2 Sheets--Sheet 1.

J. H. THORP.

Coal-Oil Stove.

No. 129,436. Patented July 16, 1872.

Fig 1.

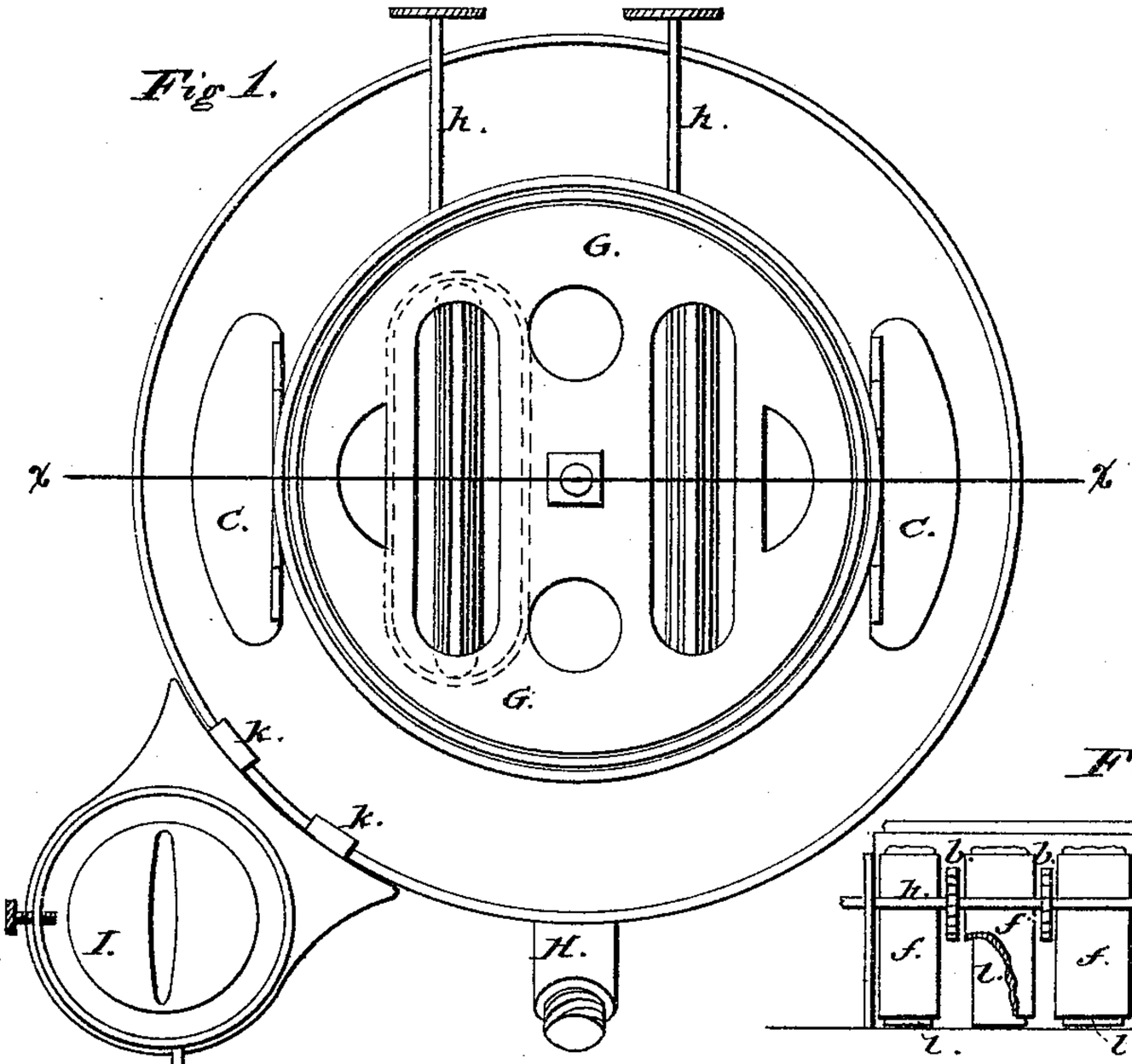


Fig 3.

Fig 2.

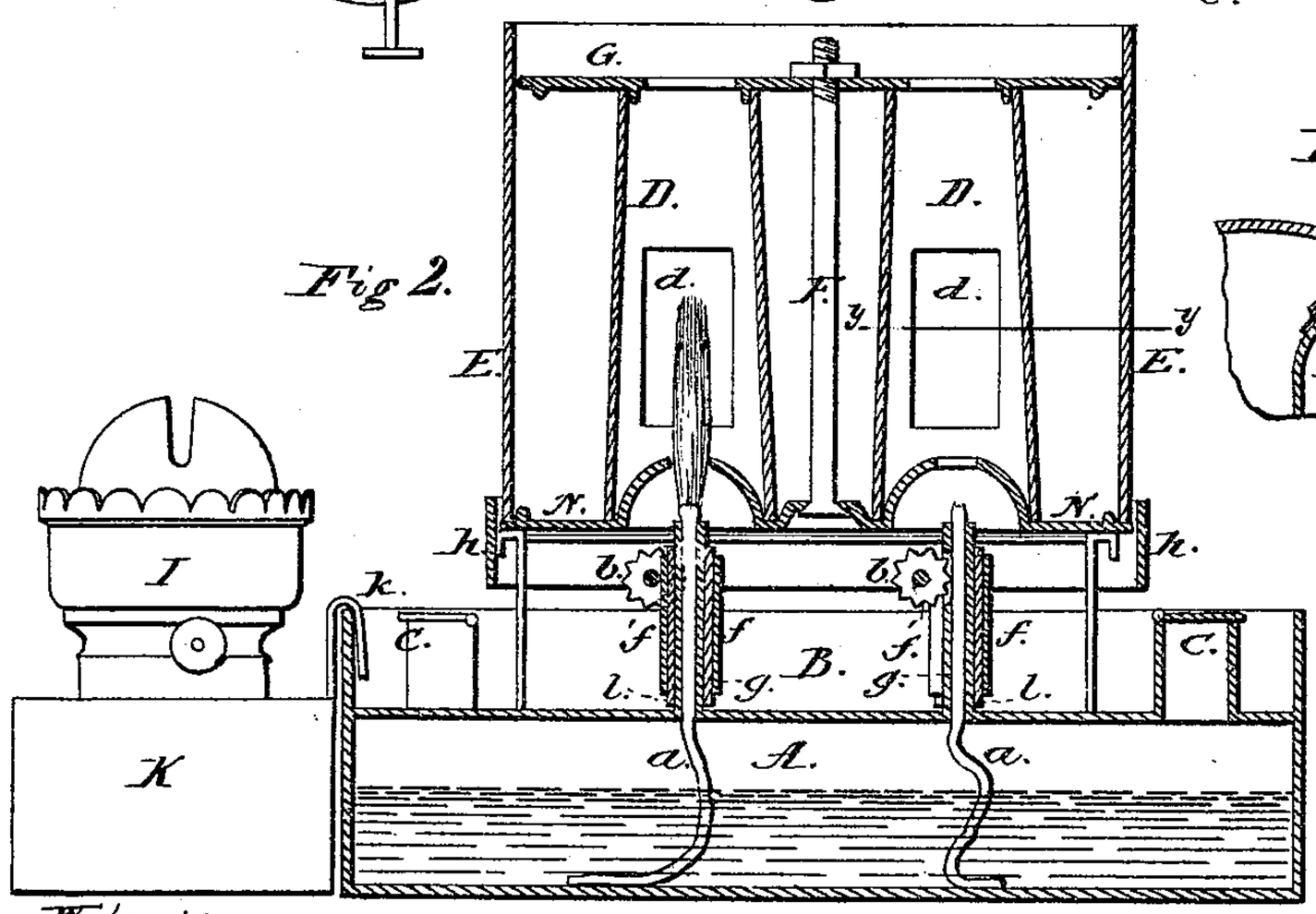
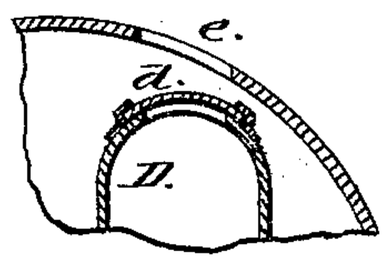


Fig 4.



Witnesses.

Samuel Gardiner

R. C. Allen

Inventor.

James H. Thorp

per Samuel Gardiner atty.

2 Sheets--Sheet 2.

J. H. THORP.

Coal-Oil Stove.

No. 129,436. Patented July 16, 1872.

Fig. 5.

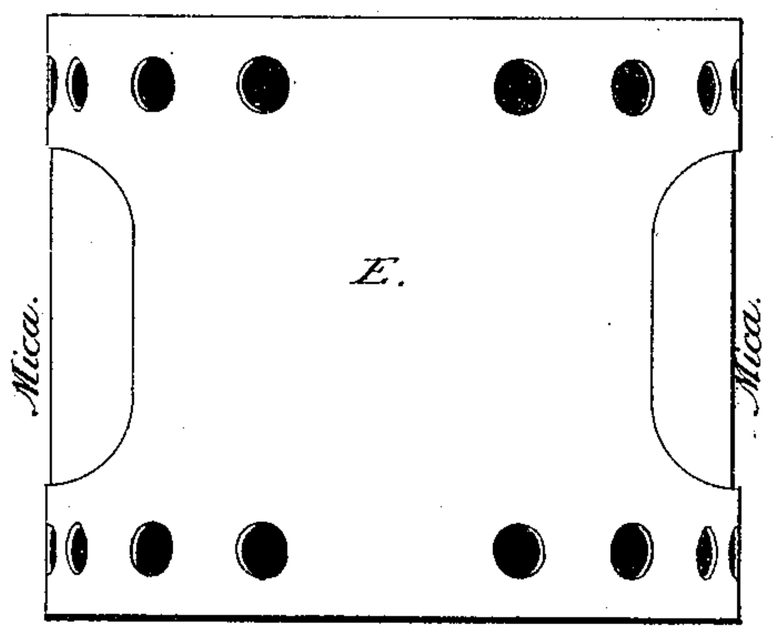
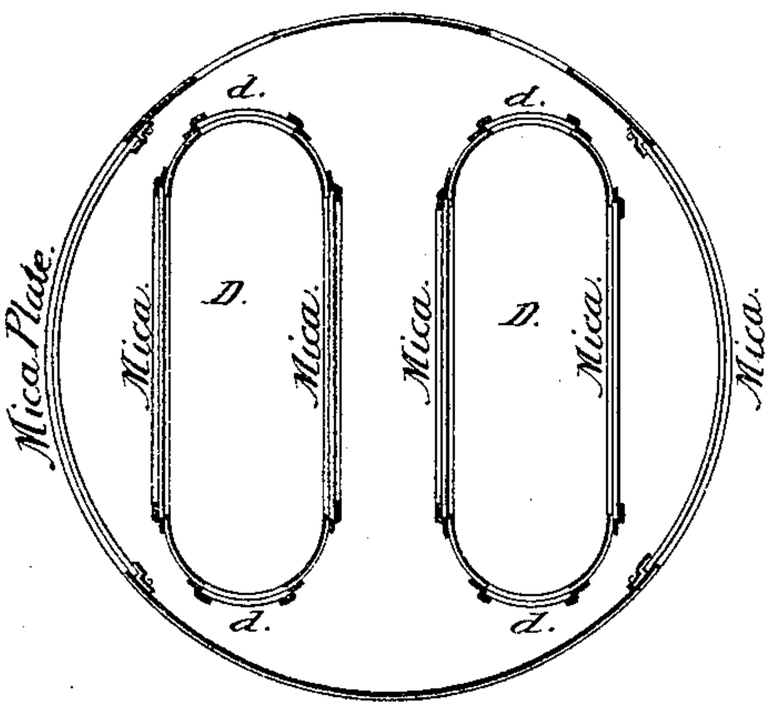


Fig. 6.



Witnesses:
Thos. Dowell

Inventor:
James H. Thorp
per Saml. Gardiner. atty.

129,436

UNITED STATES PATENT OFFICE.

JAMES H. THORP, OF NEW YORK, N. Y.

IMPROVEMENT IN COAL-OIL STOVES.

Specification forming part of Letters Patent No. 129,436, dated July 16, 1872.

SPECIFICATION.

I, JAMES H. THORP, of the State, county, and city of New York, have invented certain Improvements in Coal-Oil Stoves, of which the following is a specification:

Nature and Object of the Invention.

The first part of my invention relates to an improvement in the manner of arranging a water-wick outside of the tube containing the oil-wick, so as to allow the toothed wheel bearing on said oil-wick to operate freely without having the said water-wick interfere with the revolutions of the toothed wheel; it consists of a series of independent tubes arranged on the sides of the tubes containing the oil-wicks next to the rods to which the toothed wheels are attached. These tubes have spaces between them to allow the toothed wheels to pass freely into the oil wick-tubes for the purpose of catching hold of the wick to raise or lower the same, as more or less heat is required in the stove. It not unfrequently happens that while the thumb-screws are being turned to raise or lower the oil-wick on the old plan that the toothed wheels become entangled in the water-wick through which they pass, which forms an obstruction to the free adjustment of the raising and lowering device. This feature of my invention is intended to obviate this difficulty. The second part of my invention relates to the use of a metallic jacket surrounding the flues or chimneys through which the flames pass, and to prevent the escape of the heat and concentrate or utilize the same for cooking or heating purposes. This device consists of a band, cylindrical or of any other convenient shape, to rest upon the base of the lamp, and extend above the chimneys to form a rest for the stove fixtures, if desirable, for light work. When it is desirable to use the cooking untensils directly on the cylinder or casing E, I use a cylinder with perforations near the top and bottom; the former to allow a draught from the lamp; the latter to afford an entrance for the air without to facilitate that draught. This cylinder or casing may have its sides cut away, and mica may be introduced in the openings opposite to the large mica plates in the chimneys, to allow the light to pass out and illuminate the room at night while the cooking is going on, without the necessity of other light than that within the stove. My model shows mica in the ends of the chimneys only, whereas I desire to use the same in the sides also, if desirable. The third part of my invention relates to one or more openings in the top plate of the oil-reservoir, to give vent to the gases generated by heat from the lamp, and at the same time to serve as openings, into which a hook may be introduced to catch the oil-wicks in case they should by accident fall beyond reach of the toothed wheel intended to raise and lower the same. These openings are formed in the upper plate of the oil-reservoir, and are surrounded by boxes which have hinged covers that may remain closed, under ordinary circumstances, but should it be necessary to give vent to the oil-reservoir by opening them, the explosive vapor may pass off beyond the influence of the flame or heat from the lamp. The fourth part of my invention relates to the furnishing of an auxiliary lamp that may be moved around the stove to supply light to the same, so that the attendant may be enabled to attend to her work about the stove at night without the aid of any other lamp. This device consists of an ordinary lamp with a metallic reservoir having one of its sides made to conform to the contour of the stove's base to which it is loosely suspended. On this side of the lamp is firmly fixed a hook, extending vertically above its reservoir, which may be hung upon the flange forming the side of the water-vessel. This lamp may be moved at pleasure about the axis of the stove by simply sliding it around the same on the flange to which it is hooked. The auxiliary lamp is not unlike any other lamp used for illuminating purposes, with the exception that one of its sides (the sides of the oil-receptacle) is curved in a manner to conform to the curvature of the vessel about which it is intended to move. Its hooks *k*, which attach it to the rim of the water-vessel, support it while it is being moved around said vessel or about the stove.

Description of Drawing.

Figure 1 is a plan view, showing the upper arrangements and general form of heater; Fig. 2, transverse section on line *x x* of Fig. 1; Fig. 3, a detail of water-wick and cog-wheels, &c.;

Fig. 4, section on *y y* of Fig. 2; Fig. 5, elevation of perforated cylinder; Fig. 6, plan of same.

General Description.

A is the oil-reservoir, which is covered by the plate, which forms also the bottom of the water-vessel B, above the same. C C are the box-openings, provided with hinged covers, which may be opened when it is necessary to recover the wick, which may by accident have slipped from the teeth of the raising and lowering device; or to allow the gas generated by overheating of the oil while the stove is in use to escape. The rims of the boxes covering these openings extend upward beyond reach of the water in the water-vessel. *a a* are the oil-wicks, surrounded by the tubes *l l*. These wicks are very wide, and are composed of any porous material, fibrous or textile, that would be influenced by capillary attraction. These tubes have slots cut into them on one side to allow the toothed wheels *b b b* to pass through and engage the oil-wick, which is to be lowered or raised to increase or diminish the flame. There are several of the toothed wheels arranged on rods which have attached to their ends thumb-screws, to be handled in lowering or raising the oil-wicks. The rods to which these wheels are attached have upright supports secured to the bottom of the water-vessel. On the side of the oil-wick tubes *l*, next to the raising and lowering device, are the series of tubes *f* surrounding the water-wicks, the same being open at their bottoms, so that said wicks may be under the influence of the water, as long as there is any found in the water-vessel. The arrangement of separate tubes is, as before stated, to allow free play to the toothed wheels *b b b*, as they perform the work of lowering and raising the oil-wicks. On the other side of the oil-wicks the water-wick tubes are single, and of the ordinary form.

There is nothing claimed as new in the application of separate wicks surrounding the oil-wick tubes, as this device, in combination with the water in a vessel to cool the metal influenced by the heat of the lamp, is already before the public in several forms. My object is to arrange these wicks so that they may not be liable to entanglement with the raising and lowering device, but to have them at the same time to answer the full purpose of the water-wick principle.

The metal disk N, with its spaces surrounding the points where combustion takes place, is of the usual form, and is supported by legs which rest on the bottom of the water-vessel. Chimneys D D, having their horizontal sections of the oval form, and of a reduced size at their tops, are held in their places by a rod forming a screw-bolt passing between them vertically, the same being secured to the lower plate N and upper plate G. These chimneys D D have openings *d d*, which may be closed up when necessary by mica plates which slide vertically, as shown in Fig. 4 of drawing. E is a casing, of a cylindrical or other form, surrounding the chimneys D D, composed of metal or other material, with its inner surface polished. This cylinder is to confine and concentrate the heat when the stove is being used for baking or other purposes, when it is important to utilize the greatest amount of the same. This casing is supported on the plate N, and is kept in its place by small flanges projecting from the upper surface of said plate. Openings *e* are left in this cylinder, as shown in Fig. 4, so that the blaze may be watched and regulated. This casing may be dispensed with, if desirable, or adjusted at a moment's notice, as it is not a fixed feature of the stove. H is a tube extending obliquely from the side of the oil-reservoir A, through which the oil is poured to supply the same. The tube has a close-fitting cap to exclude the dust, &c. I is the small lamp, hung to the rim of the water-vessel by the hooks *k k*, which keep it in its place as it is moved about the axis of the heater to give light around the same.

Claims.

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

1. The tubes *f f f*, arranged in combination with the toothed wheels *b b*, and forming spaces to allow a free movement of said wheels, as and for the purpose set forth.

2. I claim the auxiliary lamp I, with one of the sides of the oil-receptacle curved inward, and being provided with metallic hooks *k* to support it on the rim of the water-vessel of the stove, as and for the purpose set forth.

3. The mica side lights in the lamp-chimneys, with corresponding lights in the outer cylinder or jacket, as and for the purpose set forth.

JAMES H. THORP.

Witnesses:

SAML. GARDINER,

R. ALLEN.