

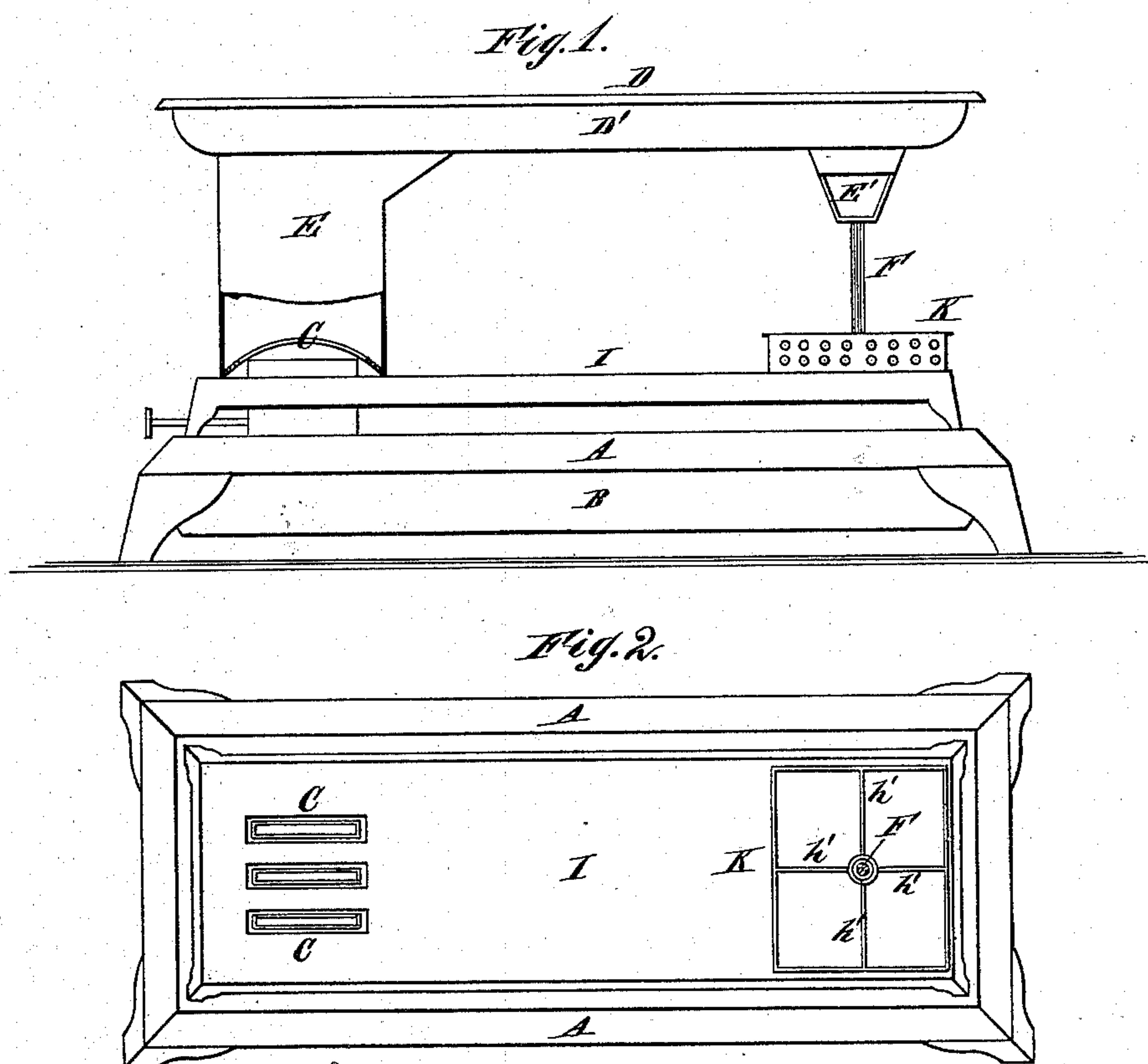
(No Model.)

2 Sheets—Sheet 1.

L. F. BETTS.  
STOVE.

No. 249,219.

Patented Nov. 8, 1881.



*Accepted:*  
*Charles R. Searle,*  
*George N. Dieterich.*

*L. F. Betts,*  
*Inventor,*  
*By A. M. Pierce,*  
*Attorney.*

(No Model.)

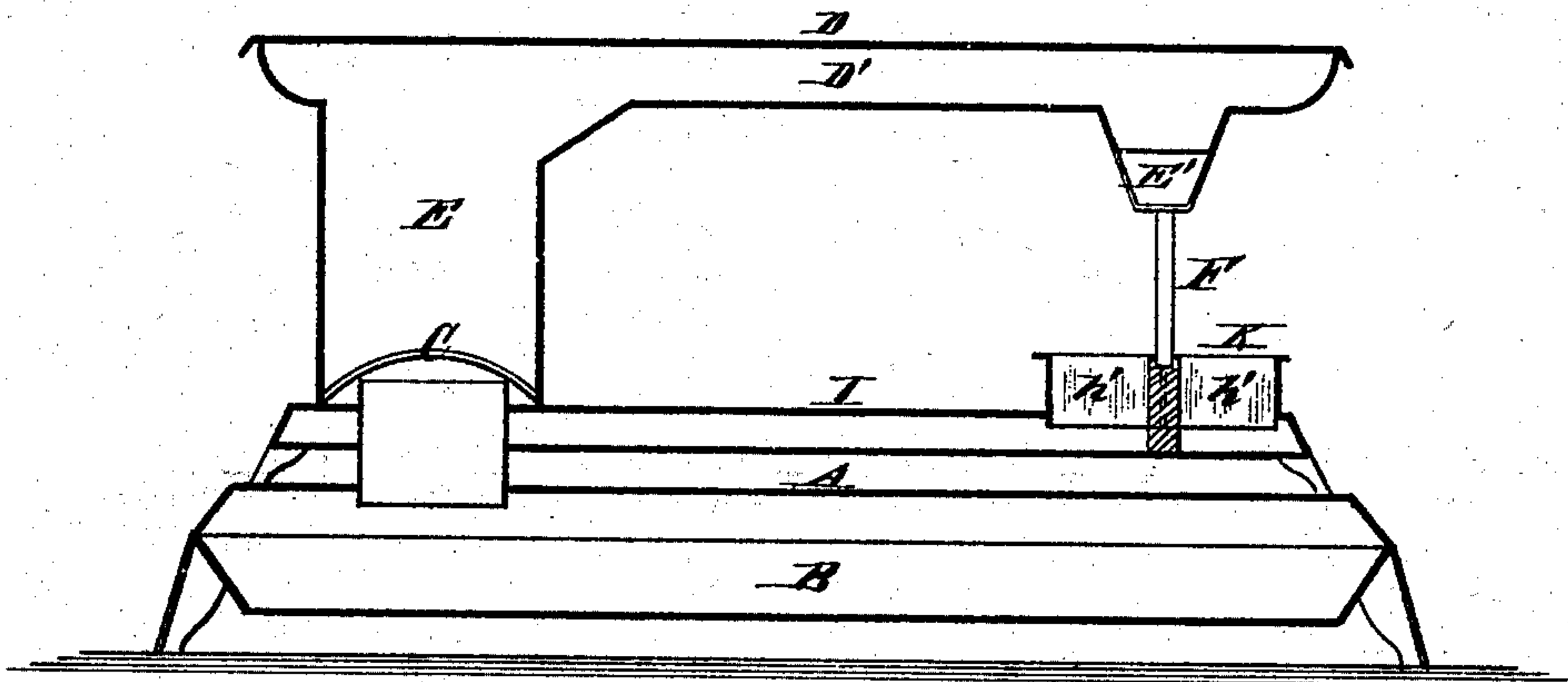
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*Fig. 3.*



*Witnesses:*  
*Charles F. Searle,*  
*John Buckler.*

*Inventor,*  
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# UNITED STATES PATENT OFFICE.

LEWIS F. BETTS, OF MORTON, PENNSYLVANIA, ASSIGNOR TO JOHN H. IRWIN,  
OF SAME PLACE, AND ROBERT E. DIETZ, OF NEW YORK, N. Y.

## STOVE.

SPECIFICATION forming part of Letters Patent No. 249,219, dated November 8, 1881.

Application filed July 15, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, LEWIS F. BETTS, of Morton, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Stoves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings and the letters marked thereon.

My invention relates especially to that class of stoves employed for domestic purposes wherein hydrocarbon oils are used as fuel, and in which the escape for the products of combustion is located at that part of the structure most remote from the source of heat, and has for its object the production of a simple and effective device in which the various parts are so arranged that the air for the support of combustion is admitted to the burners either through an inlet or inlets in close proximity thereto, or at a point some distance removed therefrom, but in such a manner as to produce thorough and perfect combustion.

To accomplish this my invention consists, essentially, in locating the burners of the stove in the pathway of an incoming current of fresh air supplied from a distance, the discharge-opening at the extremity of the passage for the heated products of combustion being so arranged as to hasten their outflow, thus rapidly drawing in fresh air to the burners to feed the flame; and my invention involves certain novel and useful combinations or arrangements of parts and peculiarities of construction and operation, all of which will be hereinafter first fully described, and then pointed out in the claims.

In the drawings, Figure 1 is a side elevation of one form of stove constructed in accordance with my improvements, and Fig. 2 is a plan of the air-chamber and burners employed in the same. Fig. 3 shows a longitudinal vertical section of the stove represented in Fig. 1.

Like letters of reference, wherever they occur, indicate corresponding parts in all the figures.

A is the base of the stove, constructed of cast-iron or any other preferred material.

B is the lamp or oil-pot, formed of tin or other suitable substance. If desired, the same may be constructed of cast-iron, and made to form a part of base A.

C are burners of any approved construction,

the same having proper wick-connection with the oil-pot.

E is a chimney surrounding the burners, and extending sufficiently thereabove to insure proper combustion.

D is the top plate of the stove, perforated with holes of suitable size for the reception of cooking utensils. This plate is mounted upon a base, D', sufficiently deep to permit the bottoms of cooking utensils to extend below the top plate, D, and with said plate forms a confined passage for the heated products of combustion from chimney E to the outlet E'.

The top of the stove is supported at one end by chimney E and the other extremity by one or more standards, F.

In the form of stove shown in Fig. 1 an air-chamber, I, is located above the oil-pot and extends the entire length thereof. The burners C pass from the oil-pot up through the air-chamber into the chimney, receiving the supply of air to support combustion from said chamber. Chimney E fits down closely upon chamber I in such a manner that practically all the air for the support of combustion must be supplied to the burners from the chamber. At the extremity of the air-chamber opposite to the burners is an opening of sufficient size to supply the requisite quantity of fresh air to the burners. Around this opening, and extending a short distance thereabove, is located a foraminated collar, K. Within this opening may be placed one or more partitions, h', extending to the top of the collar K and nearly to the bottom of the air-chamber, leaving only sufficient space for the air to pass beneath upon its way to feed the flame when deflected into the chamber. When thus constructed and arranged, passing currents of air will enter the perforations in collar K or pass over the top thereof, and, striking the partitions therein or the sides of the air-chamber, will be directed thereby to the burners, while the same current, crossing outlet E', will tend to draw the exhausted products of combustion therefrom, thus causing a supply of fresh air to flow constantly through chamber I to the burners, rendering combustion perfect and securing the desired degree of heat for utilization in cooking or for other purposes.

Having now fully described my invention,



what I claim as new therein, and desire to secure by Letters Patent, is—

1. The combination, with the fresh-air conduit I, of the inlet thereto, located at the extremity most remote from the burners, said inlet being surrounded by a foraminated collar, K, and being divided by means of partitions *h'*, substantially as set forth.

2. In a stove of the character herein specified, the combination, with the burners C, receiving their supply of air to support combustion through a chamber or conduit mounted above the oil-pot, and having the inlet thereto located in the extremity of the conduit most remote from the burners, of the partitions *h'*, located in said inlet, and extending from the

top of the foraminated collar surrounding said inlet nearly to the bottom of the conduit, substantially as shown and described.

3. In a stove of the character herein specified, base A, oil-pot B, fresh-air conduit I, collar K, partitions *h'*, burners C, chimney E, top plate, D, base D', outlet E', and support F, the whole combined and arranged to operate substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

LEWIS F. BETTS.

Witnesses:

F. W. HANAFORD,  
A. M. PIERCE.