GEORGE CANDEE.

Heating-Stove.

No. 127,306. Patented May 28, 1872.

Fig. 1

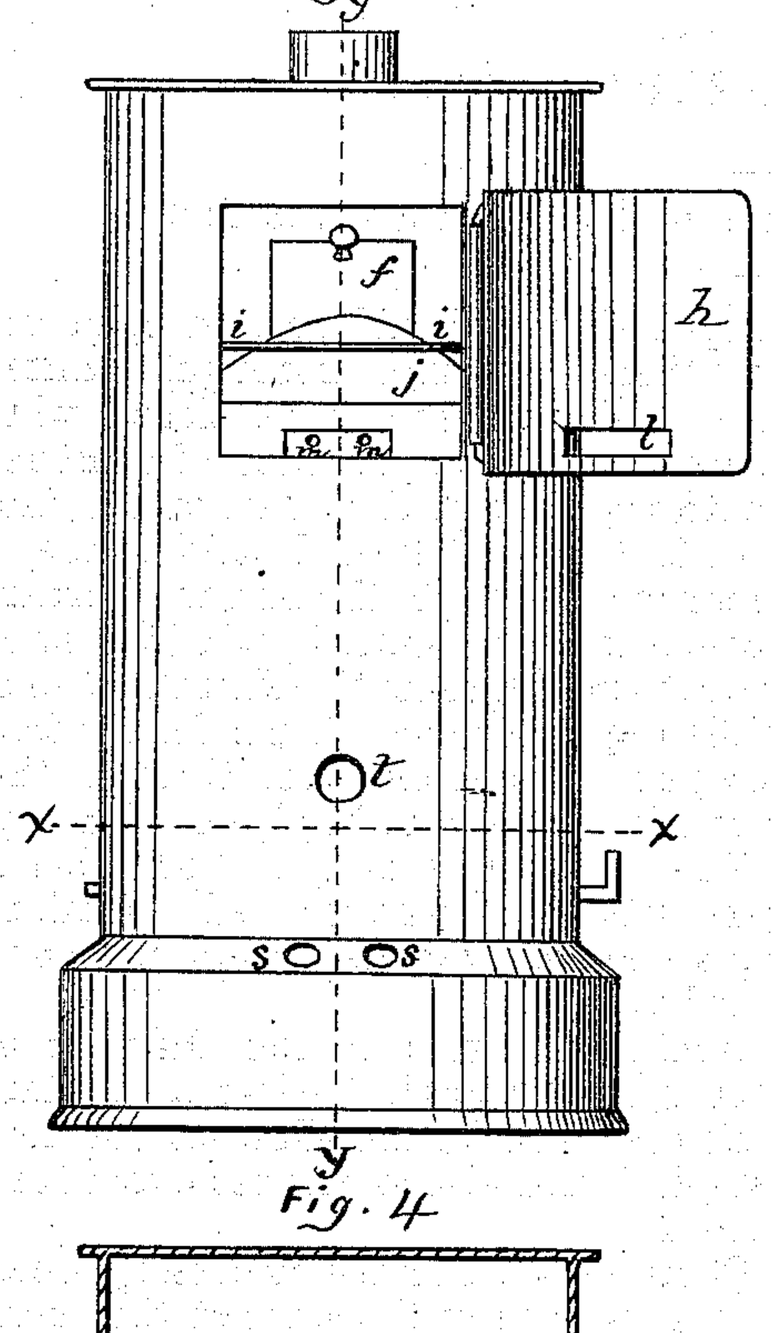


Fig. 4

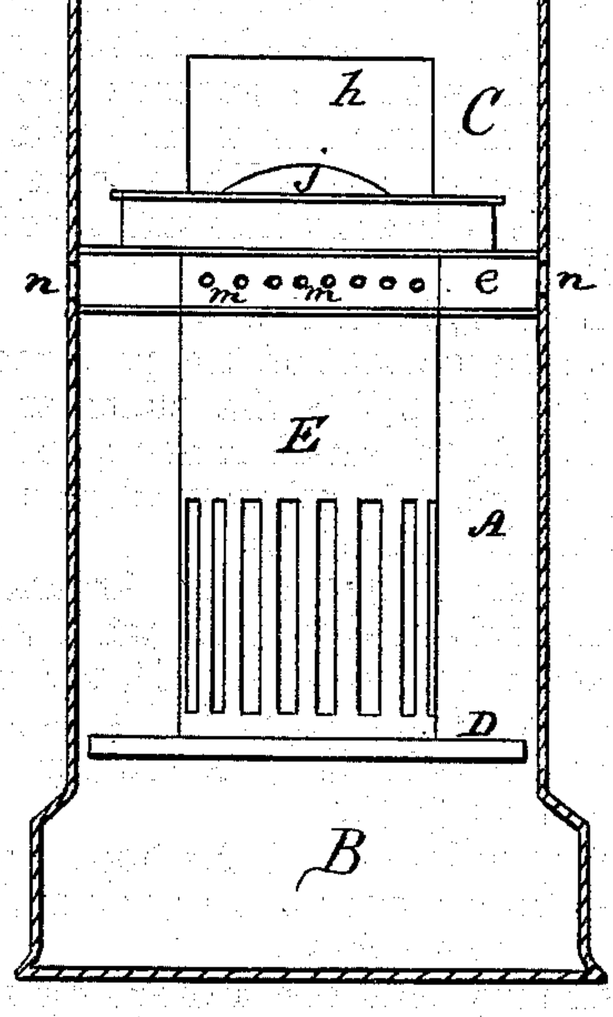


Fig. 2

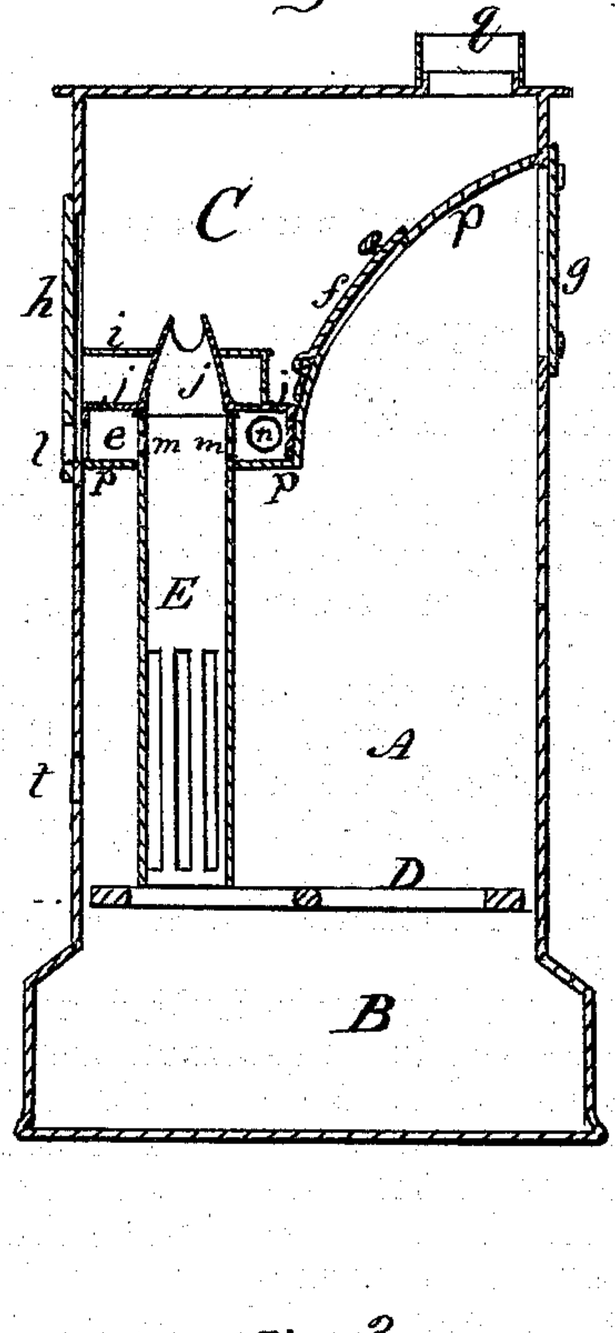
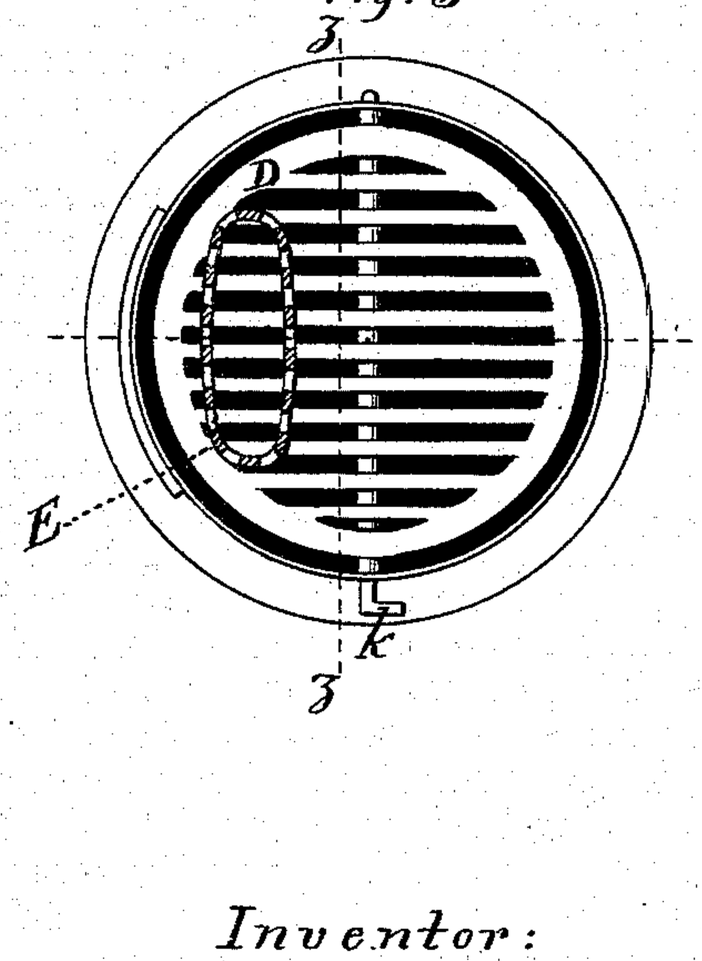


Fig. 3



Witnesses:

Arthur D. Kerr.

R. H. Steele

Inventor:

George Candee

By his attorney J. C. Robbins

127,306

UNITED STATES PATENT OFFICE.

GEORGE CANDEE, OF BEREA, KENTUCKY, ASSIGNOR OF ONE-HALF HIS RIGHT TO CORYDON L. TAMBLING, OF OBERLIN, OHIO.

IMPROVEMENT IN HEATING-STOVES.

Specification forming part of Letters Patent No. 127,306, dated May 28, 1872.

To all whom it may concern:

Be it known that I, GEORGE CANDEE, of Berea, Kentucky, have invented an Argand Fuel-Burner; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, which forms a part of this specification—

Figure 1 being a side elevation of said invention; Fig. 2, a vertical section in the line *y y* of Fig. 1; Fig. 3, a horizontal section in the line *x x* of Fig. 1; and Fig. 4, a vertical section in the line *z z* of Fig. 3.

Similar letters indicate the same parts in the drawing.

My Argand fuel-burner is divided into three compartments, viz., the fuel-combustion chamber A, the ash-pit B, and the gas-burning chamber C. The fuel-combustion chamber A is separated from the ash-pit B by the fire-grating D, and from the gas-burning chamber C by the partition *p*, as shown in Fig. 2. The fire-grating D is supported by the horizontal shaft *k* in the usual manner. A tube, E, descends from its connection with the horizontal portion of the partition *p* nearly or quite to the fire-bars of the grating D. The lower portion of said tube E is composed of a grating, or is properly perforated and of sufficient strength and stiffness to resist the action thereupon of the fuel that may be thrown against and around the same as it is supplied to the chamber of fuel-combustion. The tube E opens at the top into the gas-burning chamber C, and is surmounted in said chamber by the Argand burner *j*, as shown in Fig. 2. By means of the aperture *l* in the stove-door *h*, the corresponding aperture in the front side of the base of the Argand burner *j*, Fig. 2, and the apertures *n n* in the body of the fuel-burner, air is freely admitted to the air-chamber *e*, surrounding the portion of the tube E that rises above the partition *p;* and by means of the perforations *m m* in that portion of said tube the air passes freely into the same, and in sufficient quantities to mingle with and aid in producing a perfect combustion of all the smoke and consumable gases that may pass from the chamber A of fuel-combustion through said tube to the gas-consuming chamber C. When fire is first started in the chamber of fuel-combustion, the door *f* in the partition *p* is opened, and should remain open until the fuel therein becomes thoroughly ignited; and then said door should be closed, which will cause the gaseous products of combustion to be drawn through the midst of the incandescent fuel into the tube E; and as they escape therefrom, through the Argand burner at its head, into the chamber C, all of the smoke and the consumable gases therein will be consumed, while the unconsumable portions thereof will escape from said chamber through the aperture *q* into the draught-pipe or chimney.

The eduction-opening in the head of the Argand burner *j* may be reduced in width by placing a hood, *i*, over the same, as shown in Figs. 1 and 2.

Fuel is admitted to the chamber of fuel-combustion through the door *g*. Suitable provision is made for the admission of air to the ash-pit B, and also for the removal of the ashes therefrom.

Should it be deemed necessary, openings *t* may be formed in the sides of the chamber of fuel-combustion for the admission of air thereto, to mingle with the gaseous products of combustion therein prior to their being drawn into the perforated tube E to mingle with the air that passes directly into said tube from the ash-pit B.

I claim as my invention—

1. The arrangement of the perforated tube E with the ash-pit B, the chamber of fuel-combustion A, the air-chamber *e*, and the gas-burning chamber C, substantially as and for the purpose herein set forth.

2. The combination of the Argand-burner *j* with the perforated tube E, when said tube is arranged with the ash-pit B, the chamber of fuel-combustion A, and the gas-burning chamber C, substantially as and for the purpose herein set forth.

3. The combination of the hood *i* with the Argand-burner *j*, substantially as and for the purpose herein set forth.

In testimony that the aforegoing is a full and exact specification of my improved Argand fuel-burner, I hereunto subscribe my name this 5th day of February, 1872.

GEORGE CANDEE.

Witnesses:

J. A. R. ROGERS,

BELLE A. PRATT.