(No Model.)

H. L. HOWSE.

COOKING APPARATUS.

No. 271,463. Patented Jan. 30, 1883.

Fig. 1.

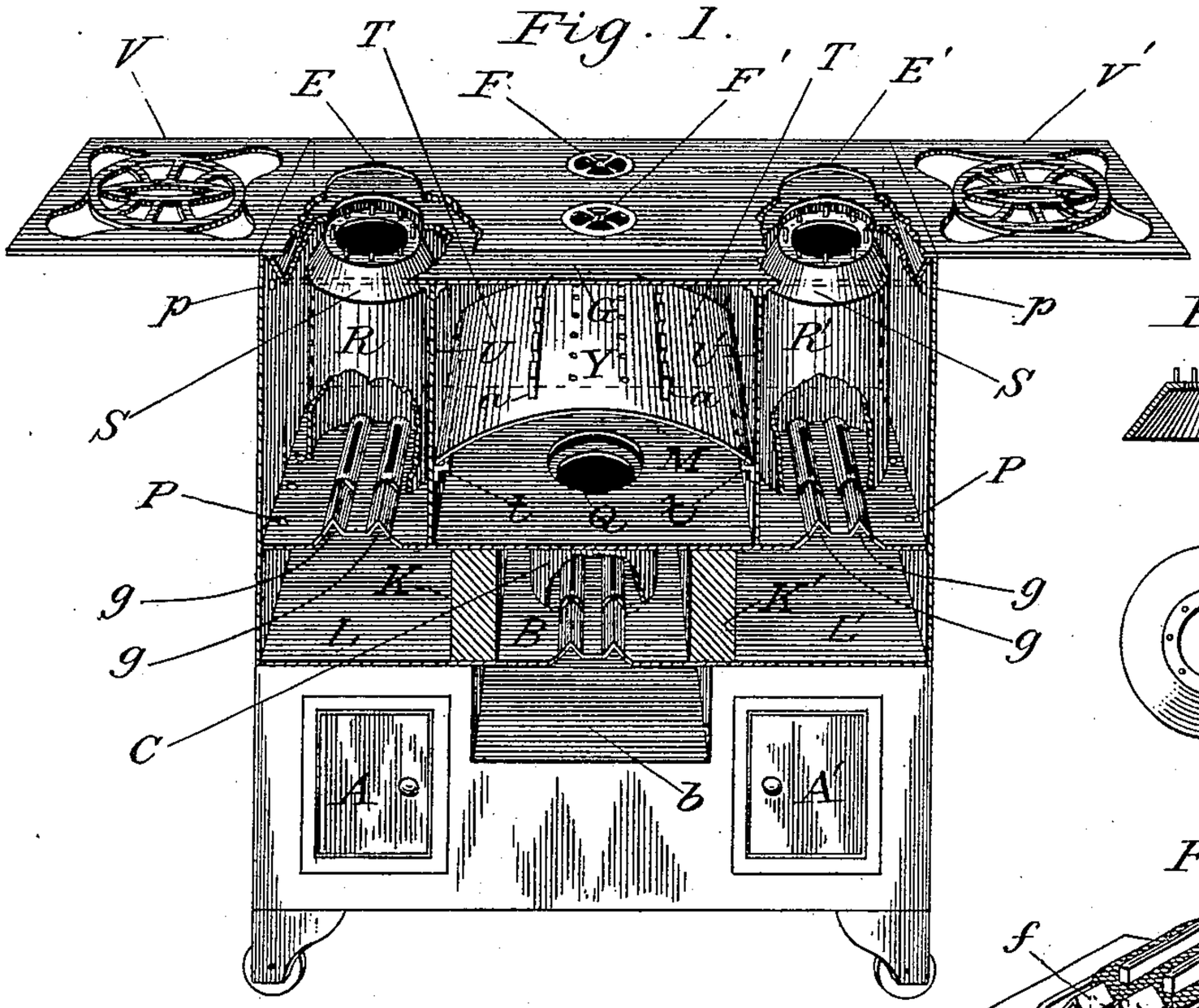


Fig. 2.

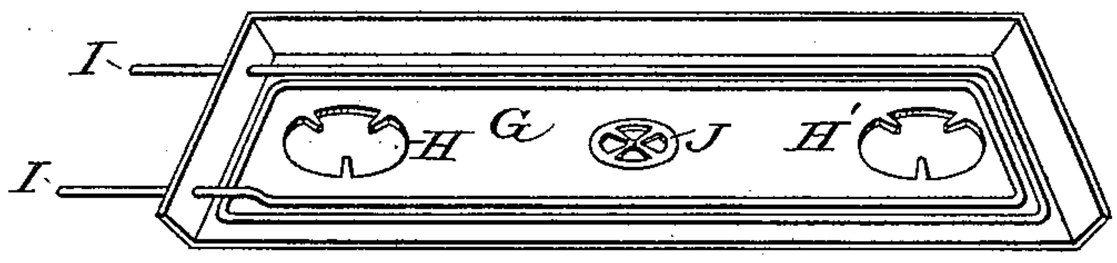


Fig. 3.

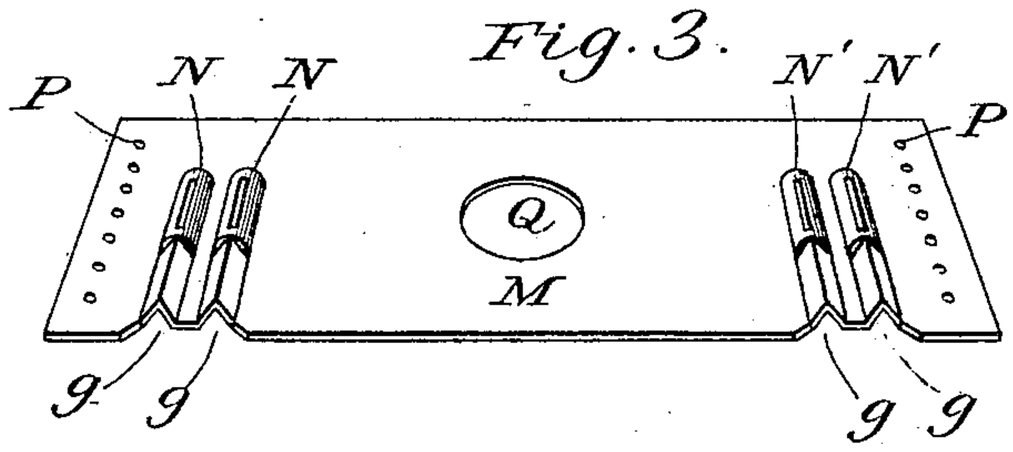
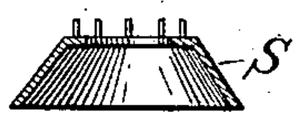


Fig. 6.



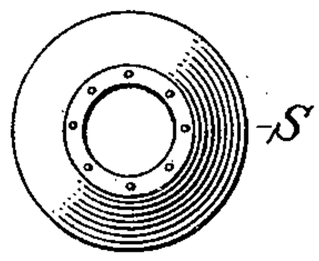


Fig. 4.

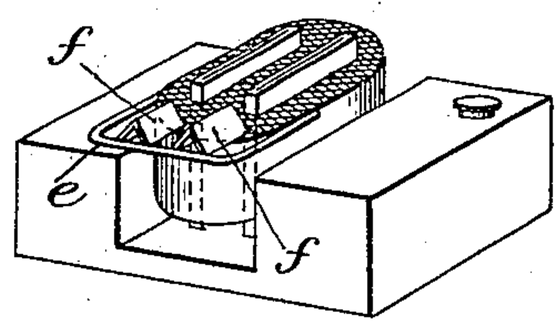
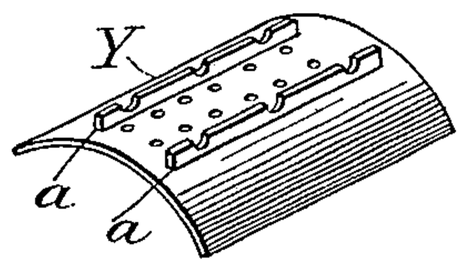


Fig. 5.



Witnesses:
Frank A. Brooks
Jesse H. Waddleigh.

Inventor.
Henry L. Howse

UNITED STATES PATENT OFFICE.

HENRY L. HOWSE, OF SAN FRANCISCO, CALIFORNIA.

COOKING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 271,463, dated January 30, 1883.

Application filed September 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY L. HOWSE, of the city and county of San Francisco, State of California, have invented an Improved Cooking Apparatus; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a novel construction of a cooking apparatus wherein oil or gas burners are employed for furnishing the heat.

It consists of an oven so arranged that a burner is placed on each side, and also one below, thereby securing all heat desirable for the oven in an even, steady manner.

The frame or portion of my apparatus containing the lamps and oven is constructed of sheet-iron or other similar metal, and is placed on top of a wooden frame, which may be formed into two small closets or cupboards, the whole resting upon legs having rollers, so that the apparatus may be moved about conveniently.

Referring to the accompanying drawings for a more complete description of my invention, Figure 1 is a front view of my cooking apparatus, having the front side removed. Fig. 2 is a view of the pan-shaped plate G. Fig. 3 is a view of plate M. Fig. 4 shows the general construction of lamp or burner which I employ. Fig. 5 is a view of the shelf Y.

My cooking apparatus is made in two parts, the lower part being formed of wood and the upper made of metal. I first make the lower part, which is so arranged as to contain two closets, A and A′, for receiving cooking utensils, &c. The center of the upper part of this wooden portion is made so that a lamp may be placed therein, as shown at *b*. Near the top of the said wooden portion of my apparatus I place a wooden shelf, B, which has an opening so made that the upper part of the oil-reservoir in the lamp may be placed under the hole Q in the bottom of the oven. Upon the shelf B, I place the second part of my apparatus, which is made of metal, as hereinbefore stated. This is arranged in the following manner: I first take a piece of sheet-iron or other suitable metal and form it the same size as the wooden portion. This is fastened with nails or screws on top edge of woodwork B. Upon this metal frame is placed a top plate, D, having holes E and E′ for receiving cooking-vessels, and also smaller holes, F and F′, which allow the escape of hot air. Beneath the top plate, D, is placed another plate, G, having flaring edges. This plate G is more fully shown in Fig. 2, which I will now describe. Holes H and H′ are made in each end, so that cooking-vessels which extend through the corresponding holes in the plate D may pass through and enter the chimneys, which I will describe hereinafter.

I is a pipe which enters one end of the plate G, and is formed into one or more coils, and passes out at the same end, as shown. This pipe is for the purpose of heating water by means of the hot air which comes from the chimneys through the holes H and H′, and also from the oven through the hole J.

On top of the shelf B are two partitions, K and K′. These partitions are placed at such a distance from the sides of the metal frame that apartments L and L′ are formed, into each of which I place a lamp, thus employing three lamps in my apparatus.

Resting upon the partitions K and K′ is a plate, M, which is shown in Fig. 3. In this plate N N and N′ N′ are cones or flame-guards over openings which allow the flames from the lamps to pass through into the chimneys. Holes P are formed to permit the entrance of sufficient air for the purpose of passing the heat that radiates from the outer side of the chimneys up to the holes *p p* in the upper part of the metal frame.

Q is an opening made for the purpose of allowing the hot air from the chimney C to pass through into the oven.

R and R′ are two chimneys, formed over the apartments L and L′, respectively. Each consists of a piece of sheet metal formed in cylindrical shape, provided with a conical-shaped disk, S, placed about midway. This disk has an opening at the top, as shown, and upon the upper side are placed pegs, on which rests the cooking-vessel, which extends through the holes E and H in the plates D and G, respectively.

T is an oven, which is formed by placing two upright metal pieces, U and U′, between the chimneys R and R′. This oven is heated by the hot air from the chimneys R and R′

and C, and also by radiated heat from the plate G.

On each side of the oven I place a cleat, *t*, upon which rests a curved shelf, Y, which is removable, and is made as follows, (see Fig. 5:) I take a piece of sheet metal of proper size, and after forming it into an arch shape, as shown, I make two rows of holes, each row extending lengthwise of the shelf near the center.

a a are small upright flanges, which are secured parallel with the rows of holes, and have corrugations formed in the upper edges, as shown. This shelf, being the full size of the oven, causes the heat to pass through the holes over the article which is baking to the upper part of the oven, and at the same time forming a radiator to bake the top of the article thereon as quickly as the bottom.

V and V′ are leaves or extension-plates which are hinged to the sides of the top plate, D. These leaves are made of cast-iron, and are perforated, so that hot air from the holes *p* will pass through and warm any vessel which may be placed upon the leaf.

The operation of my apparatus is as follows: The gas-burner or oil-lamps are placed in the apartments *b*, L, and L′ and lighted. The hot air from the lamp in the apartment *b* passes up through the chimney C and hole Q into the oven T, thence through the hole J in the top of the oven, and finally escapes through the holes F and F′ in the top plate, D. The hot air from the other two lamps passes up their respective chimneys, and also passes out of the holes F and F′. After a vessel that has been placed over the chimney R has become sufficiently heated it may be removed and placed upon the extension-leaf V, where the hot air from the holes *p* will keep it warm, thereby leaving the hole E free to be used for any other service.

If the shelf Y is placed in the oven, and it is desired to cook thereon, a pan is set on the flanges *a a*, and the heat coming through the small holes which are made in the shelf is allowed to escape through the corrugations which are formed in the edges of the flanges *a a*, and is thereby evenly distributed throughout the entire bottom of the pan.

When it is desired to bake an article it is placed upon a small removable plate having legs to raise it the proper distance from the bottom of the oven, so that the heat from the hole Q will pass between the edges of said plate and the sides of the oven, and, after having first cooked the bottom of the article, will be radiated back upon the upper side of said article by means of the shape of the shelf Y.

Fig. 4 is a view of my lamp, which is made similar to that shown in my patent of September 24, 1878, which consists of an oil-reservoir having a sink, as shown. A small flange, *e*, extends from the flame-guard, having two small bars, *f f*, that extend above the surface of the flame-guard and fit into the corresponding slots, *g g*, made in the plate M, so that the wick may be lighted and the lamps placed in position, and allow the wick-tube to extend into the flame-guard and meet with no obstruction, the said bars *f f* fitting the space which otherwise would be formed by the slots *g g*, and thus prevent the entrance of cold air at that point.

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

1. The construction of a cooking apparatus, consisting of a wooden base having cupboards, as shown, and a metal heating part consisting of an oven which is placed so that a chimney will be on each side and one below, a double top plate having holes E H and E′ H′ for receiving cooking-vessels, and also holes F, F′, and J for the passage of hot air, and the coiled pipe I for heating water, all arranged substantially as described.

2. The secondary top plate or pan, G, having holes H and H′, corresponding with holes E and E′ in plate D, for allowing cooking-vessels to pass through, and the hole J for the escape of hot air from the oven, and flaring edges through which the coiled pipe is admitted, the whole forming the top of an oven, substantially as herein described.

3. In a cooking apparatus, the removable arch-shaped shelf Y, having small holes, as shown, and upright flanges *a a*, the upper edges of which are corrugated, substantially as and for the purpose herein described.

4. The plate M, forming the bottom of the oven, and having the flame-guards N N and N′ N′, and holes P and Q for conveying the heat, substantially as and for the purpose herein described.

5. In the construction of a lamp which is used for heating a cooking apparatus, the lugs *f f*, so arranged that they fit into corresponding slots, *g g*, made in the flame-guard plate M, substantially as herein shown.

In witness whereof I hereunto set my hand.

HENRY L. HOWSE.

Witnesses:
FRANK A. BROOKS,
JESSE H. WADLEIGH.