H. D. SNYDER.

Coal Stove.

No. 82,169. Patented Sept. 15, 1868.

Fig. 1

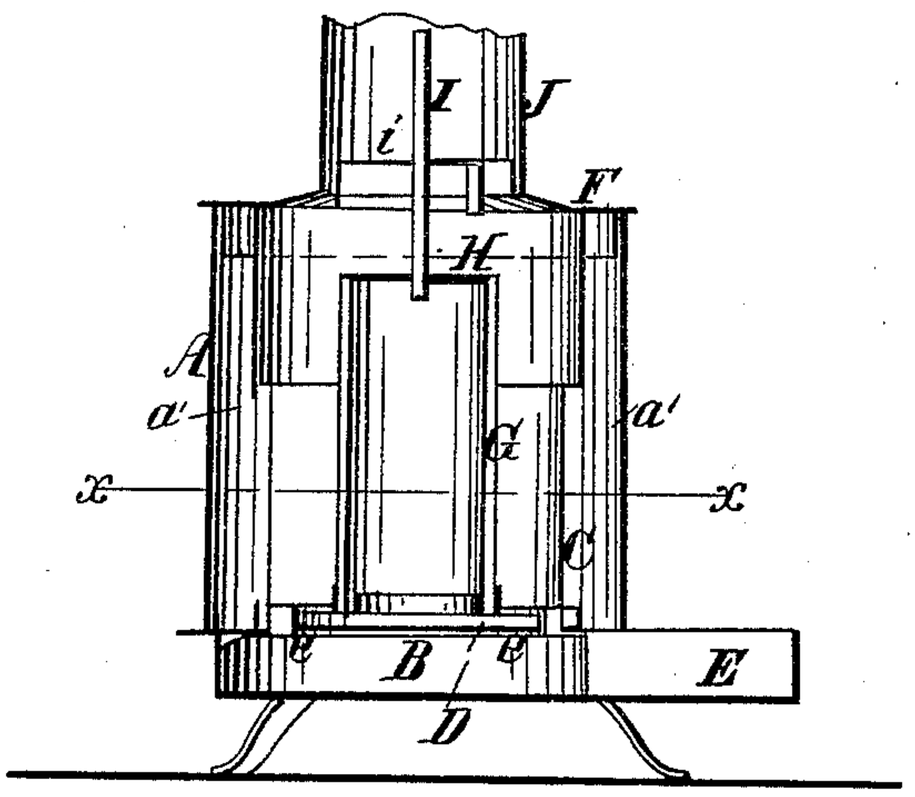
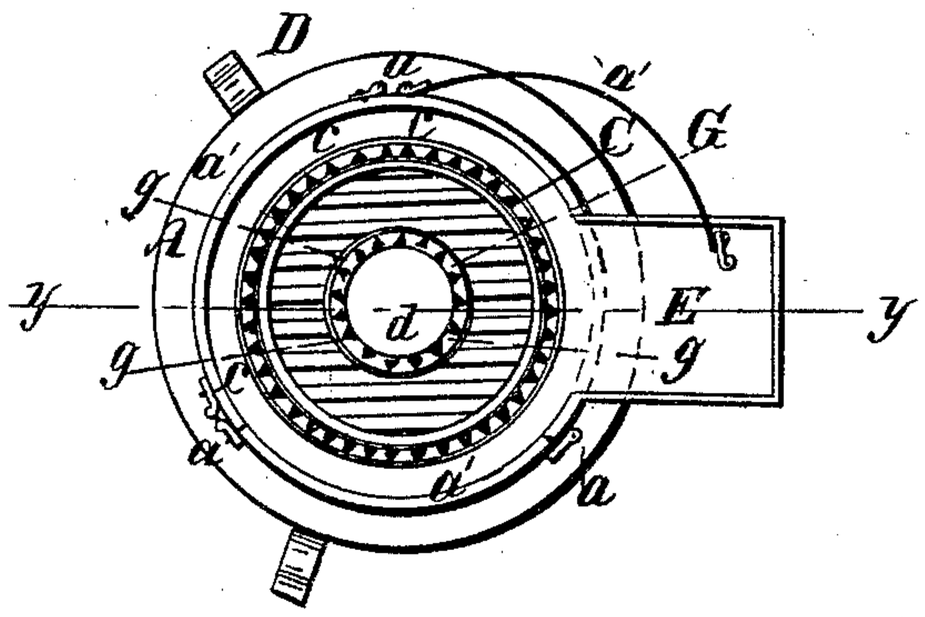


Fig. 2



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HENRY D. SNYDER, OF CARBONDALE, PENNSYLVANIA.

Letters Patent No. 82,169, *dated September* 15, 1868.

IMPROVEMENT IN COAL-STOVES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, HENRY D. SNYDER, of Carbondale, in the county of Luzerne, and State of Pennsylvania, have invented a new and improved Stove; 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 accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical section through the line *y y* of fig. 2.

Figure 2 is a horizontal section through the line *x x* of fig. 1.

The object of this invention is to so improve the culm or anthracite-burning stove that better combustion of the fuel will be effected, and the heat be better radiated, than heretofore, while the outer wall of the stove can be opened all around the fire-box, so as to diffuse the cheerful radiance of the fire on every side. The stove can also be readily changed, and adapted to burning different kinds of coal or wood.

In the drawings, A represents the outer wall of the stove, being composed of three or more upright posts, *a a a*, which support as many doors, *a' a' a'*, the doors surrounding the stove on all sides, and, when open, affording an unimpeded view of the grate and of the column of burning fuel from every side of the same.

B is the ash-box, and E the hearth.

C is the outer wall of the fire-box, being composed of upright bars *c c c*, as far up as the fuel or fire extends, and a simple cylinder, of any suitable material, above that point. This upright cylindrical fire-box rests upon a horizontal grate, D, of the usual form and construction, except that it has a central aperture, *d*. The grate D rests upon supporting-bars *e e*, which extend across the upper part of the ash-box.

Besides supporting the outer walls C of the fire-box, the grate supports an inner wall, G, concentric with the former, and likewise composed of upright bars *g g g*, such bars being connected by a ring around their lower edge, and being attached to a solid cap, H, at their top. A spindle, I, extends from the top of this interior cylinder to or through the top of the stove, being provided with arms, or passing through a centring-plate, *i*, so that it will always be kept in the proper position in the axis of the stove. An upper box or radiator, J, is attached to the stove, forming the upper portion thereof, and serving to hold the heated air that rises from the burning fuel below, and to absorb and radiate into the surrounding room the heat thereof.

The fuel is placed in the fire-box, around the inner cylinder G. Air is supplied, to support combustion, not only through the grate D, but through the bars *c c*, and those of the inner cylinder. The air that rises into the inner cylinder is prevented from passing through the same by means of the solid cap H, which deflects it and forces it among the burning fuel.

The inner cylinder G may be made detachable, so that it can be entirely removed from within the cylinder C, if desired, a small cover being provided to place over the central opening in the grate D. The outer cylinder C may be also made removable, so that both it and the inner cylinder can be taken out and the stove left to perform the functions of a simple wood-burning stove. When thus made, the grate will be formed with grooves to receive the lower ends of the two cylinders, into which the latter will be stepped, being fastened in place by any suitable means, applied either at their upper or their lower end. When the cylinder C is made removable, the part F of the stove, forming so much of the cover or top thereof as surrounds the radiator J, will be also made removable, so that it can be taken off and the cylinder lifted out.

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

A stove composed essentially of the wall A, formed of the system of doors as above described, the grate D, supported as described, the cylinders C and G, the upright shaft I, the centring-plate *i*, and the radiating-box J, all the said parts being constructed and put together as described.

To the above specification of my improvement, I have signed my hand, this twenty-second day of May, 1868.

HENRY D. SNYDER.

Witnesses:

S. C. GRITMAN,

S. S. BENEDICT.