(No Model.)

S. C. FANCHER.

HEATING STOVE.

No. 423,142. Patented Mar. 11, 1890.

Fig 1

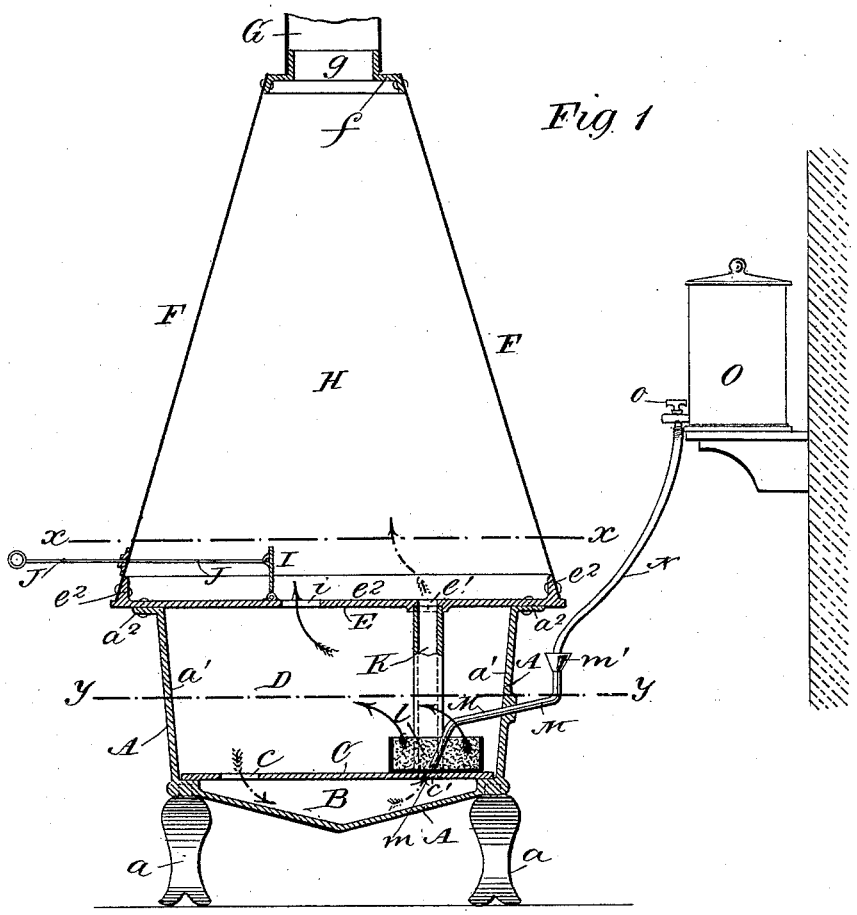


Fig 2

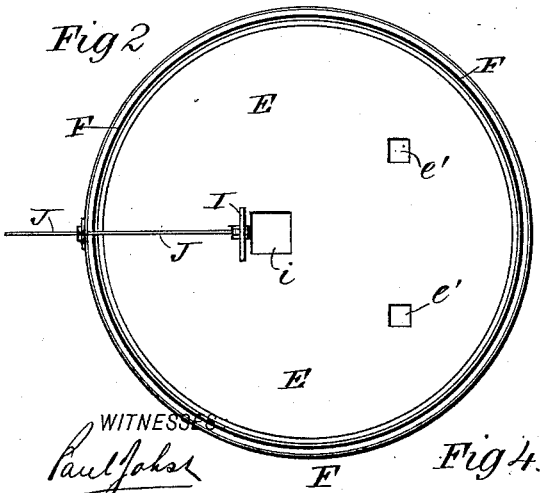


Fig 3.

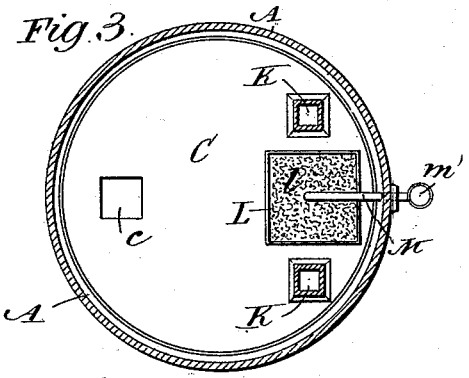
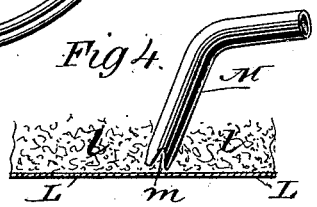


Fig 4.



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UNITED STATES PATENT OFFICE.

SALATHIEL C. FANCHER, OF KANSAS CITY, MISSOURI.

HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 423,142, dated March 11, 1890.

Application filed October 4, 1889. Serial No. 325,998. (No model.)

To all whom it may concern:

Be it known that I, SALATHIEL C. FANCHER, of Kansas City, in the county of Jackson and State of Missouri, have invented a new and Improved Heating-Stove, of which the following is a full, clear, and exact description.

My invention relates to stoves, heating-stoves more particularly, and has for its object to provide a simple, inexpensive, non-explosive oil-burning stove which is easy to manage and is adapted for quick and practically perfect regulation of heat, thereby promoting economy of fuel.

The invention consists in certain novel features of construction and combinations of parts of the heating-stove, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertial sectional view of my improved heating-stove and a side elevation of the oil-reservoir and supply-pipe. Fig. 2 is a plan view, in horizontal section, on the line $x\ x$ in Fig. 1. Fig. 3 is a plan view, in horizontal section, on the line $y\ y$ in Fig. 1; and Fig. 4 is a detail view of the discharge end of the oil-feed tube and a portion of the vapor-generator which it supplies, and drawn to a larger scale than in Fig. 1.

The base A of the stove is preferably made of cast-iron, and is sustained on suitable legs a, between which the bottom a' of the base preferably sinks or inclines downward toward the center to provide a chamber B between it and an auxiliary bottom or floor plate C, which is also preferably made of cast-iron and has an opening c, establishing communication between the chamber B and an upper chamber D, which is formed between the side walls a' of the base A, the floor-plate C, and the cast-iron top plate E of the base. The base at the top of its side wall a' is provided with an outwardly-projecting flange a^2; or it may be lugs, through which bolt or screw fastenings are passed into the top or cap plate E to hold it in place, and this plate is also preferably provided with an upwardly-projecting flange e^2, onto which is fitted the lower end of the sheet-metal body F of the stove.

The stove-body is preferably made in the conical or upwardly-tapering form shown and has a suitable cap-piece or ring f, which may be made of cast-iron or of sheet-iron, and which is provided with a central opening surrounded by a flange or neck g to receive the end of a pipe or flue G, which will lead to any suitably-constructed chimney-flue to give draft to the stove. The stove-body is preferably bolted to the flange e^2 of the base-top or cap-plate E, and this plate, with the body, forms a chamber H, which is the final or main combustion and heating chamber of the stove, and has communication with the base-chamber D through an opening i in the plate E, which may be closed by a hinged or other suitable damper I, connected to this plate and operative by means of a rod J, extending through the side of the stove.

The lower and upper combustion-chambers B H of the stove have communication with each other through vertical flues K K, which are also preferably made of cast-iron and rest in flanged necks or sockets provided for them on the floor and cap plates C E of the stove-base, which are apertured at c' and e', respectively, to coincide or register with the interior openings or passages of the flues. The relative location of the dampered opening i' of the plate E with the flues K K is shown in Fig. 2, and the relative location of the draft-passage c of the floor-plate C with these flues is shown in Fig. 3 of the drawings.

Between the draft-flues K K of the stove I place on the floor-plate C a metal box L, which is filled with bits of iron or other refractory material—shingle-nails l, for instance—and into which enters the inner end of an oil-supply tube M, the lower end of which rests on the bottom of the box L, and is notched at m to allow the oil to pass as freely as necessary from the tube into the box at or next its bottom. The upbent outer end of the tube M is preferably provided with a funnel-cap m', which receives the lower end of an oil-feed pipe N, which connects with the valved faucet o of any approved oil-reservoir O, which may rest on a shelf P, fastened to an adjacent wall or other support.

The stove-base A will have any suitably-arranged door, through which the vapor-generating box L l may be placed in the cham-

ber D relatively with the oil-supply tube M, as shown in Figs. 1 and 3 of the drawings.

The operation is as follows: When the oil-reservoir valve *o* is opened sufficiently to secure proper feed of oil through the pipe N and tube M to the vapor-generator L *l*, the oil will be lighted at the vapor-generator, and at first, or until the stove is well heated, the damper I will be opened, as shown in Figs. 1 and 2 of the drawings, to assure a direct upward draft from the vapor-generator and chamber D into the main combustion-chamber H, and thence through the pipe G to the chimney-flue, which allows the heavy smoke first following the lighting of the oil fuel to pass to the chimney through the opening *i* of plate E in direction of the heavy-line arrows in Fig. 1 of the drawings. After the generation of vapor from the oils decomposed in the box L *l* becomes more steady and complete and the smoke decreases or ceases to rise in any great volume from the generator, the damper I will be closed over the opening *i* of plate E, and the draft will then be downward from the chamber D and through the floor-plate opening *c* into the chamber B, and thence upward through the flues K K to the combustion and heating chamber H, as indicated by the dotted arrows, and thence to and through the pipe G to the chimney.

There is no danger of explosion or of sooty clogging in working this stove, and the fire can be checked almost instantly by lessening the supply of oil by adjusting the valve *o;* or the fire may be extinguished quickly by shutting this valve and entirely cutting off the supply of oil to the vapor-generator, as will readily be understood.

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

1. In a stove, the combination of a base provided with two chambers which are in communication with each other, a generator in one of the said chambers, a body portion resting upon the base, and flues connecting the body portion with the lowermost chamber of the base, substantially as described.

2. In a stove, the combination of a base having an opening in its top and provided with two chambers, which are in communication with each other, a generator in one of the chambers, a body portion resting on the base, flues extending from the top of the base through the top of the lowermost chamber, and a valve for closing the opening in the top of the base, substantially as herein shown and described.

3. In a stove, the combination of the base A, provided with the chambers B D, and with the openings *c i* in the top plates C E of the said chambers, the valve I, for closing the opening *i*, the flues K, extending through the chamber D, the generator L *l* in the chamber D, the supply-tube M, leading through the base into the generator, and the body portion F, resting on the base, substantially as herein shown and described.

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