W. H. BINNY.

Heating Stove.

No. 14,648. Patented April 15, 1856.

Fig. 1

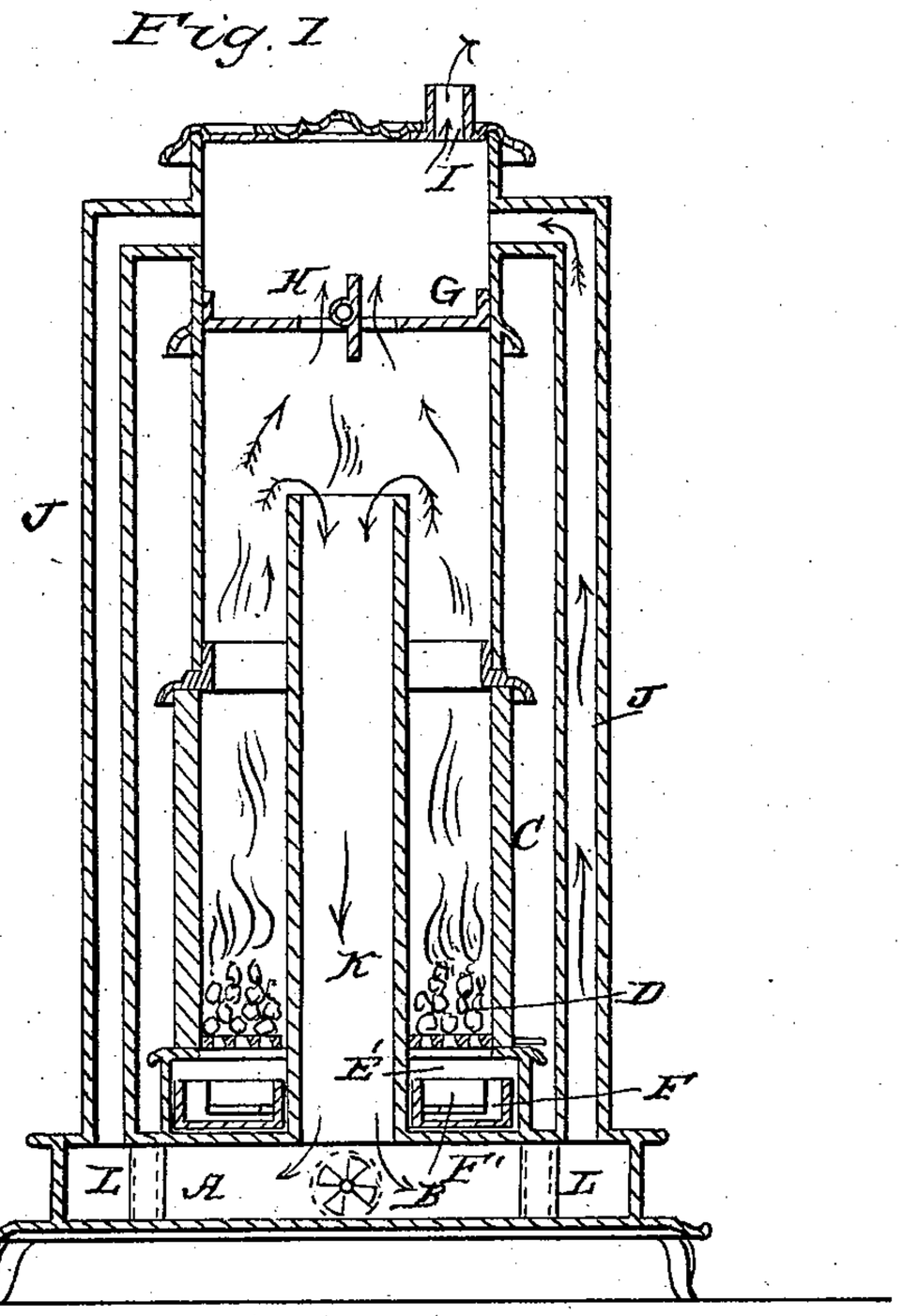
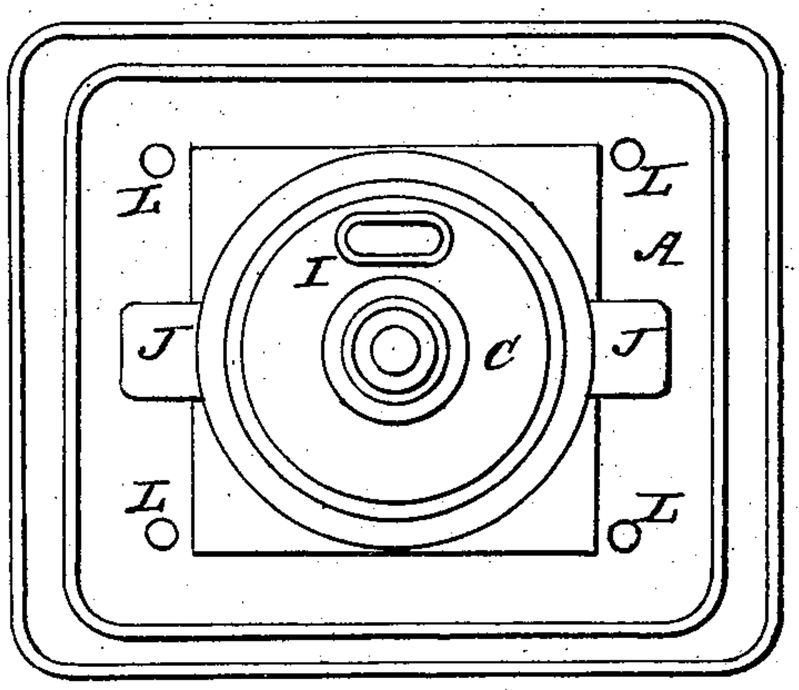


Fig. 2



UNITED STATES PATENT OFFICE.

WILLIAM W. BINNY, OF SENECA FALLS, NEW YORK.

COAL-STOVE.

Specification of Letters Patent No. 14,648, dated April 15, 1856.

To all whom it may concern:

Be it known that I, W. W. BINNY, of Seneca Falls, in the county of Seneca and State of New York, have invented a new and Improved Stove for Burning either Anthracite or Bituminous Coal; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a vertical section of my improvement, the plane of section being through the center. Fig. 2, is a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

My invention consists in the peculiar construction of the stove hereinafter fully shown and described, whereby a large amount of heat is obtained from a comparatively small amount of fuel and the gaseous products of combustion consumed.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, represents the base of the stove, said base being hollow forming a tight box and having a register B in its front side.

C, represents a cylinder which is placed on the base A, said cylinder having a fire grate D in its lower part, underneath which grate is the ash pit E, provided with a drawer F, having a draft door F′ in its front side. The cylinder C has a horizontal partition G, in its upper part, said partition having a damper H, at its center, see Fig. 1.

I, is the smoke pipe at the top of the cylinder C; and J, J, are pipes, the lower ends of which communicate with the hollow base A and the upper ends with the cylinder C, above the partition G, as plainly shown in Fig. 1.

K, is a pipe or tube placed vertically within the cylinder at its center. The upper end of the pipe or tube extends some distance above the level of the fire, and its lower part passes through the ash pit E, and communicates with the hollow base A, see Fig. 1.

L, are vertical air heating tubes which pass through the base A; four or more of these tubes may be employed.

By closing the register B, and opening the damper H, and the draft door F′ of the ash drawer a direct draft is obtained as indicated by the black arrows in Fig. 1. The direct draft is necessary in kindling the fire. By closing the damper H, the draft will take the course indicated by the red arrows viz upward from the fire in the cylinder C, and down the tube or pipe K, into the hollow base A, and thence up through the pipes J, J, into the upper part of the cylinder C, above the partition G, and into the smoke pipe I, and by closing the draft door F′, in the ash drawer F, and opening the register B, the combustion will be quite slow as the fire will be supplied with air at its upper surface only and as a large radiating surface is obtained a great amount of heat is thrown out from the stove with a comparatively small amount of fuel.

When the draft passes down the pipe or tube K, and the register B, is open the gaseous products of combustion will all be consumed, because the gases in passing down the hot tube K, will come in contact with the air admitted through the register B, and will ignite, it being well known that these gases when passing over a heated surface and supplied with a certain quantity of atmospheric air will burn.

The tubes L, afford an additional radiating surface, the air passing through them, the tubes being heated in consequence of being fitted within the hollow base.

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

The partition G, placed within the cylinder C, and provided with a damper H, the vertical tube or pipe K, also within the cylinder C, and the hollow base A, provided with a register B, when the above parts are arranged as herein shown and described for the purpose specified.

WM. W. BINNY.

Witnesses:
V. T. LINDEGREEN,
T. COOK.