E. HUNTER.
Lamp-Stove.

No. 209,567. Patented Nov. 5, 1878.

Fig. 1.

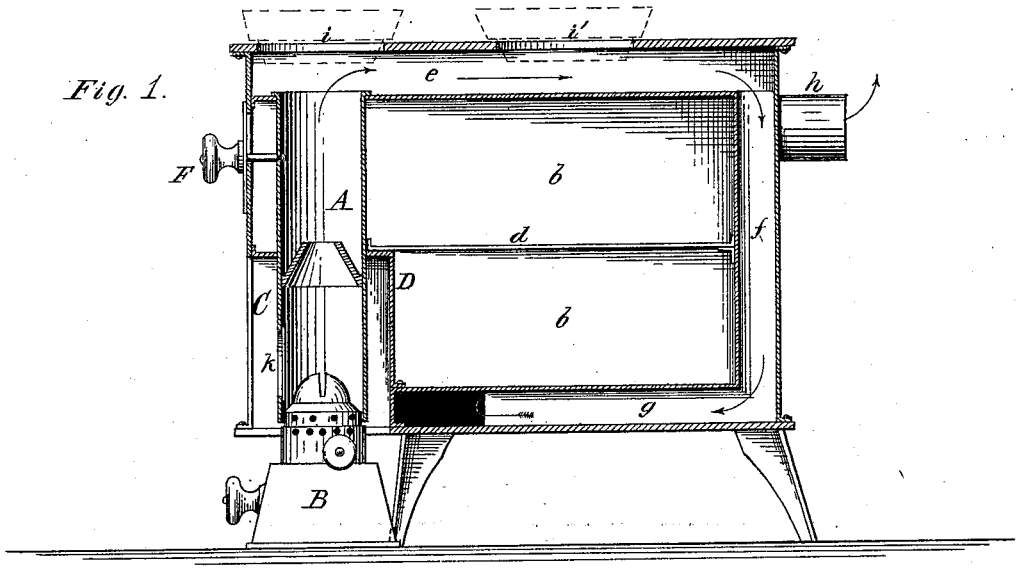


Fig. 2.

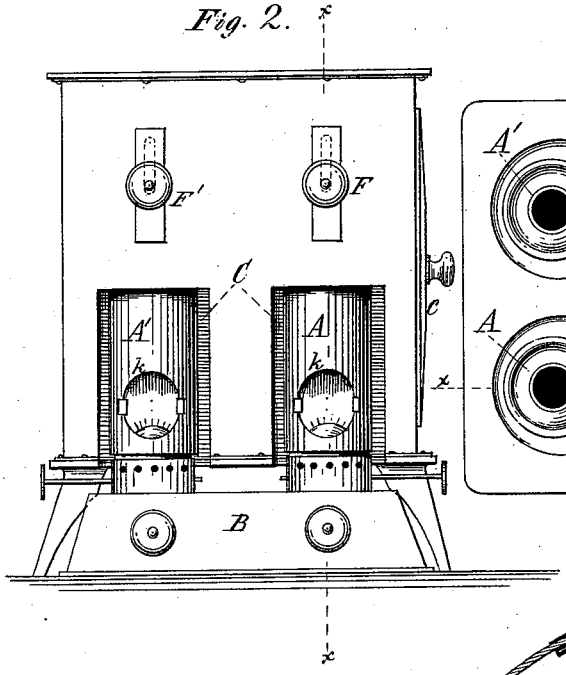


Fig. 3.

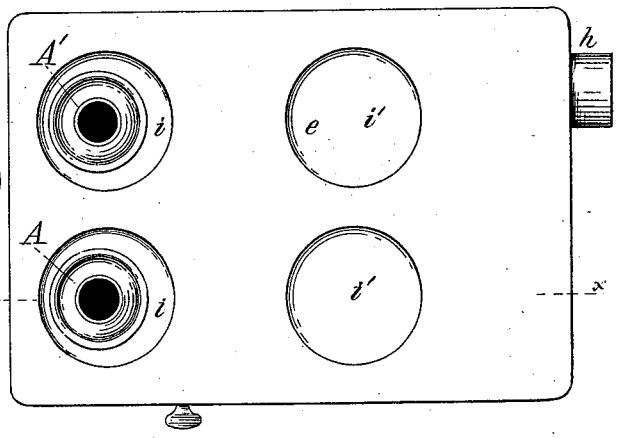
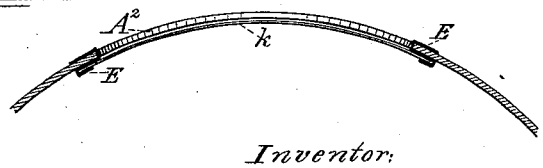


Fig. 4.



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EDWARD HUNTER, OF NORWICH, CONNECTICUT.

IMPROVEMENT IN LAMP-STOVES.

Specification forming part of Letters Patent No. **209,567**, dated November 5, 1878; application filed August 31, 1878.

To all whom it may concern:

Be it known that I, EDWARD HUNTER, of Norwich, New London county, Connecticut, have invented certain new and useful Improvements in Lamp-Stoves, of which the following is a specification:

In kerosene or lamp stoves heretofore constructed the lamp or lamp-reservoir has usually constituted the base and support to the general structure of the stove, the chimney or cylinder of the lamp having its top fitted for the reception of movable oven-chambers and other cooking utensils, which are directly supported thereon.

Now, in my invention the main structure of the stove consists of a metallic casing or stove-body, inclosing an oven-chamber, preferably, and adapted to rest on its own base, directly upon the floor or other fixed base, independent of the lamp, while the lamp forms a distinct part of the stove, removable therefrom and capable of being placed into or out of position with regard to the heating-chamber of the stove, as occasion demands. In fact, the construction of my improved stove may be said to be similar to an ordinary cooking coal-stove, with the distinction that mine is adapted for use with a movable lamp-heater, and that I introduce the novel feature of one or more vertical flues or tubes, which are embodied in the structure of the stove-casing, at one end thereof, and rise parallel with one side of the oven-chamber, with their lower ends adapted to fit over the burner of a movable lamp or lamps, to form the chimney thereto, while their upper ends open into an upper heat-diffusing chamber, similar to that in ordinary stoves, which overlies the oven-chamber, is perforated with openings to receive cooking utensils, and has an escape for the heat at the opposite end, which preferably circulates around the oven before issuing from the stove.

In addition to the main feature of my invention here outlined, a minor feature consists in arranging the flues to have a vertical adjustment in the stove-body and providing them with operating-knobs, projecting therefrom to the exterior of the stove, by which the flues are rendered capable of being readily fitted over the burners of the movable lamp when the same is placed in position, as hereinafter set forth.

In the drawings annexed, Figure 1 presents a longitudinal vertical section of my improved lamp-stove. Fig. 2 is a front elevation, and Fig. 3 a plan view, in which the line *x x* indicates the plane on which the sectional view in Fig. 1 is taken. Fig. 4 is an enlarged detail view, showing the manner of fastening the mica window in the lamp-flue.

As shown in the drawings, the body of the stove is of rectangular form, similar in general construction to an ordinary coal-stove, with the exception of those novel features which constitute my invention. The base of the body is preferably provided with feet, as shown, by which it is adapted to rest directly upon the floor or other fixed base independent of the lamp.

The body of the stove is constructed with a central oven-chamber, *b*, arranged in about the usual manner, being provided with a side door, *c*, a rack or shelf, *d*, and surrounded in the ordinary manner with chambers *e f g*, through which the heat circulates around the oven before escaping from the pipe *h*, as indicated, which, being of ordinary construction, need not be particularly described. The top of the stove is perforated with holes *i i'*, which may be provided with covers, and which permit cooking utensils to project, in the usual manner, into the upper heat-diffusing chamber, *e*, of the stove, which overlies the oven, as usual, and from which the heat escapes at the back end of the stove, thence circulating under the oven and issuing from the pipe, in about the manner of ordinary coal-stoves. The end of the stove, however, which usually forms the grate and fire-box, is, according to my invention, constructed with, preferably, two vertical cylinders or flues, A A^1, which rise parallel to one end of the oven, as shown. The lower ends of these cylinders open on a level, or thereabout, with the base of the oven, and some distance above the floor or surface on which the stove rests, while their upper ends open into the heat-diffusing and cooking chamber *e* at the top of the stove and directly under the front holes, *i i'*, in the stove-top, as seen in Figs. 1 and 3.

The front part of the stove, in which the flues A A^1 are situated, projects or overhangs some distance beyond the front feet, as shown, leaving a free space under the overhanging

part, by which a removable lamp or lamps, B, resting also on the same floor or surface as the stove, may be placed directly under the flues A A^1, as shown in Fig. 1.

The lower front corner of the stove, which corresponds in position with the ash-pit of ordinary coal-stoves, is formed into a lamp-chamber, C, by a right-angled partition, D, which chamber occupies or projects into the lower front corner of the oven-chamber, as shown, and rises to about half the height thereof. The lower end of the flues A A^1 project down into this lamp-chamber, which is entirely open at the bottom, as shown in Fig. 1, and has also openings or doors in front, as shown in Fig. 2, which latter expose the ends of the flues provided with the mica windows *k*, and enable the conditions of combustion to be observed and regulated.

The lamp B being placed under the lamp chamber C of the stove, as indicated, the mouth of the flues A A^1 are adjusted down over the burners, so as to closely embrace and fit over the same, thus forming chimneys to the lamps, by which a strong draft and perfect combustion are established. The heat of the lamp thus rises through the flues A, impinges upon the bottom of the cooking vessels placed on the front of the stove, and diffuses itself through the chamber *e*, over the oven, from whence it passes at the back, through the circulating-chamber *f g*, around the oven, and escapes from the pipe *h*.

This pipe may be prolonged upward some distance, or it may be connected with the chimney of the house in the manner of any ordinary stove, so as to secure more powerful draft; but it is not essential, as I find that the circulation of the heat is practically accomplished with good effect without it.

By this construction of the oil-stove it will be seen that the heat of the lamp is most effectually utilized and economized, and it is found that baking can be done in the oven while a number of vessels are at the same time cooking on the stove-top, and with no greater consumption of oil than in an ordinary double-lamp stove, where usually but two dishes can be cooked at once. I thus combine the capacity of the coal-stove with the cleanliness and readiness of the oil-stove, and in a safe and simple construction, of a nature familiar to and easily managed by the ordinary housekeeper.

The lamp B may be of any suitable or adapted form, as my invention does not particularly concern that, and is freely movable with respect to the stove-body, as described, it being simply adjustable into position under the flues, as shown. It may, however, be fixed to the stove-body; but this is not desirable, as its ease of removal and separation from the stove-body is an advantage in filling, trimming, &c.; and a further important advantage, it will be observed, lies in having the stove-body, with its utensils, stationary with respect to the lamp, for it is often desirable to remove the lamp for adjustment or examination, which cannot be done in ordinary stoves without a general disarrangement of the stove and cooking utensils, as the lamp forms of itself the base to the stove-body and to the cooking utensils supported thereon, which objectionable quality is obviated in my invention.

In order to admit the ready adjustment of the lamp-flues A over the burners of the removable lamp when placed in position, the flues are made freely movable in a vertical direction, with sufficient play to admit of their being raised to permit the placement of the lamp beneath, and to be then forced down properly over the lamp-burner. To effect this, knobs F F′ project from the flues through the front of the stove, by which they may be readily manipulated for this purpose, as will be understood on reference to the drawing.

It will be observed, on reference to Fig. 1, that the flues A A^1 pass directly through the oven-chamber *b*, in the upper front corner thereof, in which the hot radiating-surface is freely exposed, to directly heat the oven. This direct radiation, together with the diffused heat circulated around the oven, is found to heat the oven very effectively and enable baking to be done with rapidity and perfection. The interior of the flues is preferably fitted with the usual deflecting-cone over the burners, as seen in Fig. 1.

In lamp-stoves the little detail of securing the mica window in the lamp-chimney has been usually found difficult to accomplish in a simple and satisfactory manner. In Fig. 4 I illustrate the means which I employ. A^2 indicates the wall of the chimney, provided with the window-aperture; and *k*, the mica pane fitted over the same. E are S-shaped fasteners, formed of thin sheet metal, one of which is placed on each side of the pane, with the mica embraced by one fold of the S, and the chimney embraced by the other fold; and by flattening the folds tightly together with a strong pressure the pane is held securely to the chimney in a very simple, secure, and inexpensive manner, as will be observed.

The stove-body may be constructed of sheet or cast iron, or a combination of both, or of any other equivalent material that the manufacturer may find suitable.

What I claim is—

1. In a lamp-stove, the combination, with a movable lamp, of a stove body or casing having at its upper end a cooking and heat-diffusing chamber, with its top perforated with a series of holes to permit the insertion of cooking-vessels therein, and its lower end provided with feet, adapting the stove-body to rest on a base independently of the lamp, together with one or more vertical flues inclosed in the stove-body, with their lower ends opening above the supporting-base and adapted to fit over the burners of the lamp, and their upper ends opening into the said cooking-chamber, beneath the perforated top of the same, substantially as herein shown and described.

2. A lamp-stove formed of a metallic chest

or casing inclosing an oven-chamber, and formed with one or more vertical cylinders or flues, A A^1, arranged at one end of the casing, rising parallel with one end of the oven-chamber, with their lower ends adapted to fit over the burners of a lamp or lamps to form the chimney thereto, and with their upper ends opening into one end of a heat-diffusing and cooking chamber at the top of the stove, which overlies the oven, and from which the heat escapes at the opposite end, substantially as herein shown and described.

3. In a lamp-stove, a stove-body constructed with one or more vertical flues, A A^1, serving as chimneys to the lamp, having a vertical adjustment in the stove-body, and provided with manipulating-knobs F F′, projecting therefrom to the exterior of the stove-casing, whereby the flues may be conveniently raised and lowered to adjust the same over the burners of the lamp, substantially as herein shown and described.

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Witnesses:
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