

(No Model.)

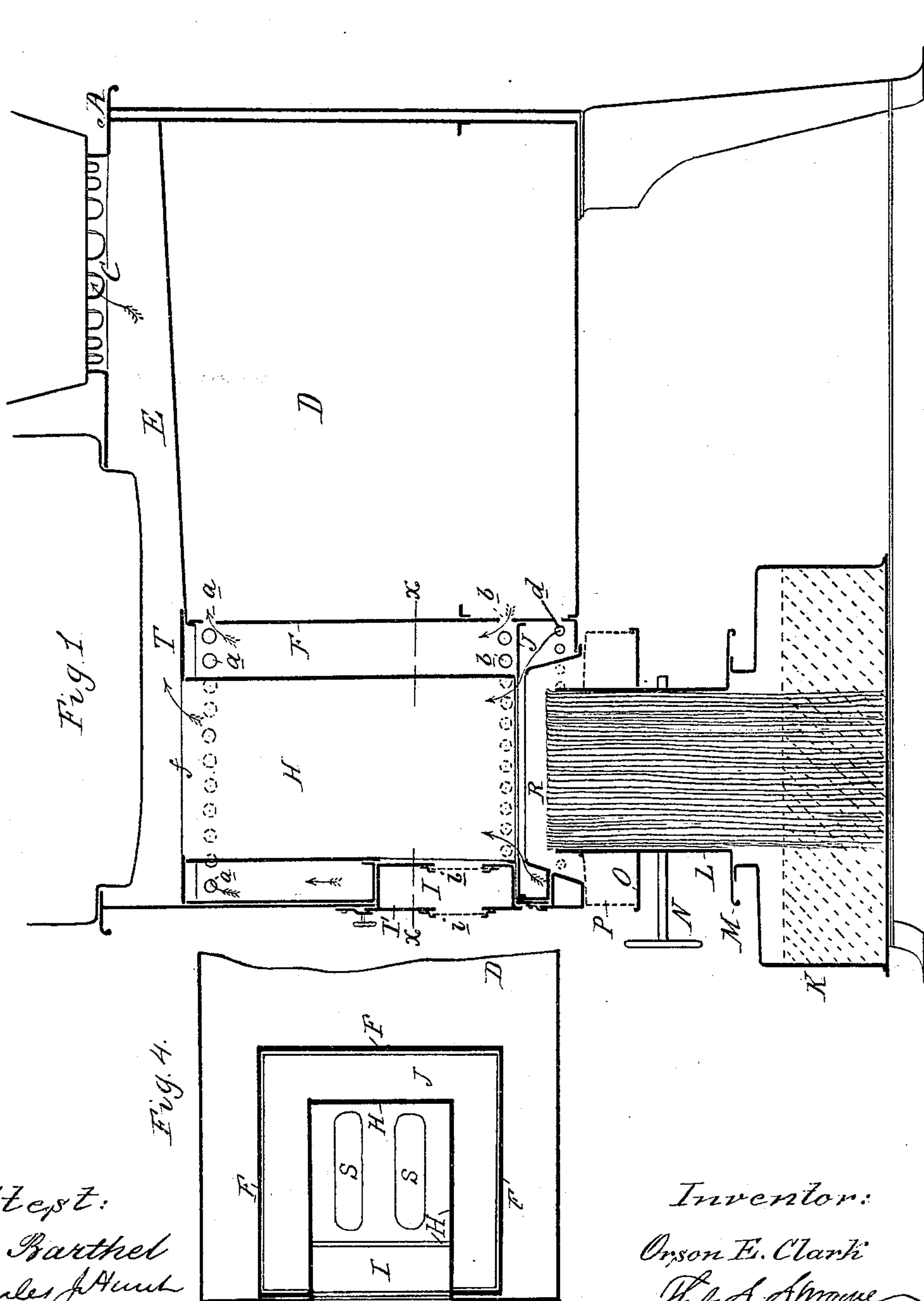
2 Sheets—Sheet 1.

O. E. CLARK.

OIL STOVE.

No. 258,630.

Patented May 30, 1882.



Attest:
H. Barthel
Charles J. Hunt

Inventor:
Orson E. Clark
per Thos. S. Sprague
Atty.

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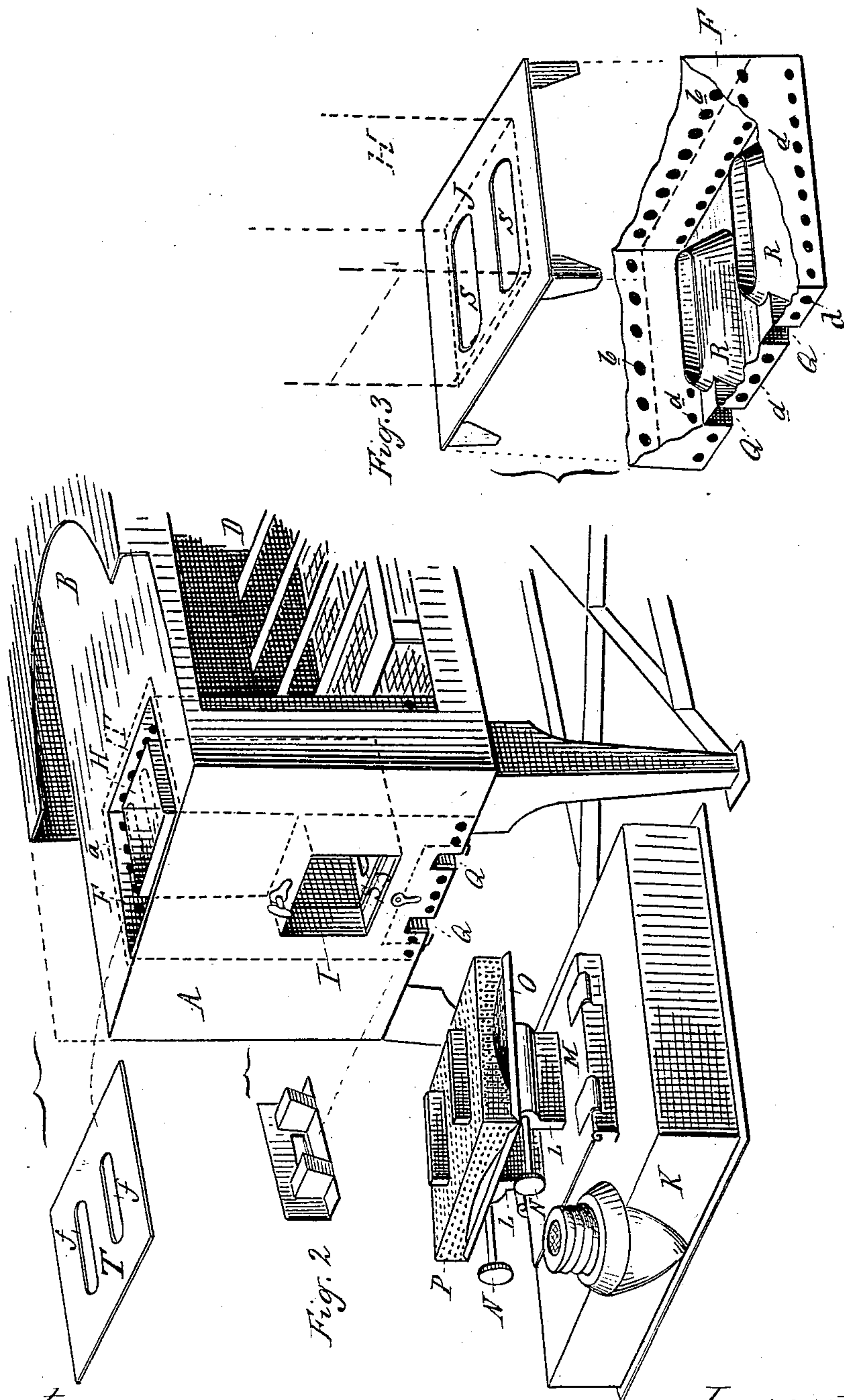
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OIL STOVE.

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UNITED STATES PATENT OFFICE.

ORSON E. CLARK, OF DETROIT, MICHIGAN.

OIL-STOVE.

SPECIFICATION forming part of Letters Patent No. 258,630, dated May 30, 1882.

Application filed November 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, ORSON E. CLARK, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Stoves, of which the following is a specification.

The nature of this invention relates to certain improvements in that class of stoves known as "oil-stoves;" and the invention consists in the peculiar construction of parts and in their various combinations, as more fully hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents a vertical section of my improved oil-stove; Fig. 2, a sectional perspective with the lamp withdrawn and the cap of the chimney and the stop for the wick-passages detached and the door to the central flue removed; Fig. 3, a sectional perspective of the cones and the base of the chimney proper; and Fig. 4, a sectional detail through line *x x*, Fig. 1, but with the door to the central flue removed.

A represents the top plate, provided with suitable boiler-holes, B, and an escape-collar, C, having scalloped edges, and through which the products of combustion escape. The scalloped edges of the collar allow the use of a flat-bottomed culinary vessel without impeding the draft. A double-walled oven may, however, be substituted for this collar, if desired, so that the products of combustion will pass through its hollow walls and escape through a similar collar on its top.

D is the oven proper, between the top of which and the top of the stove is situated the flue E, affording communication between the combustion-chamber H and the collar C, said combustion-chamber being surrounded by a rectangular flue, F, the outer walls of which are perforated on two sides and at the rear, at the top, as at *a*, and at the bottom, as at *b*, to communicate with the oven D, in order to produce a circulation of air in the oven and utilize the heat radiated through the combustion-chamber and chimney H.

Air is admitted around the cones R to the flame in the combustion-chamber H through perforations *d* in the front, rear, and sides of the flue F, near the bottom of said flue.

One or more openings, I, in the front of the stove lead through the front wall and front of the flue F into the chimney H and afford easy

access to the latter above the chimney-base J. The opening I is provided with a double-walled or chambered door, I', which is provided with mica windows *i i*, through which the condition of the flame may be examined.

A lamp-reservoir, K, designed to be withdrawn, as shown in Fig. 2, is provided with a hinged top, M, which carries the wick-tubes L, secured to it in any desired manner.

The wick-tubes are provided with enlargements to receive the ordinary raising and lowering devices N, and upon these enlargements rests the imperforate plate O, surrounding the tubes and supporting the perforated frame P, forming a chamber, through which air can freely pass to prevent the heat from the burners from injuriously heating the lamp and contents.

In order to allow the upper ends of the wick-tubes to pass outward when the lamp is removed or replaced, channels Q are formed in the front wall, which are provided with suitable devices for stopping or closing them.

From the bottom of the flue F, which also forms a portion of the bottom of the stove, project the cones R, which are so situated that when the lamp is in position the wick-tubes will fit loosely within them, so that air may pass through said cones to furnish the necessary oxygen at the proper point to promote combustion. In the lower end of the flue F rests the chimney-base J, which is supported just above the cones, and is provided with slots S S coincident with the openings of said cones.

The chimney and combustion-chamber H is rectangular in cross-section, and rests upon the base J, as shown in dotted lines in Fig. 3, so as to inclose the slots S of said base. A plate, T, rests upon the top of the chimney H, and is provided with two slots, *f*, similar to the slots in the base J. This plate T projects over and covers the space which forms the flue F, so that the heated air radiated from the chimney will be caused to circulate in the oven D through the perforations *a* and *b*, the slots *f* allowing the products of combustion to pass through the flue E between the top of the stove and top of the oven to the escape-collar.

Although the drawings show only two wick-tubes, any number, according to the size of the stove and heat required, may be employed,

the other coacting parts being correspondingly enlarged. Between the wick-tube plate and the top of the lamp-reservoir any suitable non-conductor may be placed.

5 If desired, a separate chimney-flue may be provided for each burner, which will give a still greater amount of radiating-surface. Hence I do not desire to limit myself to the exact construction shown.

10 What I claim is—

1. The combination of the combustion-chamber H, the flue F, surrounding said chamber, and the oven D, partly surrounding the flue F, said flue being provided with openings *a* at 15 its upper end and with openings *b* near its lower end, whereby a constant circulation of air in the oven and flue is insured, substantially as shown, and for the purpose specified.

2. In an oil-stove, the combination of the 20 outer casing having a series of holes, the flue F, having holes *a* *b*, the cones R, the slotted plates J and T, the flues H and E, and the oven D, substantially as shown and described.

3. In an oil-stove, the combination, with the 25 oven D and the chimney H, of the flue F, pro-

vided with an upper series of holes, *a*, and two lower series of holes, *b* and *d*, and the chimney-base J, supported between the lower two series of holes, and forming two distinct chambers in the flue F, substantially as set forth. 30

4. The combination, with the outer casing and the flue F and chimney H within said outer casing, of the double walled or chambered door I', constructed to close and fill a passage, I, 35 leading into the chimney H through the flue F, substantially as and for the purpose specified.

5. In a lamp-stove, the flue F, fitting within the outer casing thereof, and provided with a bottom composed of a bottom plate, the cones 40 R, and passages Q, leading to said cones, in combination with the slotted plate J and the chimney H, fitting within said flue above the cones, and a lamp having wick-tubes projecting into the latter, substantially as and for the 45 purpose specified.

ORSON E. CLARK.

Witnesses:

H. S. SPRAGUE,
CHAS. J. HUNT.