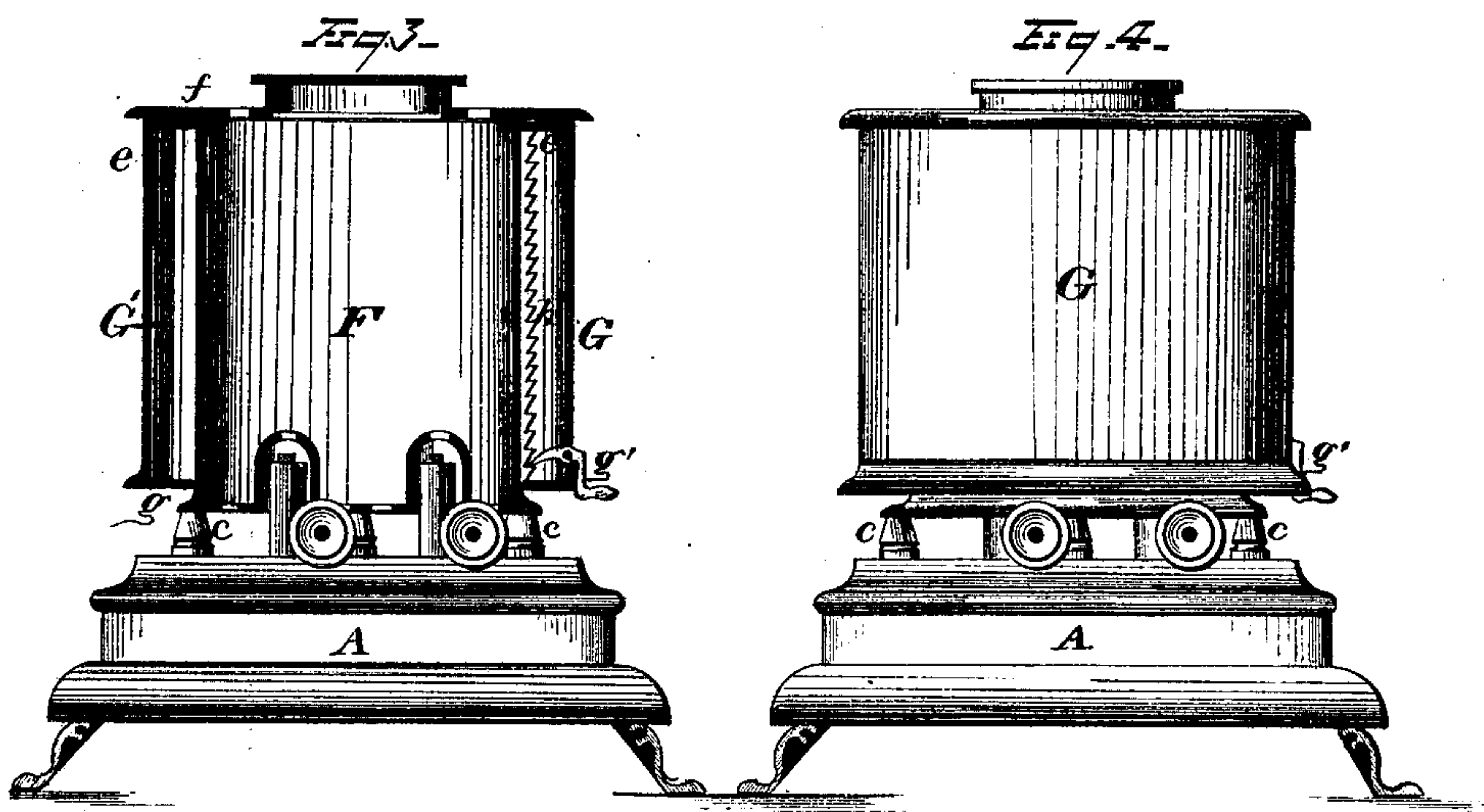
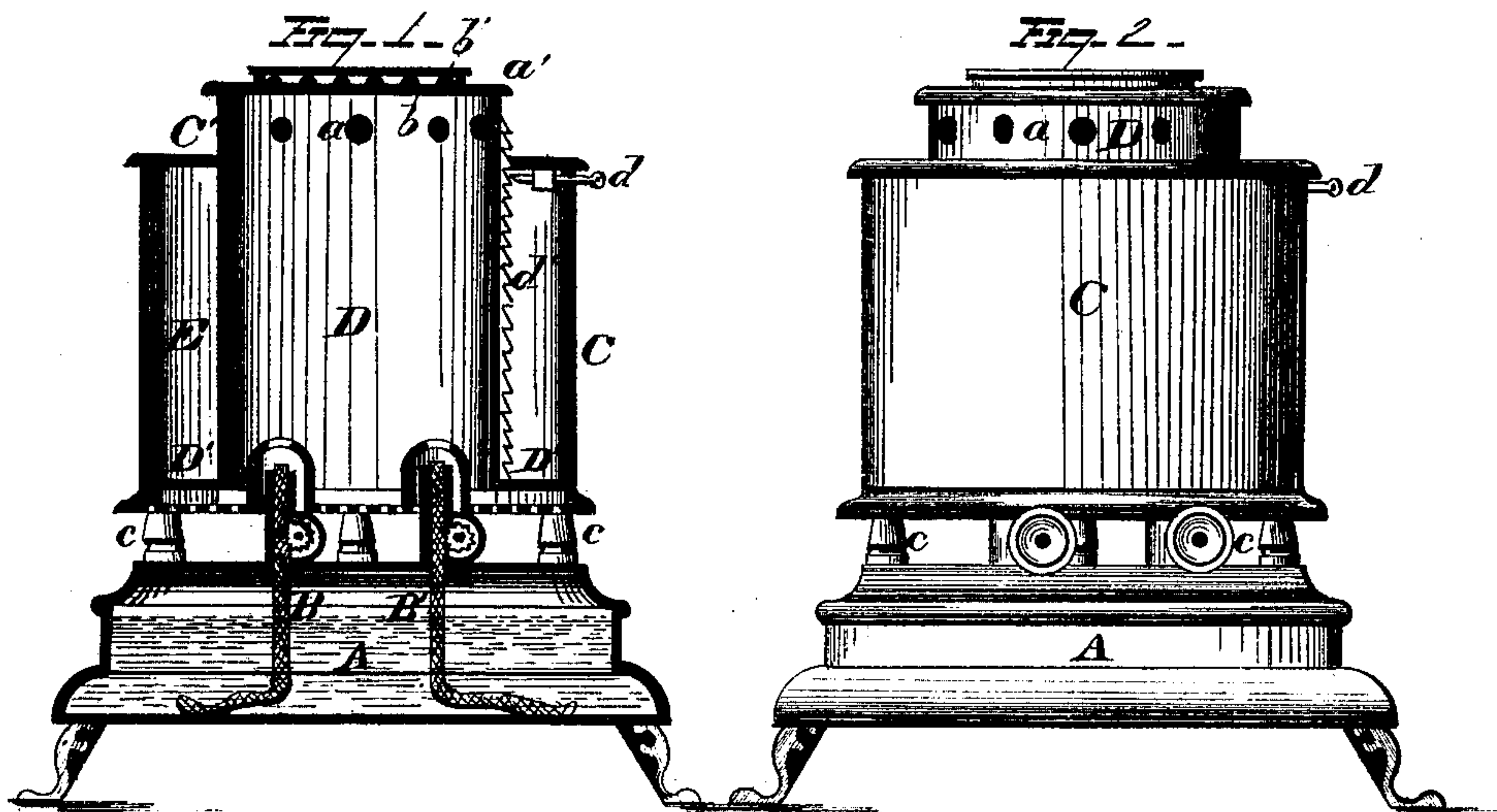


H. A. SEYMOUR, Jr.
OIL AND GAS STOVES.

No. 183,979.

Patented Oct. 31, 1876.



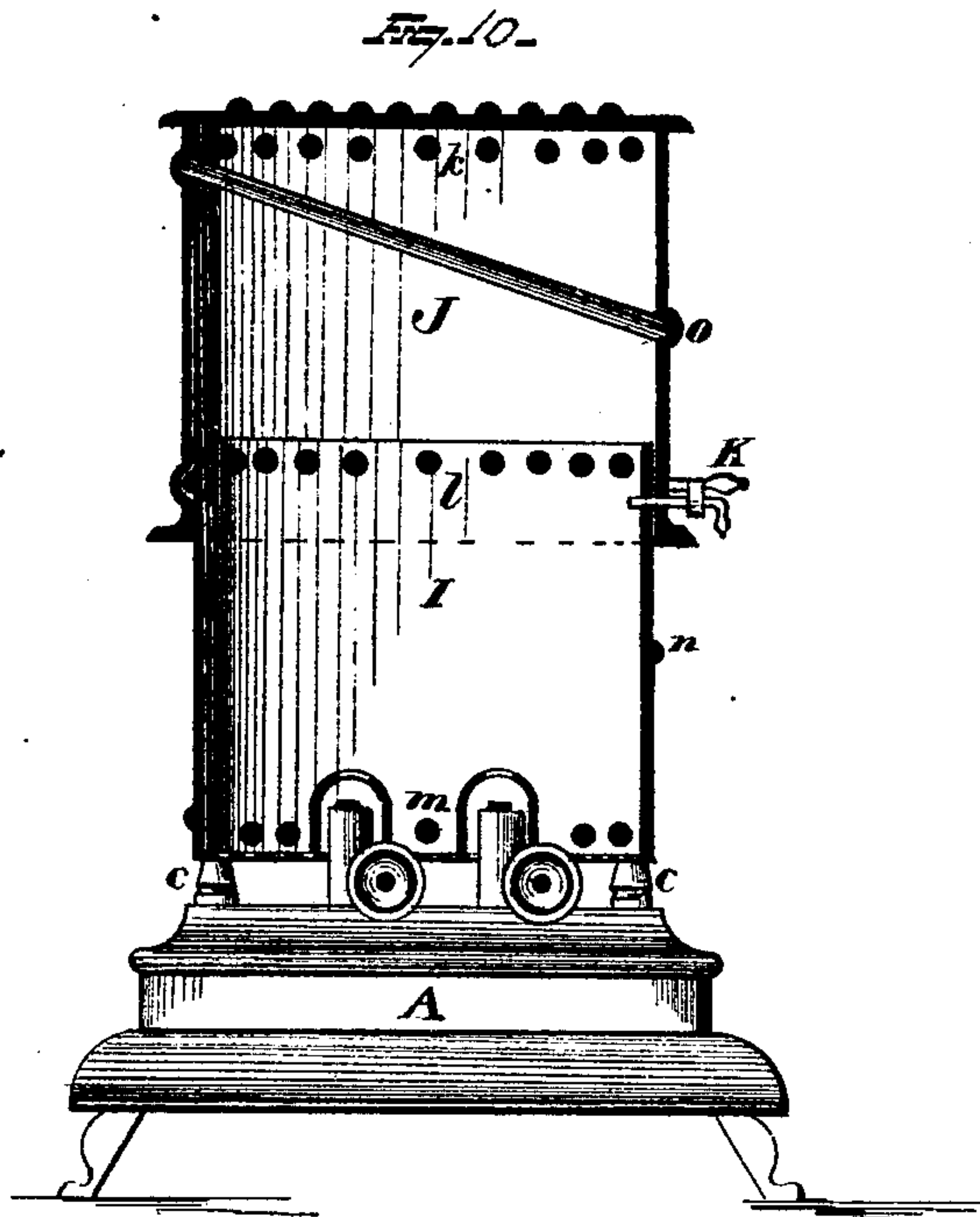
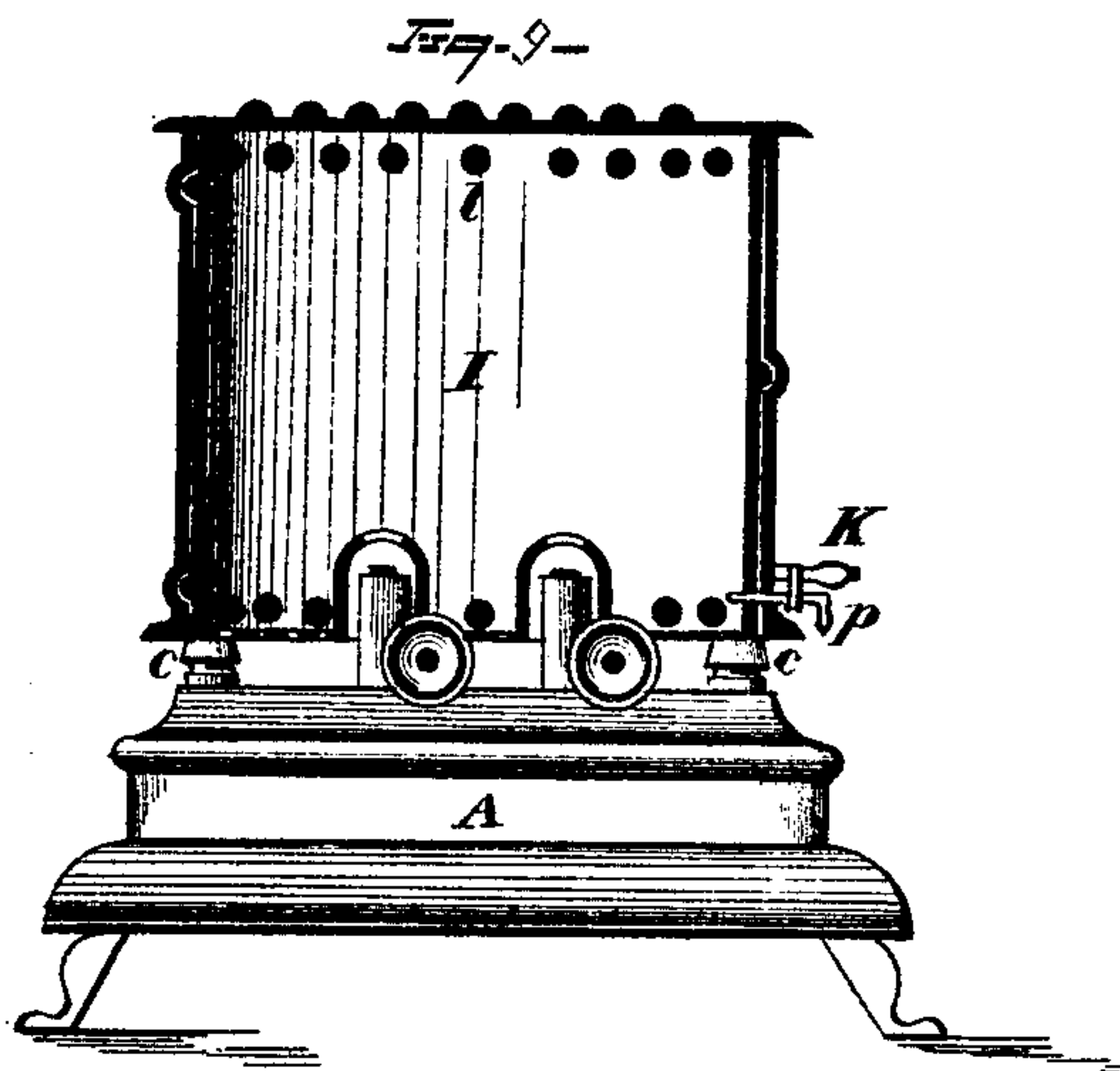
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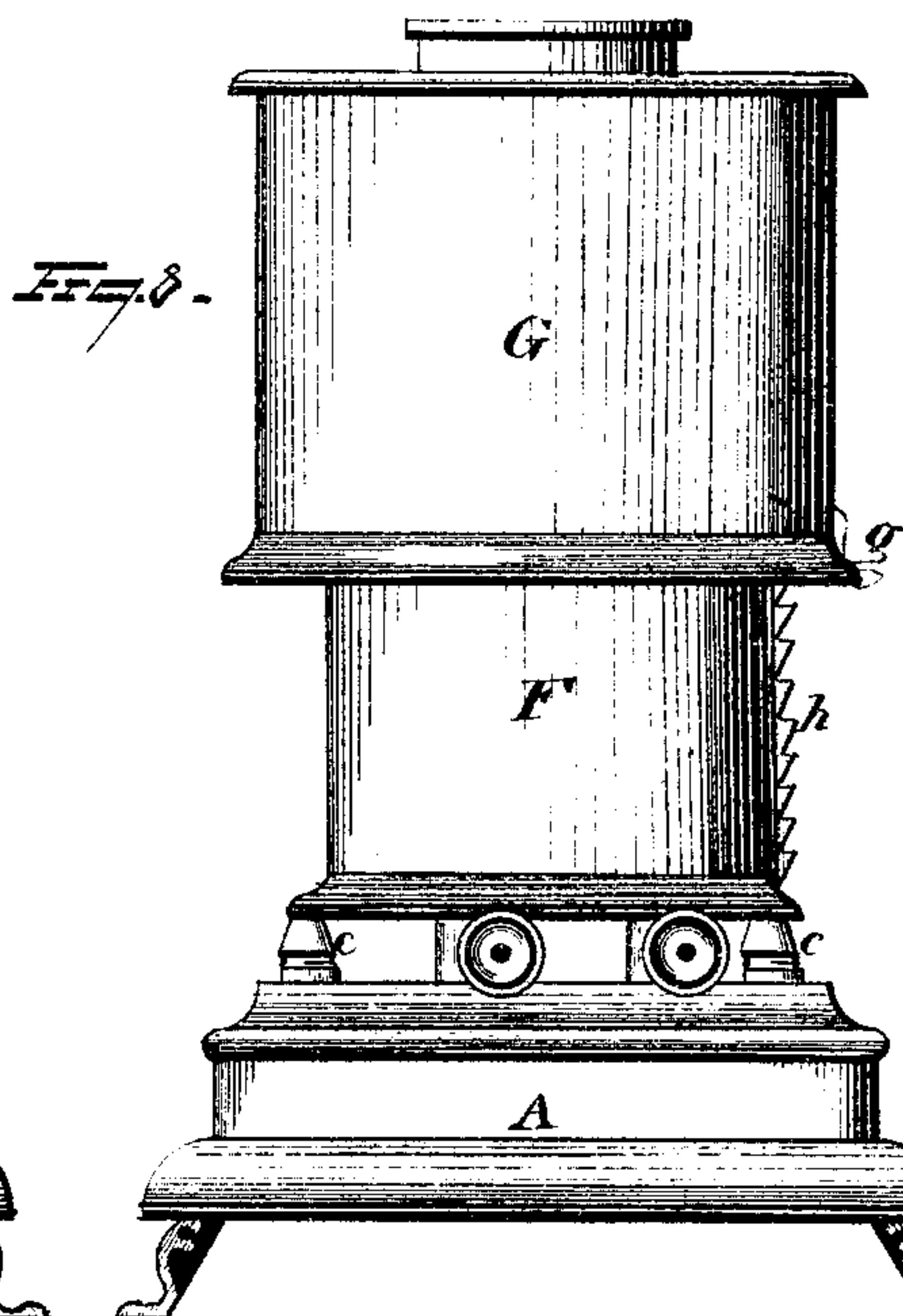
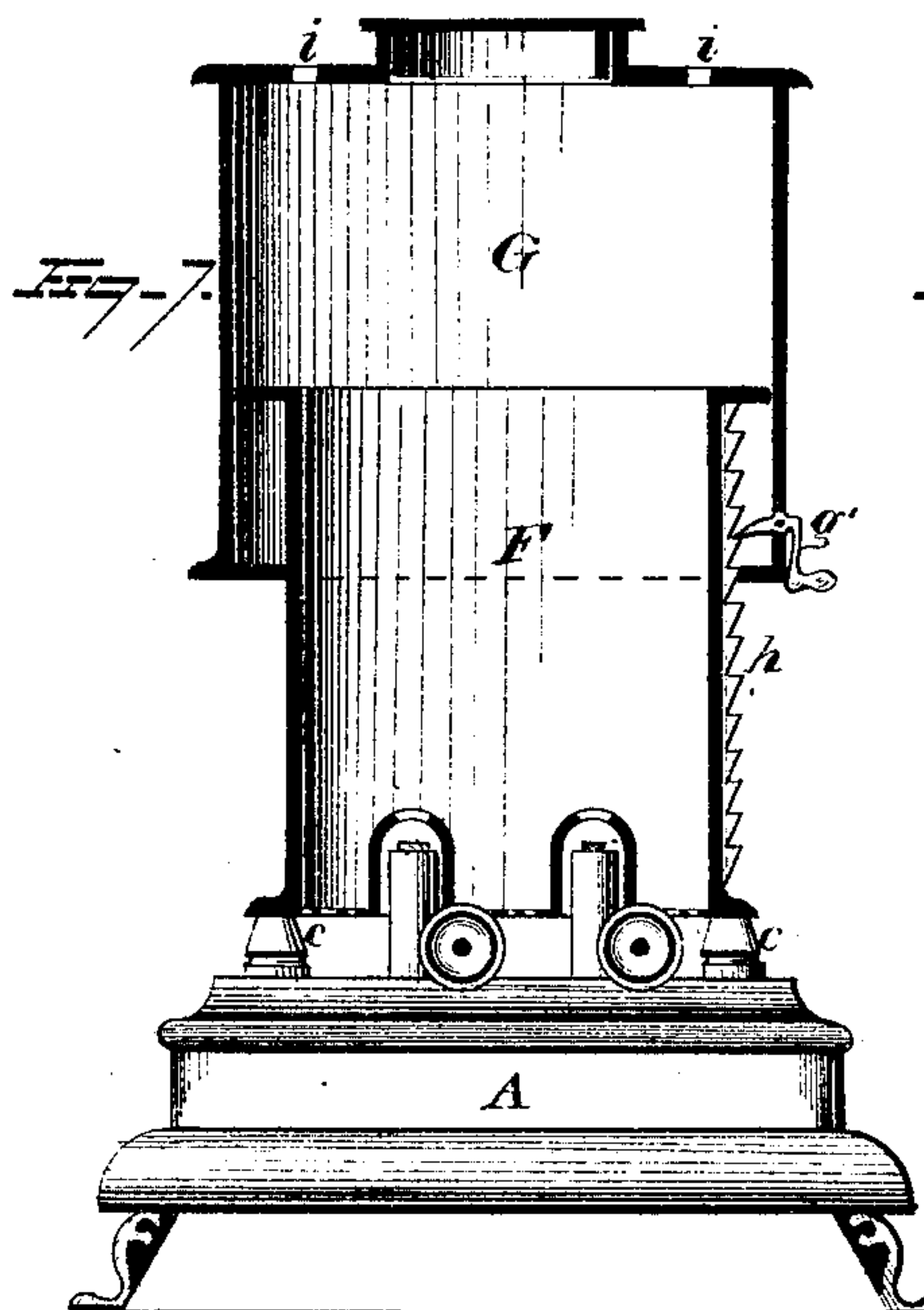
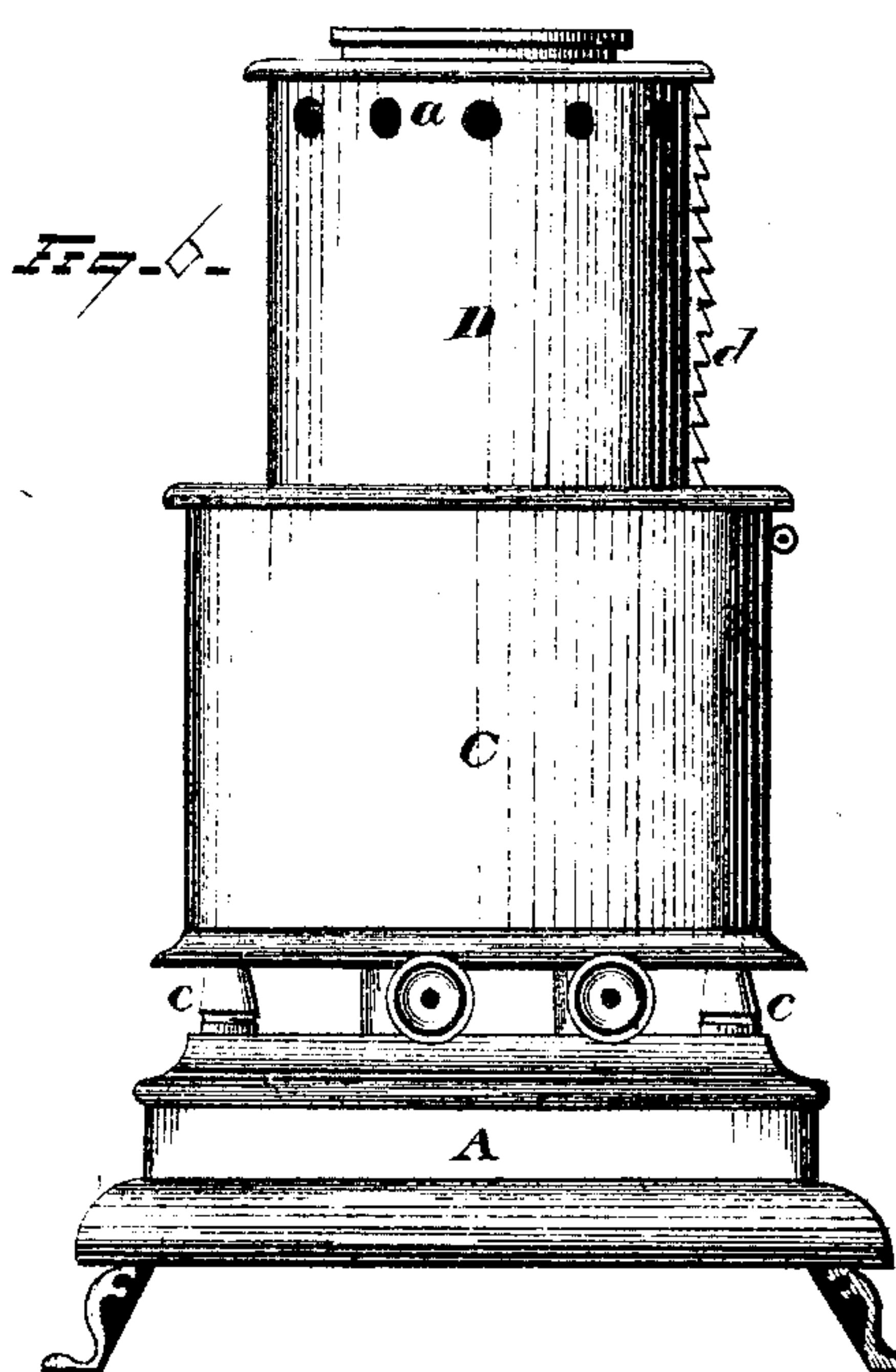
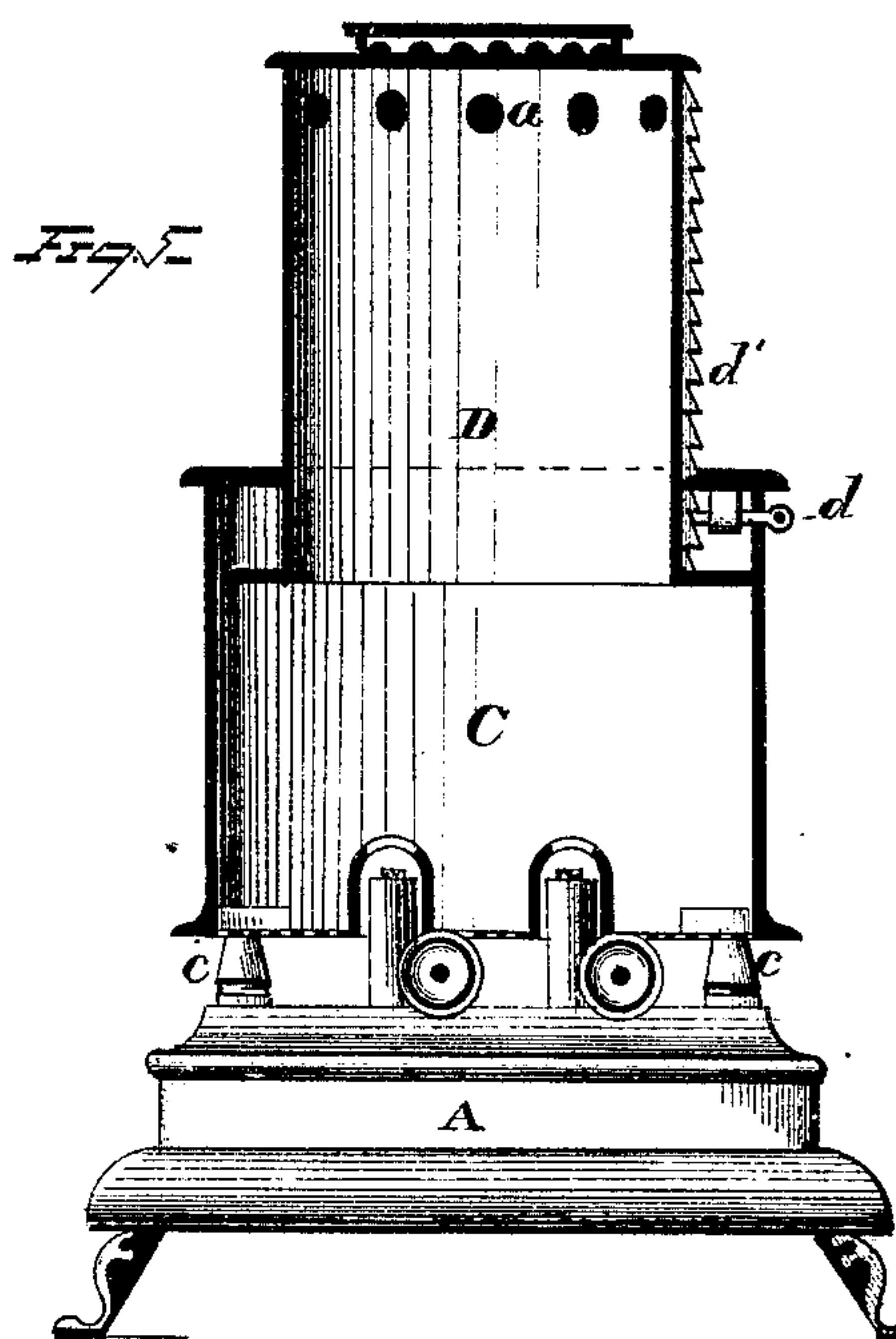
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UNITED STATES PATENT OFFICE.

HENRY A. SEYMOUR, JR., OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN OIL AND GAS STOVES.

Specification forming part of Letters Patent No. **183,979**, dated October 31, 1876; application filed October 7, 1876.

To all whom it may concern:

Be it known that I, HENRY A. SEYMOUR, Jr., of Washington, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Oil and Gas Stoves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to certain improvements in oil and gas stoves.

Figure 1 represents a vertical section of my improved stove as adapted for cooking purposes. Fig. 2 is a side elevation of the same. Figs. 5 and 6, respectively, represent a vertical section and side elevation of the stove shown in Figs. 1 and 2 with cylinders extended to constitute a heating-stove. Figs. 3, 4, 7, 8, 9, and 10 show modified forms of construction embodying my invention.

The object of my invention is to construct an oil or gas stove in such a manner that it shall be specially adapted for use either for cooking or heating purposes, and easily convertible into either form of stove, when desired.

My invention consists, first, in an oil or gas stove, the body of which consists, essentially, of a stationary and a movable cylinder, the latter provided with an opening at its upper end for the reception of cooking utensils or vessels; second, an oil or gas stove provided with an extensible cylinder, and means whereby said cylinder may be secured to the stationary cylinder at any desired height; third, an oil or gas stove constructed with an inner and outer cylinder relatively arranged to form a dead-air space about the interior cylinder of the stove; fourth, an oil or gas stove constructed with a fixed and a vertically-adjustable cylinder, the said cylinder adapted to form a dead-air space about the fixed cylinder, or to convert both cylinders into heat-radiating surfaces; fifth, in the several details of construction and combination of parts as will be hereinafter described, and pointed out in the claims.

In Fig. 1, A represents the base of an oil-stove, and B B' the wicks, the latter provided with devices properly arranged for regulating their adjustment. The oil-reservoir and wick-raising attachment may be of any form or style, as my improvement is equally well adapted for use with any of the oil or gas burners now employed. C is the outer shell or cylinder of the stove, and is supported by standard c secured to the base or oil-receptacle A, thereby forming an open space between the lower end of the cylinder C and the top of base portion A, through which space air has free ingress to the flame or point of combustion. Within the outer cylinder C is placed a smaller cylinder, D, which latter is supported against lateral movement at its upper end by means of the inwardly-projecting flange C', secured to the upper end of cylinder C, and at its lower end by the flange D', attached to the lower end of cylinder D. The cylinders C and D, thus constructed and arranged, form a dead-air space, E, between the outer and inner cylinders, which space serves to retain and preserve the heat for cooking purposes. The dead-air space E may be formed of any desired dimensions, as it can be readily regulated by varying the relative diameters of the outer and inner cylinders. The upper end of the interior cylinder may be constructed to be nearly or quite flush with the outer cylinder, or it may be formed to slightly project above the outer cylinder, as shown in Figs. 1 and 2, in which case the projecting portion is perforated, as at a, to allow of a free draft through the interior cylinder. The upper plate a' of the interior cylinder D is provided with an opening, b, of any desired size, for the reception of cooking or heating utensils or vessels, and about said opening b is secured a serrated ring, b', or equivalent device, to allow of the passage of the heat about the vessel seated therein.

A cooking-stove constructed as above described utilizes a large percentage of the heat generated from the oil or gas, as the heat is confined within two cylinders, which together constitute the opposing walls of a dead-air space, E; and also another important advantage results from the construction shown—

namely, the atmosphere about the stove, when used for cooking purposes, is but slightly affected by the heat of the stove, as the dead-air space obstructs and prevents the radiation of heat from the outer cylinder of the stove, thereby rendering it especially desirable for use for cooking purposes during the summer months.

When it is desired to convert the cooking-stove shown in Figs. 1 and 2 into a heating-stove, the interior cylinder D is raised to the position represented in Figs. 5 and 6, and readily secured at any desired height by means of a slide or bolt, *d*, the inner end of which is adapted to engage with the ratchet-bar *d'*, secured to the side of the inner cylinder, the upper flange *C'* being cut away to receive the ratchet-bar *d'*, and serving as a guide to prevent the rotation of the inner cylinder D. The cylinders C and D, when thus extended, have their interior surfaces presented to the direct contact of the currents of heat from the burners, and the dead-air space E (shown in Fig. 1) is converted into a radiating-surface, and an additional radiating-surface equal to the area of the inner cylinder D is formed thereby. Thus the stove—heretofore described as specially adapted for cooking purposes when in a contracted state—possesses all the essentials and qualifications of a complete and economical heating-stove when extended to the position last referred to.

The heat of the stove may be readily graduated by adjusting the inner cylinder D at different heights, and thus render it useful for securing any desired temperature in the apartment in which it is placed; and also different articles of food may be subjected to varying degrees of heat, as desired.

In Fig. 3 the inner cylinder F is stationary, and the outer cylinder G constructed to be vertically adjusted thereon. In a stove of this construction the inner cylinder is preferably formed with an outwardly-turned flange, *e*, secured to its upper end, upon which flange rests an inwardly-projecting flange, *f*, attached to the upper end of the outer and movable cylinder G. Cylinder G is also provided with a lower flange, *g*, thus forming a dead-air space, *G'*, between the inner and outer cylinder when the stove is in a contracted position and adapted for cooking purposes.

Figs. 7 and 8 show the cooking-stove represented by Figs. 3 and 4 extended to form a heating-stove. The outer cylinder G is raised and secured to the inner fixed cylinder F by means of a pawl, *g'*, which engages with a ratchet-bar, *h*, secured to the side of cylinder F. Lugs or arms are attached to the inner side of cylinder G, to fit against the sides of the ratchet-bar, and thus prevent the rotation of the outer cylinder and insure certain means of adjustment between the two cylinders. The top flange of the outer and movable cylinder is perforated at *i* for the passage of heat, and

the opening in the top of the stove is constructed as shown, or as represented in Fig. 1.

Figs. 9 and 10 represent another modification of my improvement. I represents the inner and fixed cylinder, mounted on any of the well-known oil or gas burners, and J is the outer and vertically-adjustable cylinder. These cylinders are provided with openings *k*, *l*, and *m*, which openings may be of any desired size, location, and sufficient in number to insure a free induction and eduction of air to and from the burners. Cylinders I J are each formed with a spiral corrugation or groove, *n o*, extending their entire length, and of such relative size and form that the spiral corrugation of the inner cylinder snugly fits within the corresponding corrugation or groove of the outer cylinder. The outer cylinder J is provided with a handle, K, secured to its lower edge, and to said handle is attached a sliding bolt, *p*. The inner cylinder is perforated to allow the sliding bolt *p* to be inserted therein at any desired point, and thus secure any desired adjustment of the two cylinders.

The cylinders, when in the position shown in Fig. 9, are adapted for cooking purposes, and when extended, as represented in Fig. 10, are intended for heating purposes.

It is evident that any desired adjusting mechanism may be employed in lieu of the special devices shown and described; and it is also evident that the several cylinders may be perforated as desired. Hence I do not limit myself to the exact construction of devices shown, but purpose using any equivalent means for carrying my invention into effect.

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

1. An oil or gas stove constructed with fixed and movable cylinders, the movable cylinder provided with an opening at its upper end for the reception of cooking vessels or utensils.

2. The body of an oil or gas stove formed of inner and outer cylinders, one of said cylinders provided with an opening at its upper end to receive a lid or cooking-vessel, and adapted to be raised and lowered, and means whereby said movable cylinders may be secured to the fixed cylinder at any desired height.

3. The body of an oil or gas stove formed of an inner and outer cylinder, one of said cylinders being movable, and adapted to be vertically adjusted relative to the fixed cylinder, the said cylinders constructed with flanged ends, to constitute, when not extended, an intervening dead-air space.

4. The body of an oil or gas stove formed of a fixed and a movable cylinder, the said cylinders adapted to form a dead-air space about the fixed cylinder, and also to be readily converted into heat-radiating surfaces.

5. In an oil or gas stove wherein the body of the same is formed of an inner and outer cylinder, one of said cylinders being provided with an opening at its upper end to receive a lid or cooking vessel or utensil, and adapted to be raised and lowered, the combination, with the fixed cylinder, having a ratchet-bar secured thereto, of the movable cylinder, provided with a pawl or sliding bar, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of October, 1876.

HENRY A. SEYMOUR, JR.

Witnesses:

ED. I. NOTTINGHAM,
F. O. McCLEARY.