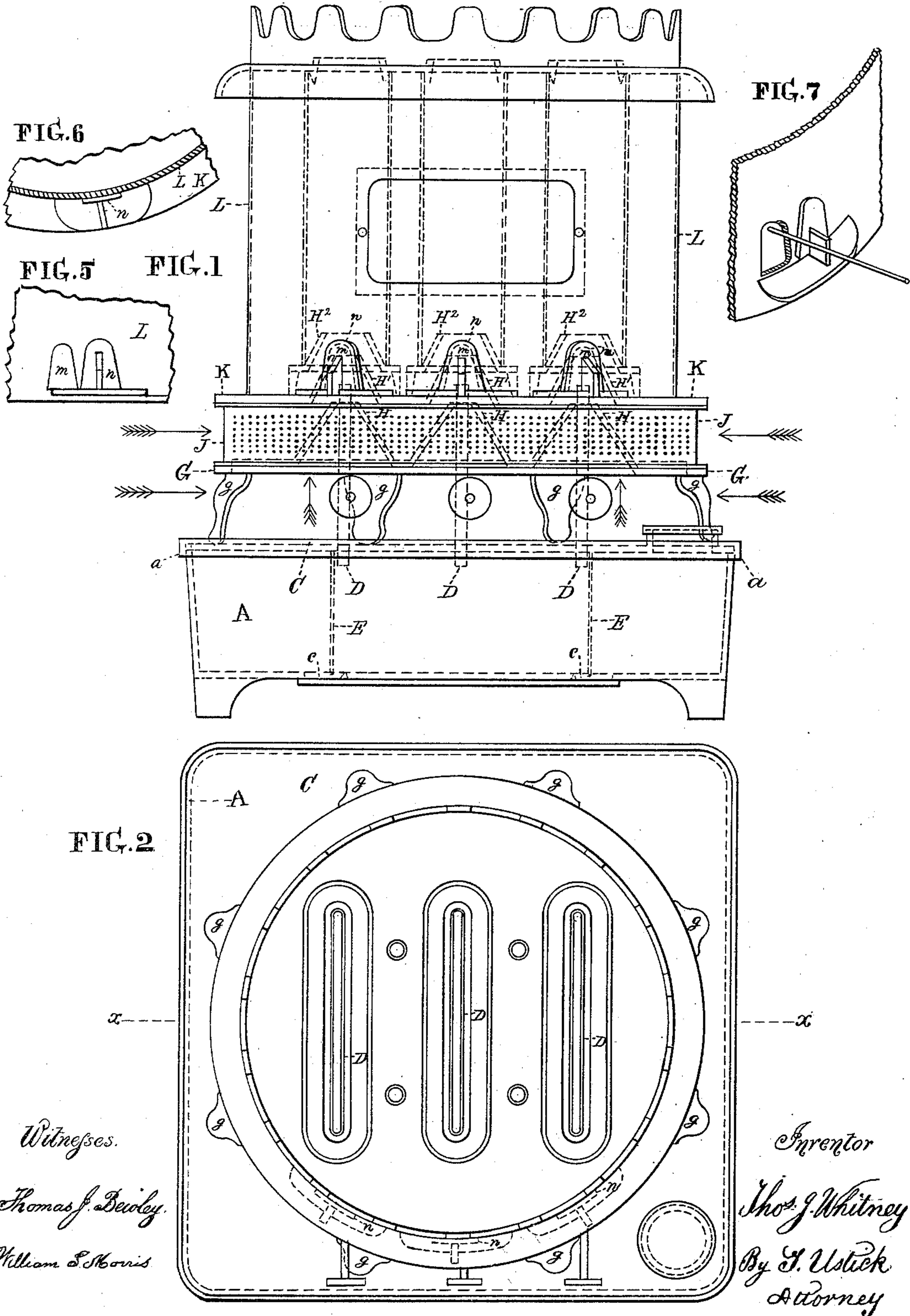


T. J. WHITNEY.  
Oil Stove.

No. 232,160.

Patented Sept. 14, 1880.



Witnesses.  
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William S. Morris

Inventor  
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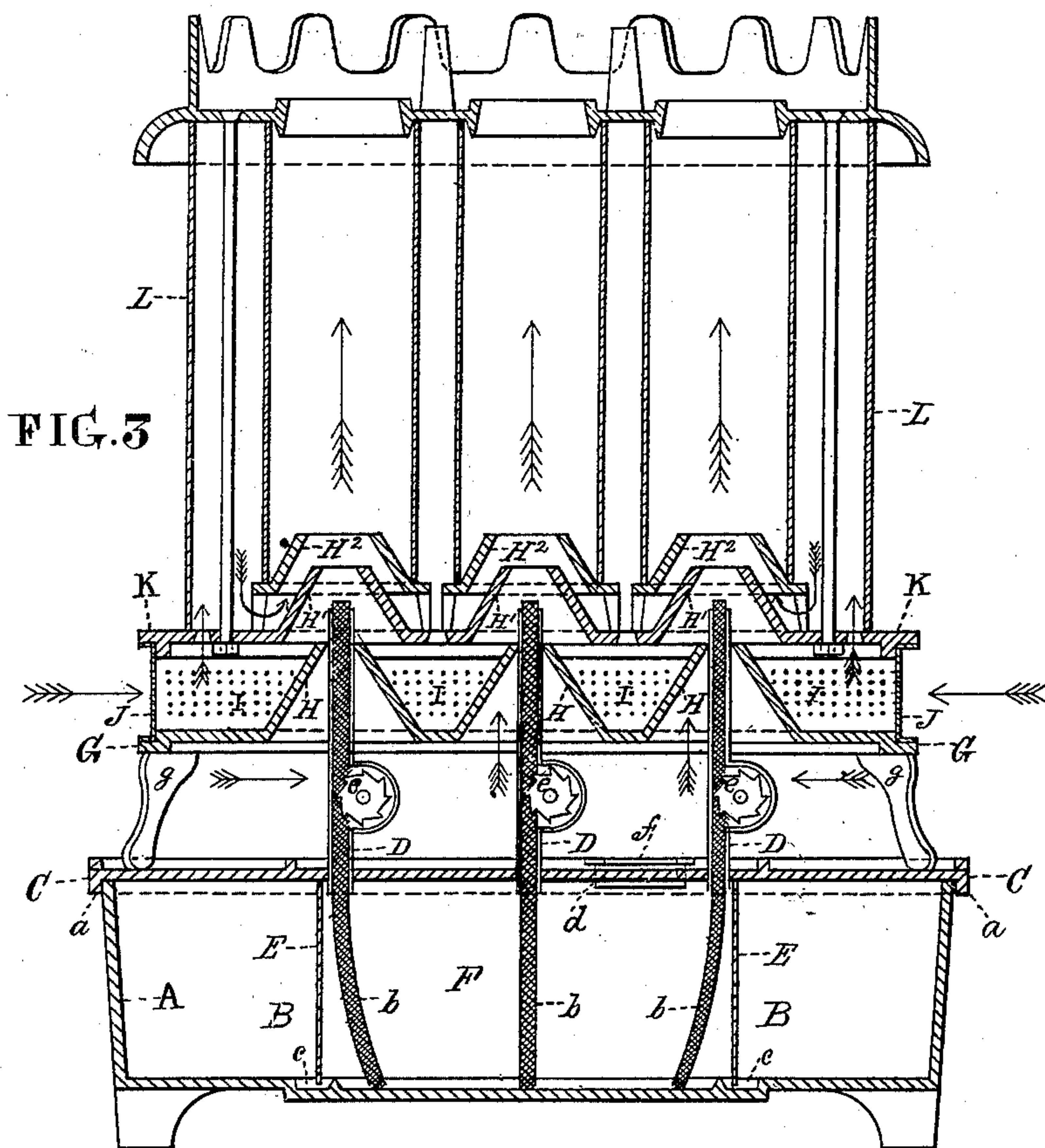
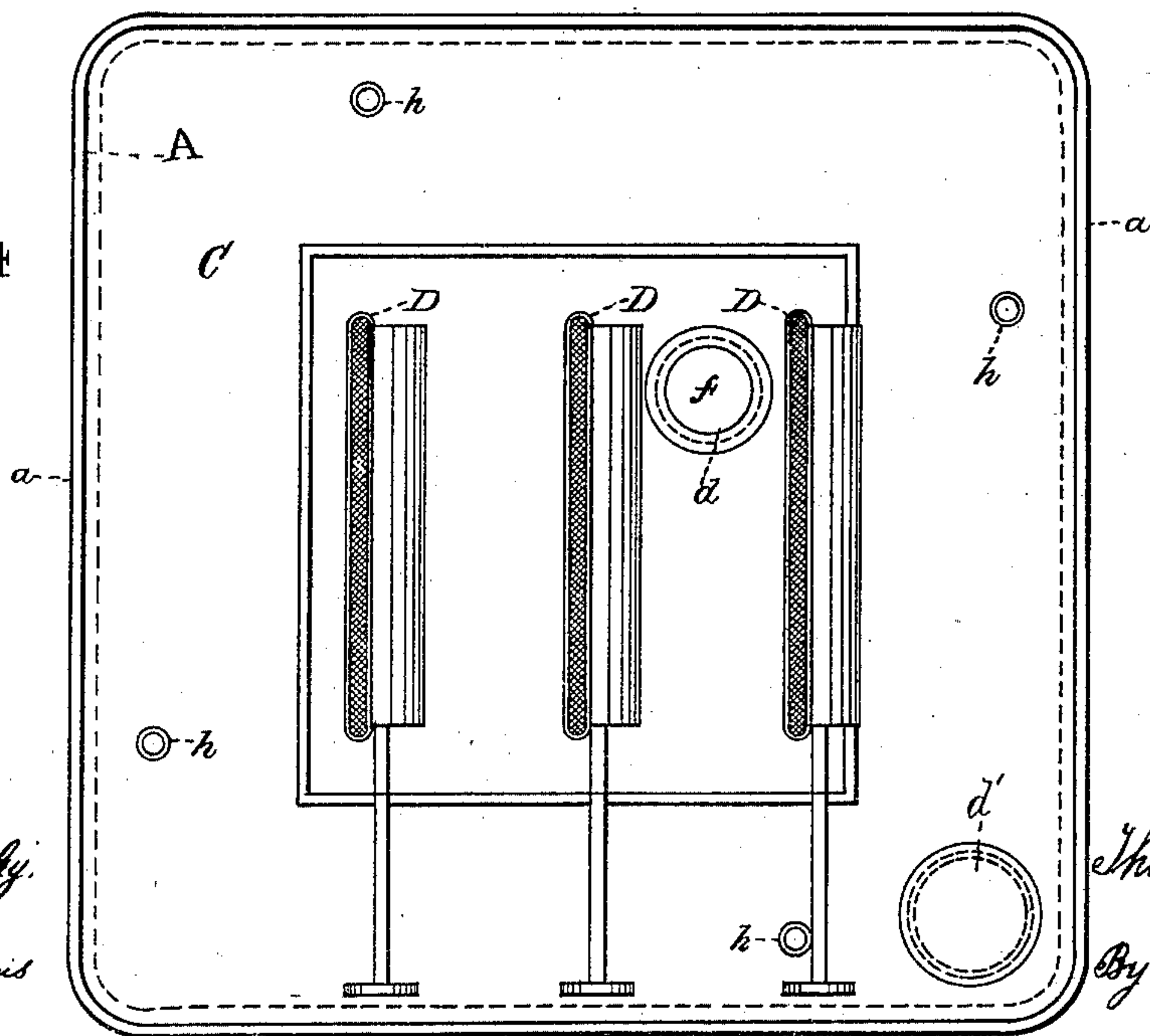


FIG. 4



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# UNITED STATES PATENT OFFICE.

THOMAS J. WHITNEY, OF PHILADELPHIA, PENNSYLVANIA.

## OIL-STOVE.

SPECIFICATION forming part of Letters Patent No. 232,160, dated September 14, 1880.

Application filed January 26, 1880.

To all whom it may concern:

Be it known that I, THOMAS J. WHITNEY, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Oil-Stoves, of which the following is a specification.

My invention, in the first place, consists of an oil trap or seal formed of a partition in the form of a parallelogram, that projects downward from the top plate of the oil-reservoir and around the lower end of the wicks beneath the wick-tubes, and a depression of corresponding form, into which the lower edge of said partition extends, thus preventing air from the surrounding oil-reservoir passing into the wick-chamber and mixing with vapors of oil therein and forming an explosive gas, which would be supplied to the burners.

The invention, in the second place, consists of an opening in the top plate of the oil-reservoir leading directly into the wick-chamber for the removal of the wicks when they have been accidentally turned down too far to be operated upon by the ratchet-wheels. A separate opening is used for filling the reservoir, being outside of the wick-chamber, to prevent atmospheric air flowing into said chamber when the reservoir is being filled with oil.

The invention, in the third place, consists of openings in the cylinder or drum, which surround the wick-tubes, there being one opening opposite each tube at a convenient height to admit of the insertion of a match for igniting the wicks. The openings are provided with suitable covers.

In the accompanying drawings, which make a part of this specification, Figure 1 is a front elevation of my improved oil-stove. Fig. 2 is a plan or top view of the same. Fig. 3, Sheet No. 2; is a vertical section at the line *xx* of Fig. 2. Fig. 4 is a top view of the base A, having the wick-tubes D D D in connection therewith, the upper part of the stove being removed. Fig. 5, Sheet No. 1, is a front view of a section of the drum L, provided with an opening, *m*, and a sliding door, *n*. Fig. 6 is a top view of said section. Fig. 7 is a section, in perspective, of the drum L, having an opening, *m*, and a sliding door, *n*.

Like letters of reference in all the figures indicate the same parts.

A represents the base of my improved oil-stove, having an oil-reservoir, B, which has a cover or top plate, C, that is provided with a downward-projecting lip, *a*, at its surrounding edge, which laps over the upper edges of the vertical sides of the base A, and is soldered thereto to make an air-tight joint. Projecting upward from the plate C are the wick-tubes D D D.

E is a partition in the form of a parallelogram, which projects downward from the lower side of the cover C, and forms the wick-chamber F, separating it from the surrounding oil-reservoir B. The lower edge of the partition enters the groove *c*, of the same form as that of the partition, and of such dimensions as to admit of the oil in the reservoir flowing freely from the latter into the wick-chamber to keep the oil of uniform height in said chamber and reservoir. The connection of the lower edge of the partition with the groove (which is always full of oil, even when the latter is exhausted in the wick-chamber) and oil-reservoir forms a trap or seal, whereby air is prevented passing from the reservoir to the wick-chamber, and mixing with the vapors of oil in the chamber and forming an explosive gas, which would be supplied to the burners.

There is an opening, *d*, in the plate C, leading into the wick-chamber F, for the purpose of removing the wicks when they have been accidentally turned down from their connection with the ratchet-wheels *e*. The opening is provided with the screw-plug *f*. As the wick-chamber is required to be air-tight to prevent air mixing with vapors of oil therein, and thus preventing the formation of explosive gas, as above mentioned, the opening *d* is only used when it becomes necessary to remove the wicks, and the opening *d'*, leading into the reservoir B, is used for supplying the reservoir with oil.

G is a diaphragm, which is provided with feet *g*, that rest on the plate C, they being retained in position by means of pins *h*, or other suitable projections of the plate. A space is thus formed between the diaphragm and the plate C for the circulation of air to the cones H H H, which project upward from the dia-



phragm and surround the wick-tubes D D D, as seen in Fig. 3, thus causing an increased upward circulation of air and carrying the radiated heat to the flames of the burners.

5 I is an air-chamber, formed by the combination of the perforated cylindrical ring J, diaphragm G, and cone-plate K, which forms the bottom of the cylinder or drum I. The plate K is provided with cones H' H' H' directly  
10 above the cones H H H. Partly above and surrounding the upper part of the cones H' H' H' are cones H<sup>2</sup> H<sup>2</sup> H<sup>2</sup>, which have stud-feet *i*, that rest upon the cone-plate K.

M M M are chimneys, the lower ends of which  
15 are seated upon the cones H<sup>2</sup> H H<sup>2</sup>, and their upper ends are connected with the collars *j j j* on the lower side of the crown-plate N of the cylinder or drum L, as seen in Fig. 3.

By the arrangement above described the air  
20 passes through the openings in the cone-plate K, and is heated and passes between the heated cones H' and H<sup>2</sup>, and thence to the flames of the burners for combustion, commonly known as "hot blast."

25 There are openings *m m m* through the lower edge of the cylinder or drum L, for the insertion of a match, *o*, for lighting the wicks, thus avoiding the usual mode of making openings in the flues or chimneys. The openings are

covered by doors *n n n*, or other suitable device. 30

I claim as my invention—

1. The combination of the partition E with the plate C of the base A and the groove *c* in the bottom of the oil-reservoir, forming a safety 35 oil trap or seal, to prevent air passing from the reservoir into the wick-chamber F, and thus avoid the formation of explosive gas, which would be supplied to the flames of the burners, substantially as set forth.

2. In a lamp-stove, a reservoir divided by vertical diaphragms into compartments, as shown, having at the bottom of such diaphragms the 40 recesses *e*, and having in the top of the central compartment or wick-chamber of the reservoir 45 a covered opening, *d*, for the removal of the wicks.

3. The combination, with the chimneys and the upper cones, elevated above the plate K, as shown, of the casing L, having openings *m* 50 and covers *n* at its base, whereby convenient access to the wicks for lighting the same is afforded, substantially as described.

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Witnesses:

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