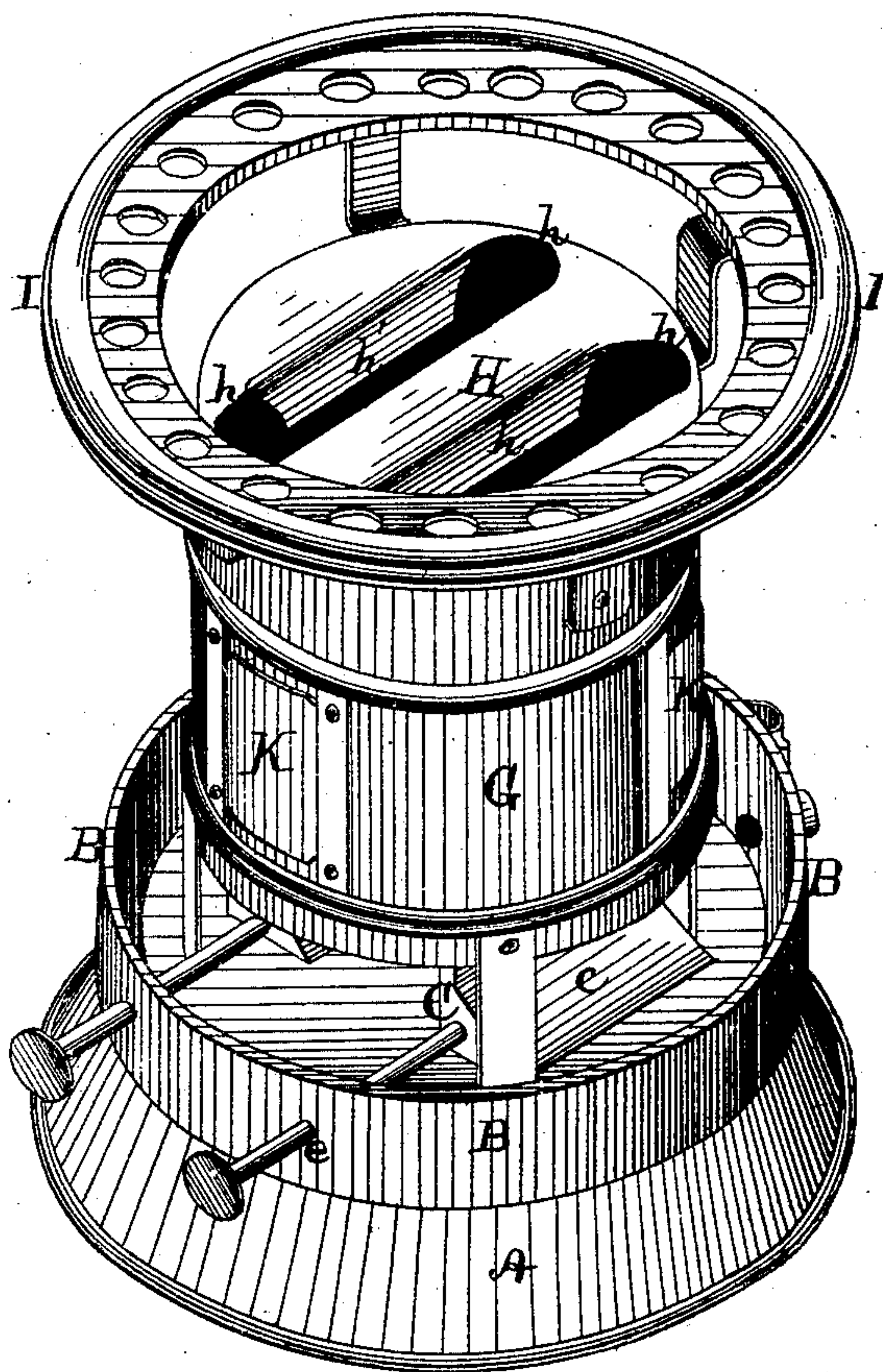


J. A. FREY.
Coal-Oil Stoves.

No. 156,149.

Patented Oct. 20, 1874.

Fig. 1.



WITNESSES=

Asa E. Hutchinson
John R. Young

INVENTOR.

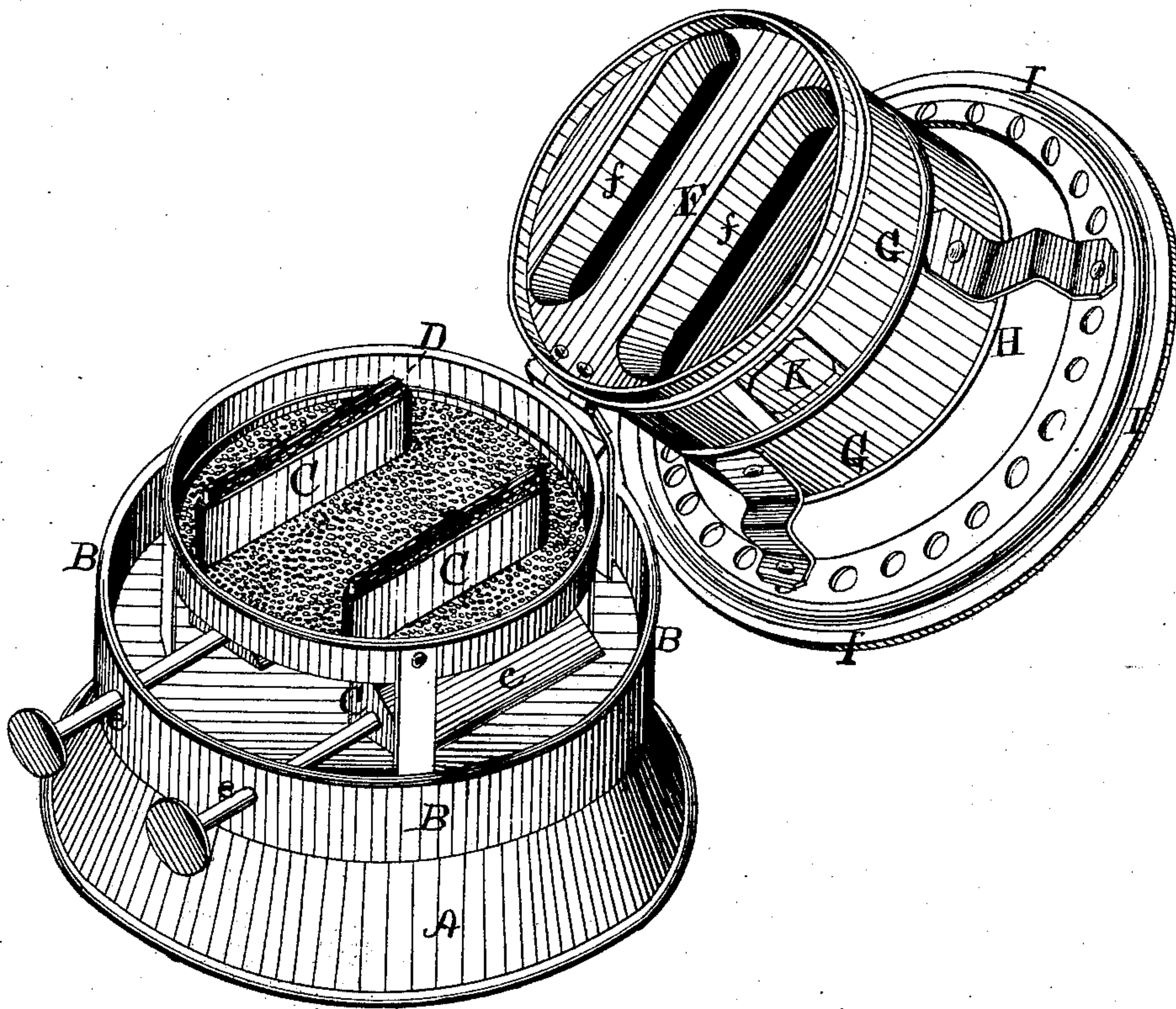
John A. Frey, by
Orindle and Seane, his Attys

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Fig. 2.



WITNESSES=

Jas. E. Hutchinson
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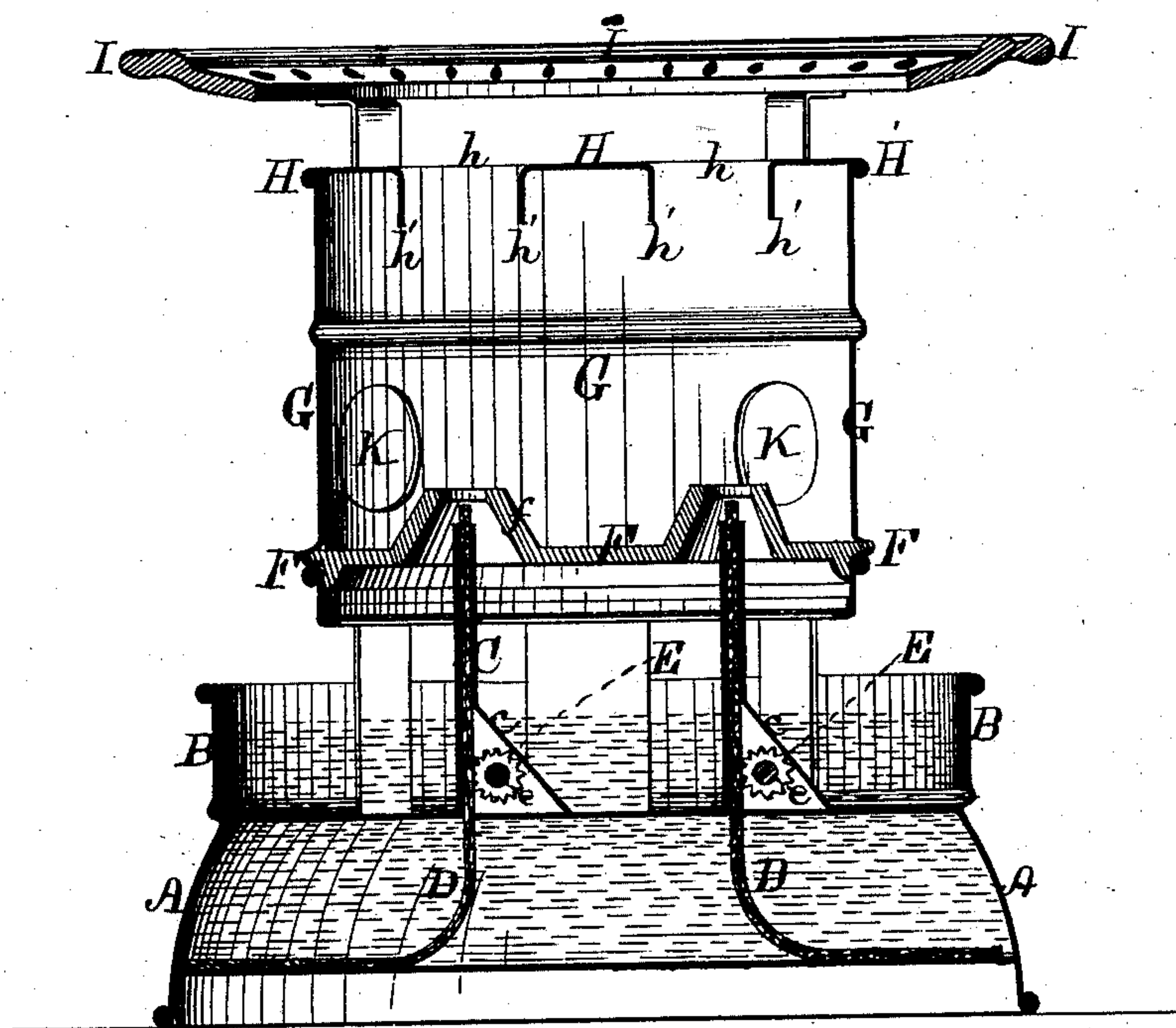
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Patented Oct. 20, 1874.

Fig. 3.



WITNESSES=

Asst. Hutchinson
John R. Young

INVENTOR.

John A. Frey, by
Orindle and Beane, his Attys

UNITED STATES PATENT OFFICE.

JOHN A. FREY, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN COAL-OIL STOVES.

Specification forming part of Letters Patent No. **156,149**, dated October 20, 1874; application filed July 8, 1874.

To all whom it may concern:

Be it known that I, JOHN A. FREY, of Washington, in the county of Washington and in the District of Columbia, have invented certain new and useful Improvements in Coal-Oil Stoves; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a perspective view of my stove as arranged for use. Fig. 2 is a like view of the same with the upper hinged portion turned to one side so as to uncover the wick-tubes, and Fig. 3 is a vertical central section upon a line having a right angle to said tubes.

Letters of like name and kind refer to like parts in each of the figures.

My invention is an improvement upon a similar device which has before been manufactured and sold by me, and which is protected by several patents; and it consists in the peculiar construction of the funnel or chimney, and its combination with the wick-tubes, substantially as and for the purpose hereinafter shown.

In the annexed drawings, A represents the reservoir for containing oil, which reservoir has, preferably, downward and outward flaring sides, and at its upper side and outer edge is inclosed by means of an annular flange, B, that has a height of about one and one-half inch, and is used to contain water for receiving the heat radiated downward from the burners, so as to prevent the same from being communicated to the oil. From the reservoir A two tubes, C and C, extend upward to the required distance, and serve to contain wicks D and D, of usual shape. Said wicks are moved vertically by means of star-wheels E and E, which latter are secured upon, and rotate with, suitable shafts, *e* and *e*. In order that the wick-wheel shafts *e* and *e* may be prevented from becoming warped by the action of the heat, so as thereby to change the relative positions of the wicks and engaging wheel, said parts are located within a suitable housing, *c*, below the water-line, by which means a perfect protection is afforded, and all liability to derangement

avoided. Above and around the upper ends of the wick-tubes C and C is placed a cap, F, that is provided with cone-shaped kerbs *f* and *f*, one of which coincides with each of said tubes, and permits the flame of the burning oil to pass upward from the wick. From the cap F, which is, preferably, constructed from cast metal, a sheet-metal cylinder, G, extends upward about seven inches, and at its upper end is inclosed by a metal head, H, which latter is provided with two openings, *h* and *h*, that coincide in position with the wick-tube kerbs *f* and *f*, but have considerably larger horizontal dimensions. From each side of each opening *h* a flange, *h'*, extends downward, and causes the heated escaping gases to be deflected toward the ends of said openings, instead, as would otherwise be the case, of passing outward, principally at the longitudinal center of the same. The cylinder G, cap F, and head H, which form the chimney of the lamp, are hinged so as to permit of being turned to one side, as shown in Fig. 2. An elevated support, I, for cooking utensils, is secured to the upper end of said cylinder, and a number of glazed openings, K and K, are provided in the sides of the latter, completing the apparatus, the operation of which will be readily understood from the foregoing description.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

The combined cap and chimney, consisting of the cap F, provided with the kerbs *f* and *f*, the sheet-metal cylinder G, and the head H, provided with the openings *h* and *h*, and flanges or flue-plates *h'* and *h'*, depending from the sides only of said openings, said parts being constructed and combined to operate in the manner and for the purpose substantially as shown.

In testimony that I claim the foregoing I have hereunto set my hand this 26th day of June, 1874.

JOHN A. FREY.

Witnesses:

GEO. S. PRINDLE,
WILLIAM FITCH.