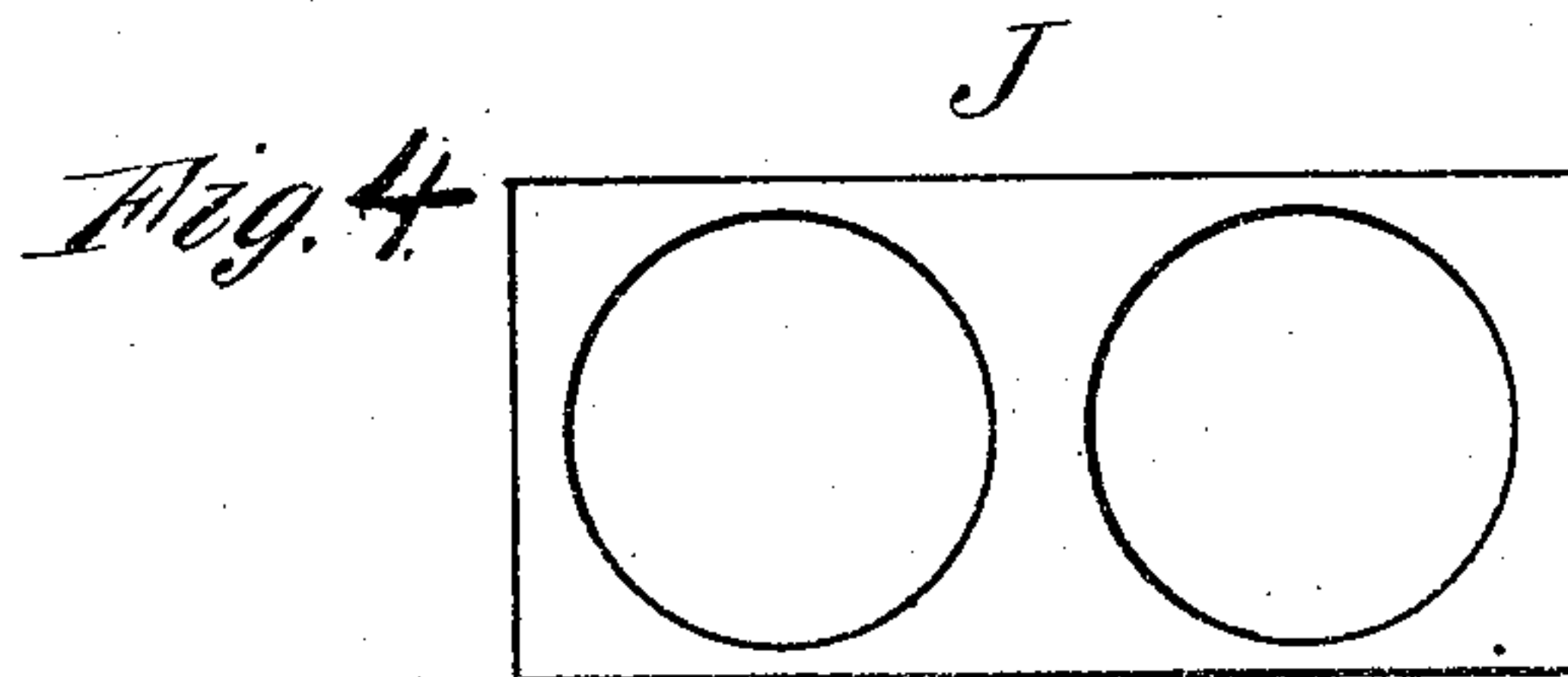
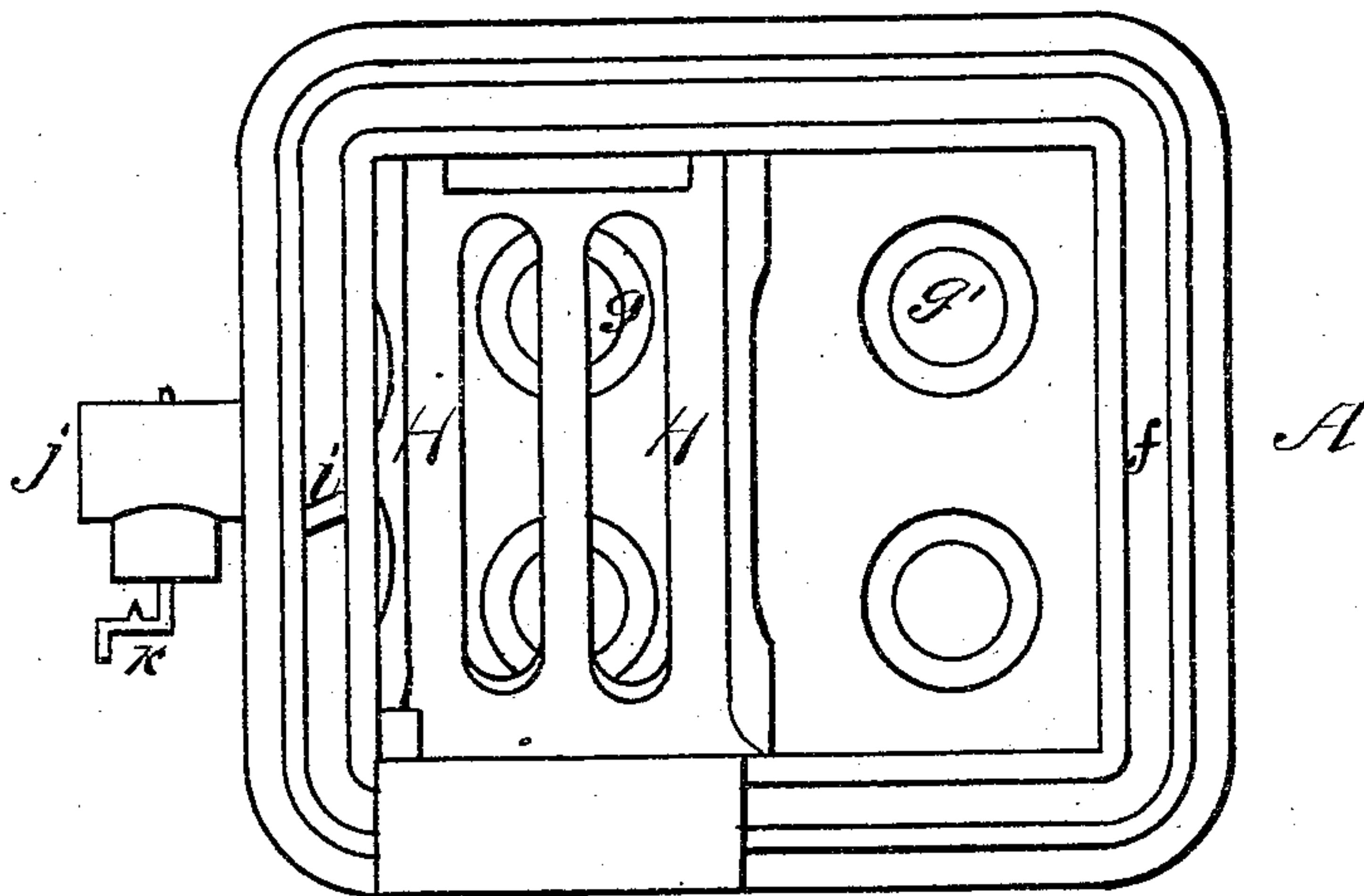
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by his attorneys  
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Lamp or Gas Stoves.

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*Fig. 3.*



Witnesses.  
*E. H. Bates.*  
*F. J. Chasi*

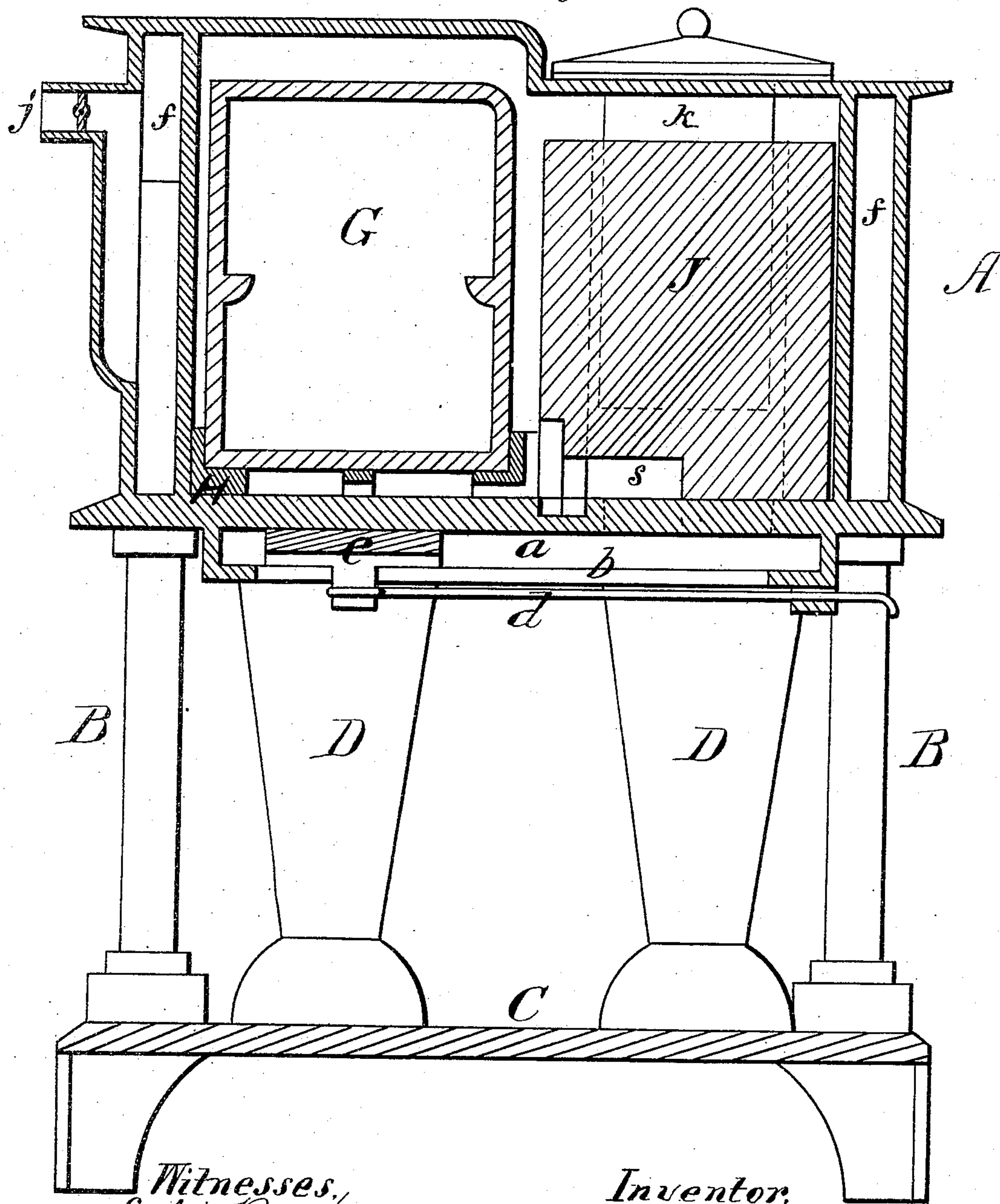
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Patented July 21, 1874.

Fig. 5.



Witnesses,  
E. A. Bates  
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Inventor,  
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Chipman & Co  
Attorneys



# UNITED STATES PATENT OFFICE

WILLIAM J. LAVAL, OF COLUMBIA, SOUTH CAROLINA.

## IMPROVEMENT IN LAMP OR GAS STOVES.

Specification forming part of Letters Patent No. **153,351**, dated July 21, 1874; application filed April 29, 1874.

*To all whom it may concern:*

Be it known that I, WILLIAM JACINTH LAVAL, of Columbia, in the county of Richland and State of South Carolina, have invented a new and valuable Improvement in Stoves; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figures 1 and 5 of the drawing are vertical sections thereof. Fig. 2 is a horizontal section. Fig. 3 is a top view. Fig. 4 is a plan view of the detachable jacket.

This invention has relation to stoves which are chiefly designed for cooking purposes; and it consists in the arrangement of one or more chimneys or tubular flues beneath a stove, so as to communicate with the interior thereof, in combination with an adjustable regulator; also, in the novel construction and arrangement of the devices, as will be hereinafter more fully described and claimed.

In the annexed drawings, A designates the body of my improved stove, which I have illustrated as mounted on four posts, B, rising from a stand, C. D D designate chimneys or flues, in or beneath which lamps or gas-burners will be placed, from which to obtain the necessary heat for cooking and boiling purposes. The lower ends of these chimneys rest upon the stand C, and their upper ends communicate with a chamber, *a*, between a plate, *b*, and the bottom plate *c* of the body of the stove, as shown in Fig. 1. In practice, I may construct the chimneys of metal, a suitable fire-clay, or they may be made of mica, so as to be transparent, and they may or may not have doors in them. They may be made cylindrical, angular, conical, or of any other suitable shape. The bottom plate *c* of the body A is perforated at *g g'* for admitting the heat from the chamber *a* into the interior of this body, and for regulating such admission I employ a sliding plate, *e*, in chamber *a*, which is adjustable by means of a rod, *d*, and which can be made to shut the holes *g* or the holes *g'*, as may be required, or which can be moved between the said holes when it is desired to admit heat through all of them.

The vertical side walls of the body A are double and inclose between them a space, *f*, which space communicates with the interior chamber of said body by means of an aperture, *h*, made through the inner back wall on one side of a vertical partition, *i*. On the opposite side of the partition *i* is an opening through the outer back wall of the body A, to which opening the exit-pipe *j* is applied, having a damper, *k*, arranged in it. The pipe *j* may communicate with a removable heating-drum, or a warm closet, or a water-heater. The top of the space *f* between the double walls of the body A is closed by the top plate of the latter, through which kettle and boiler holes may be made, in the usual well-known manner adopted in cooking-stoves. An opening is made through the two walls on one side of the body A, of suitable size to admit an oven, G, which oven is of such length that when it is closed by a door, *l*, and the outer door *l'* is closed, a space, *f'*, is left between the two doors, which communicates with the space *f*; and thus allows a circulation of heated air and products of combustion through this space. If desirable, the top of the stove may also have a heated-air space constructed in it, which would communicate with the vertical air-space. By thus surrounding the inner chamber of the body A, I not only prevent much radiation of heat therefrom, but I also utilize the heat by causing an internal radiation thereof from the inner walls.

The oven is closed at all sides except at its front end, which is provided with a door, as above described, and this door may be applied directly to the oven, and consequently removable with it, or the door may be hinged to the inner wall of the body A.

The oven is supported upon a grating or frame, H, which is constructed so that heated air and products of combustion are free to circulate beneath and at the sides, top, and ends of this oven; said frame H is removable. J designates a jacket, which is constructed with two circular passages adapted to receive boilers K in them, and leave spaces around these boilers. When the jacket is in its place the passages through it will be directly over the holes *g'*, so that the bottoms and sides of the boilers will be exposed to the heat rising



through the holes  $g'$ , which will be concentrated about the boilers, and will escape at the upper ends of the passages through the jacket.

It will be seen by reference to Fig. 5 of the drawings that the bottom of the jacket is constructed with a recess,  $s$ , leading from the two boiler-holes into the space beneath the oven, thus allowing the heated products, after they circulate in said boiler-holes, to be utilized in warming the oven before they escape into the flue-spaces  $f f'$ .

By removing the oven  $G$  and sliding the jacket  $J$  back it can also be removed through the door-opening.

It will be seen from the above description that when holes  $g g'$  are open the heated air will rise through the chimneys  $D$  and circulate about the boilers and oven; thence enter the space  $f$  on one side of the partition  $i$ , pass around the body of the stove, and escape through the pipe  $j$ .

What I claim, and desire to secure by Letters Patent, is—

1. One or more chimneys or flues,  $D$ , beneath a stove to communicate with the interior chamber, in combination with the adjustable regulator  $e$ , as set forth.

2. The movable jacket  $J$ , constructed with two circular passages adapted to receive boiler  $K$  in them and leave a space around the boiler, in combination with the chimneys  $D$ , as and for the purpose set forth.

3. The flue-space  $f f'$  and partition  $b'$  between the walls of body  $A$ , in combination with the passage  $h$  and outlet  $j$ , substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM JACINTH LAVAL.

Witnesses:

EDWARD R. ARTHUR,  
W. H. EVANS.