E. A. HIBBARD.

Cooking Stove.

No. 11,994 Patented Nov. 28, 1854.

Fig. 1

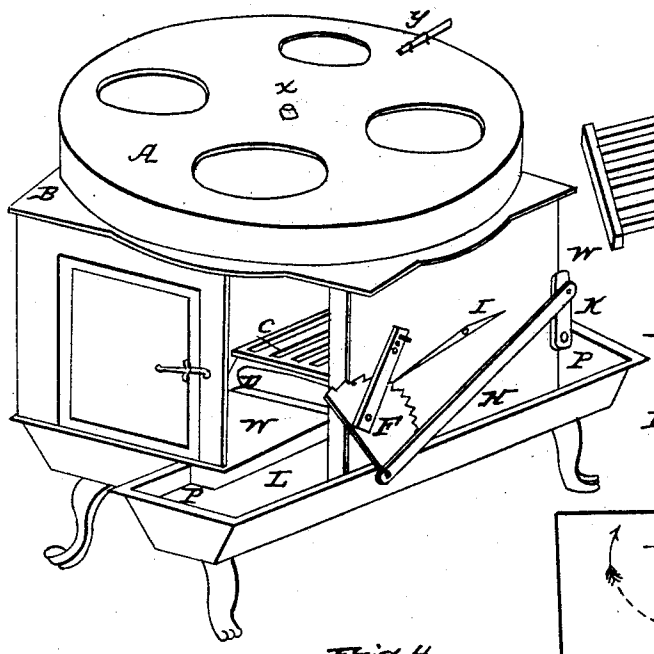


Fig. 3

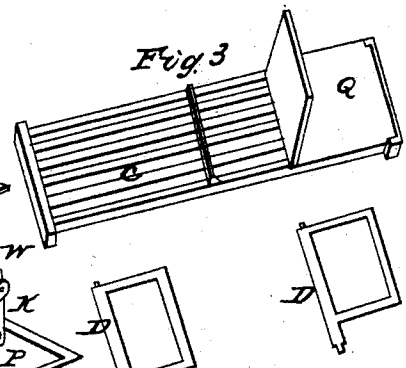
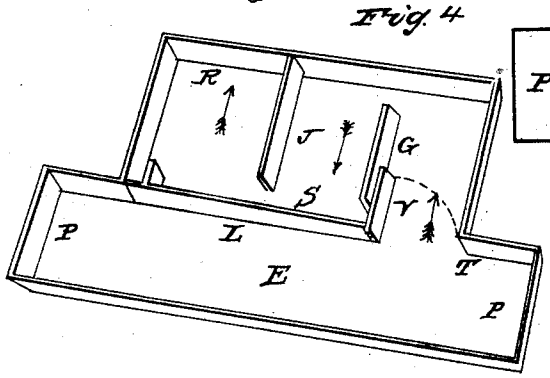


Fig. 4



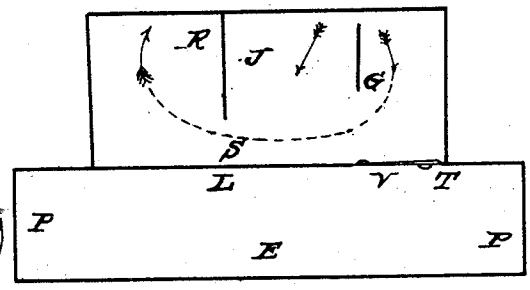
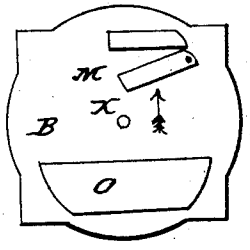


Fig. 2



Witnesses

C. W. Gibbons

Inventor

E. A. Hibbard

UNITED STATES PATENT OFFICE.

ELIAS A. HIBBARD, OF WINCHESTER, VIRGINIA.

COOKING-STOVE.

Specification of Letters Patent No. 11,994, dated November 28, 1854.

To all whom it may concern:

Be it known that I, ELIAS A. HIBBARD, of Winchester, in the county of Frederick and State of Virginia, have invented a new and useful Rotary Cooking-Stove with Elevating Fire-Grate Attached; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view, showing the front, one end, and the top; Fig. 2 is a view of the surface of the uppermost plate, the rotary top being removed; Fig. 3 is a view of the fire grate with one of the angular plates on it, also the eccentrics which elevate and recede the grate; Fig. 4 is a perspective view of the bottom plate, showing how the fire traverses under the oven at the time when the operation of it is reversed; Fig. 5 is an outline delineation, showing how the fire traverses under the oven generally, to wit in its natural operation.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

My stove is constructed with a fire chamber in the part of it, which I shall designate as the front, it being the right hand side as shown in Fig. 1, and is directly above E in Figs. 4 and 5. The bake oven is in the center, and the diving and ascending flues are in the rear. In a large sized stove the three parts to wit, the fire chamber, oven, and rear flues make a body of 2 feet and 8 inches square and 1 foot deep. The bottom plate has a rim all around it 3 inches deep being beveled something like the rim of a square baking pan, and the oven bottom plate fills the space between the fire chamber and the rear flues, being laid on the top edge of this rim which is so formed that the surface of the plate corresponds with the surface of the rim.

The plates L, J and G, and damper V being 3 inches deep stand in grooves between the bottom plate and the oven bottom, being arranged as set forth in Figs. 4 and 5. The front cavity in the bottom plate being under the fire grate constitute the ash pan. The plate which divides the rear flues is 3 inches wide and may be joined to plate J at the far end both plates making one, in the form of a carpenter's square.

The stovepipe hole is in the upper edge of the back plate above R and should be something like 8 inches in diameter. The other necessary plates to form the body of the stove being put in, makes it 1 foot deep, on top of which plate, Fig. 2, is put with the large opening O coming directly over the fire grate.

The rotary top A is shaped like the lid of a common snuff box and is 3 feet in diameter with a vein $3\frac{1}{2}$ inches deep and hangs on a pivot at X and can be turned by lever Y so as to bring the boiler holes off or on to the fire at pleasure.

The two plates of the fire chamber have a hole in each end to admit the two eccentrics D, on top of which the fire grate C is put. When wood is used for fuel angular plates Q are left off, but to burn coal I put one on each end thereby forming a coal chamber in the center of the grate.

On the front end of one eccentric a crank and ratchet F is fixed, in like manner the other eccentric in a reverse position a crank K is put.

At the extreme end of each crank, the connecting shaft H is attached, see Fig. 1. A lever *o o* is also attached to ratchet F.

Whenever the grate is required to be raised or lowered it is done by application of lever *o o*, and is stayed at the desired point by the dog marked I. This principle is particularly useful in heating smoothing irons because that the fire can at all times be kept in direct contact with the heating pans.

The doors to admit the wood are at each end of the fire chamber at W, see Fig. 1.

The draft is regulated by slides which are admitted into the rim of the bottom plate at P. The air being admitted under the grate, ascends through the opening O, and passes back to damper M and drops down the diving flue at the rear end of plate G and takes its course both sides of the plate by way of the opening R, see Fig. 5.

In using fuel which makes but little blaze, such as green wood, coal, &c., it often happens that the bottom plate fails to keep time with the top, and the bread will be dough at the bottom, while the top is burning. To remove that discrepancy I open damper V which acts on a hinge, and bring it against plate G, see Fig. 4. I then close the natural draft at the doors with the slides P, and close the diving flue at damper M, and admit the draft through one of the boiler holes on to the top of the oven, thereby reversing

the whole operation of the fire, causing the heat to be immediately drawn from the top plate down through the fire and grate, passing through damper V into the return flue passing S and escapes through the pipe above R, by which process the bottom plate is heated with wonderful rapidity, and the top plate is chilled at the same time, see Fig. 4.

What I claim as my invention and desire to secure by Letters Patent, is—

The combining or arranging the reverse manner of draft, the elevating and receding grate, the return flue, the diving and ascending flue, the angular plates for burning coal, and the rotary top, in manner and form, and contiguity with each other as set forth.

E. A. HIBBARD.

Witnesses:
C. W. GIBBENS,
J. W. JENNINGS.