B. R. HAWLEY.

COOK STOVE.

No. 247,908. Patented Oct. 4, 1881.

FIG. 1.

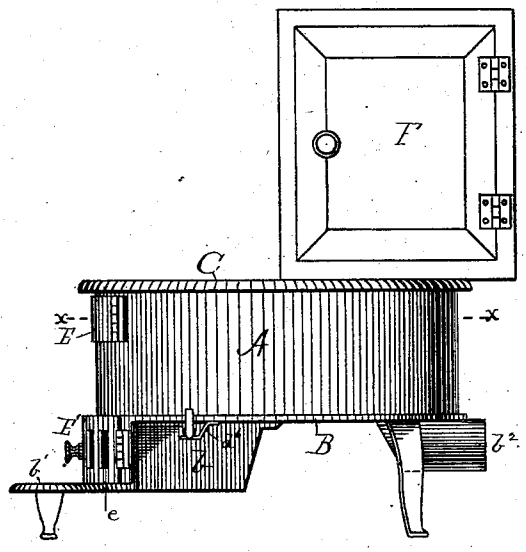


FIG. 2.

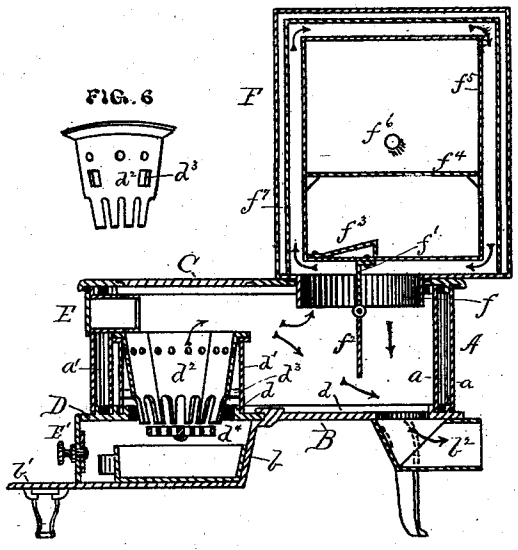


FIG. 6

FIG. 3.

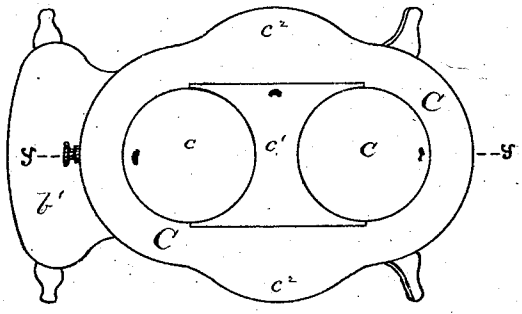


FIG. 4.

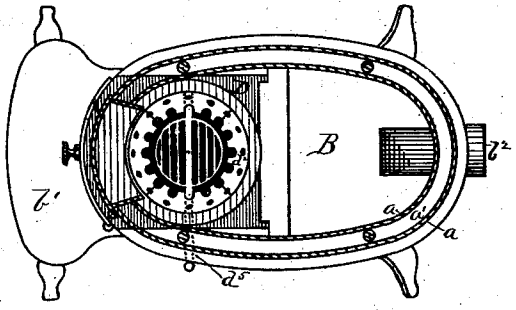
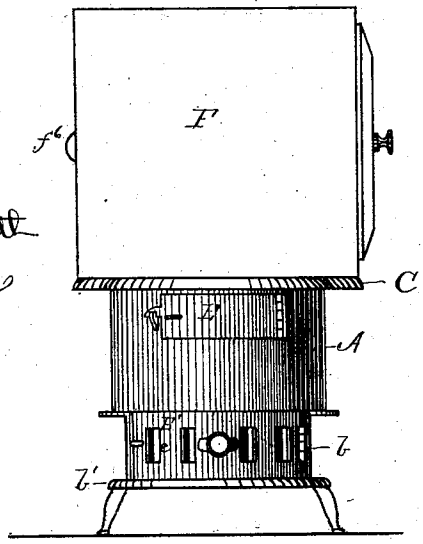


FIG. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

BENJAMIN R. HAWLEY, OF HYDE PARK, ASSIGNOR TO GEORGE H. HESS, OF CHICAGO, ILLINOIS.

COOK-STOVE.

SPECIFICATION forming part of Letters Patent No. 247,908, dated October 4, 1881.

Application filed January 28, 1878.

To all whom it may concern:

Be it known that I, BENJAMIN R. HAWLEY, of Hyde Park, in the county of Cook and State of Illinois, have invented certain Improvements in Cook-Stoves, of which the following is a specification.

In the accompanying drawings, Figure 1 is a side elevation of my improved stove with the oven in place. Fig. 2 is a central section of the same. Fig. 3 is a plan view of the stove, and Fig. 4 a horizontal section thereof upon the line *x x* of Fig. 1. Fig. 5 is a front view. Fig. 6 is detached view of a part of the fire-pot.

Like letters indicate like parts wherever used in the several figures.

Referring to said drawings, A represents the vertical walls, B the bottom, and C the top, of my improved stove. The first of these is constructed of two shells, *a a*, one within the other, and with an air-space between, as at *a'*. This air-space acts a non-conductor, and thus is retained within the heating-chamber much of the heat which otherwise would be given out into the room and lost. The bottom, together with the ash-pit *b* and hearth *b'*, are cast in one piece. Under an opening at the rear end of this bottom is attached the escape-flue b^2. The top is provided with holes *c c*, one directly over the fire-pot and the other in the rear, with a removable bridge-piece, *c'*, between, to permit the insertion of the ordinary wash-boiler. At each side, and midway between the ends, are overhanging or projecting shelves c^2 c^2, which are useful when several articles or dishes are being cooked or when the direct action of the fire is more intense than is desired for some parts of the cooking.

D is a plate covering the ash-pit, with the exception of the opening therein over the grate and under the fire-pot. This plate is fitted in a groove in the bottom at the rear side thereof, and to it is affixed an upwardly-projecting flange, *d*, which connects with a similar flange upon the bottom, and forms a continuation thereof, the same giving form and abutment to the inner shell *a*.

The fire-pot is surrounded by a ring, *d'*, (attached to the plate D,) which supports the sections or segments d^2 thereof. These segments rest at their tops upon the top of the ring, and at their bottom are held in position by lugs or projections d^3, extending from their backs to the ring, as will be fully understood from Figs. 2 and 6, the latter showing the back of one of them. They are forked at their lower ends and provided with air-openings near the upper portions, as shown in the drawings. d^4 is the grate, which turns upon pivots d^5, one of which is flattened, and receives upon such flattened portion the pressure of a spring, d^6, whereby the grate is retained in a horizontal plane.

Just above the fire-pot is a fuel-feeding door, E, and in front of the ash-pit is also a door, E', provided with draft-openings *e*, made regulable by any of the ordinary methods of constructing such parts of stoves.

F is a removable oven, having certain peculiarities which adapt it to be used with this stove, and it may be made a part of the stove, if desired. It is provided at the bottom with a collar, *f*, which sets down into the rear opening in the stove-top. Midway across this collar, and extending up into the oven until it meets the lining thereof, is a partition, *f'*, depending from which is an apron, f^2, which may be attached by a hinge-joint, and which, when the oven is placed upon the stove, drops down into the heating-chamber of the stove, as clearly shown in Fig. 2. The effect of this apron is to cause the greater part of the air and products of combustion to enter the oven and pass through the flue surrounding the same, in the manner indicated by the arrows in said figure; but inasmuch as the apron does not completely fill the space of the chamber, so as to cut off all direct escape for the gases, it will be found that the heavier portions thereof will still follow their natural course and pass downward to the exit in the manner indicated by other arrows in said figure. That portion of the oven directly over the stove-opening and in front of the partition, being exposed to very great heat, is preferably covered upon the inside with a plate, f^3, as shown in Fig. 2, thereby doubling the lining at the point exposed to the greatest heat. The usual shelving, f^4, may also be placed within.

The oven is provided with an interior lining,

f^5, which may, if desired, be made removable for purposes of repair. If made removable, it may be taken out through the door-opening by simply loosening the screw f^6 in the back, by which it is held, and detaching the depending apron. The passage for heat is next outside this lining. The exterior of the oven, or that part thereof surrounding the flue, I prefer to make with a dead-air space, f^7, both to economize the heat and to keep the kitchen cool. The door and back should for similar reasons be constructed with double walls.

The body of the stove I make oval or oblong, as shown in the drawings. For a small and economical form this will be found especially advantageous.

The plate or shield f^3 is made of the peculiar construction shown in the drawings, in order to deflect the heat toward the farther side of the oven, which would naturally be the cooler side, and for this purpose openings are made in that part thereof which stands vertically.

In stoves of this kind the fire will be found to be regulated to some extent automatically—that is to say, when the heat is not absorbed by the cooking as rapidly as it is produced the force of the expanded air within the chamber checks the draft, and the combustion is retarded until the checking force is withdrawn.

I am aware that stoves have been constructed with non-conducting vertical walls.

I am also aware that stoves and furnaces have been made wherein the outlet-flue debouched from the heating-chamber at a point below the top of the fire-pot.

I claim as new—

1. The combination, with the cook-stove wherein the products of combustion are discharged into an open-chamber, of an oven having a flue running over the same and an apron placed at the flue-opening and depending within but not reaching to the bottom of said chamber, so as to deflect the products of combustion and heated air into the flue, substantially as specified.

2. The oven provided with the deflecting-apron, and wherein is combined with said apron and with the lining a bent piece, f^3, placed upon the inside, as shown, whereby the heat-rays from that portion of the lining receiving the greatest amount of heat are turned toward the cooler side of the oven and burning at that point is prevented.

3. The oven constructed with the removable lining, held in place by screws or bolts, and removable through the door opening, and provided with the deflecting-apron, substantially as set forth.

B. R. HAWLEY.

Witnesses:
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