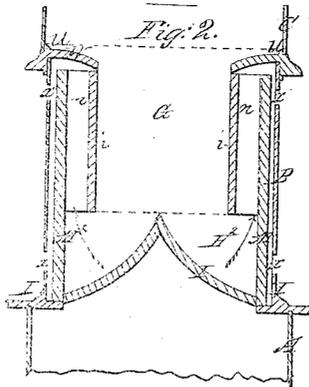
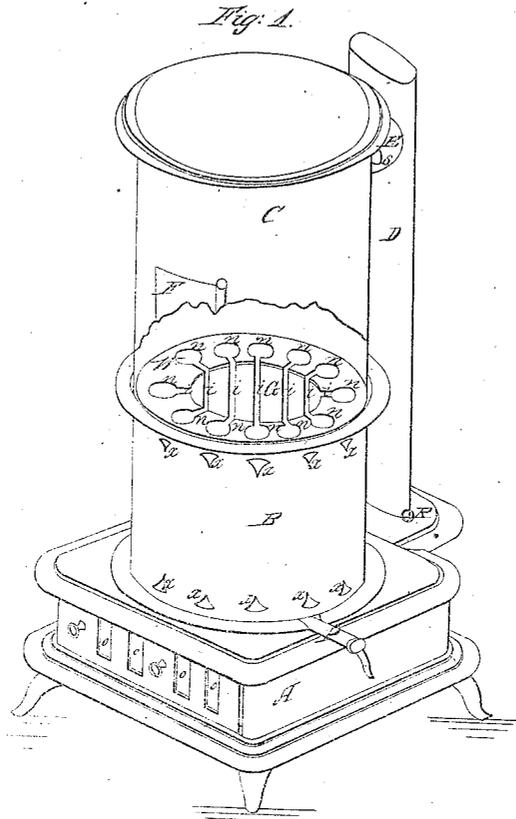


L. W. CAMPBELL.
COAL STOVE.

No. 51,143.

Patented Nov. 28, 1865.



Witnesses.
George Stinson.
John Hubbard.

Inventor.
Luther W. Campbell.

UNITED STATES PATENT OFFICE.

LUTHER W. CAMPBELL, OF AURORA, ILLINOIS.

COAL-STOVE.

Specification forming part of Letters Patent No. 51,143, dated November 28, 1865.

To all whom it may concern:

Be it known that I, LUTHER W. CAMPBELL, of Aurora, in the county of Kane and State of Illinois, have invented an Improved Stove; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a perspective representation of my improved stove. Fig. 2 is a vertical central section of the fire-box.

The nature of my invention consists in providing a convenient stove for burning coal or wood in such a manner as to have the combustion take place on the largest surface possible, or around the outside of the fuel, and in providing hot-air flues continuously around the inside of the fire-box for consuming the gas rising from the coal; also, in enlarging the fire-box at the bottom and making a cone-shaped grate for carrying out the object of the invention.

That others skilled in the art may make and use my invention, I will describe the method of constructing and using the same.

First, as a foundation to which I attach my improvement, I use any of the common bases or ash-boxes now in common use for the bottoms of stoves, but prefer the square pattern represented in the drawings, as shown at Fig. 1 by the letter A, and to the top of the ash-box or base of the stove A, I attach, by any of the common methods, the fire-box B, and to the top of the fire-box B, by means of the flange or rim U, I attach the drum C.

At D, Fig. 1, is shown the stove-pipe, which is connected with the ash-box A in the common manner, and to the drum C by means of the horizontal pipe E.

At S and R are shown the dampers, which are used to change the current of draft.

P represents the crank used in stirring the coal that rests upon the grate, and is used in the usual manner.

F represents the door in the drum C, that is used in the same manner as in other stoves when putting fuel in the fire-box G.

The fire-box B, the inside of which is shown at G, I construct wholly on a new plan, by inclosing the same with a series of hot-air

flues, as *n n n*, &c., represents, and extend them from the top of the fire-box downward one-half to three-fourths of the height of the same, thus giving a greater distance between the sides of the fire-box below the flues *n*, as shown at M M, Fig. 2, than between them.

At *i i*, &c., Fig. 1, are shown small grooves or openings leading from the inside of the fire-box G to the hot-air flues *n*.

At I, Fig. 2, will be seen the grate upon which the fuel is supported, and is raised in the center for the purpose of giving the coal or fuel a tendency toward the fire-box M M.

At W is represented the cap which is used for the purpose of checking the upward tendency of the cold air as it enters the covering of the fire-box at *x* and turn the same inward through the flues *n*.

In constructing the fire-box the outside of the same, as shown at B, is not essential, only as a matter of ornament or convenience. The fire-box will answer every purpose without it.

The material used in the manufacture of the fire-box is the same as that generally approved in the construction of other stoves, the part M being of cast-iron, and the flues *n* can be made of the same material, which is preferable; but they can be made of any fire-proof composition used for such purposes.

Operation: First, any kind of fuel can be used in the same manner as in other stoves, but my improvement is especially adapted to the burning of Illinois coals, or any other kind that gives imperfect combustion. In lighting the fire the outside of the coal should be ignited first, as the flues will then carry off all the gases not possible to consume. If this precaution is taken the fire-box can be filled to the top of the flues without any possibility of obstructing the draft. The darts 2 in the enlarged part of the fire-box show the direction of the draft through the flues *n*.

Now, having described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

A fire-box for a stove, containing the flues *n*, cap W, parts M, as set forth.

LUTHER W. CAMPBELL.

Witnesses:

GEORGE STIMSON,
JOHN H. HUBBARD.