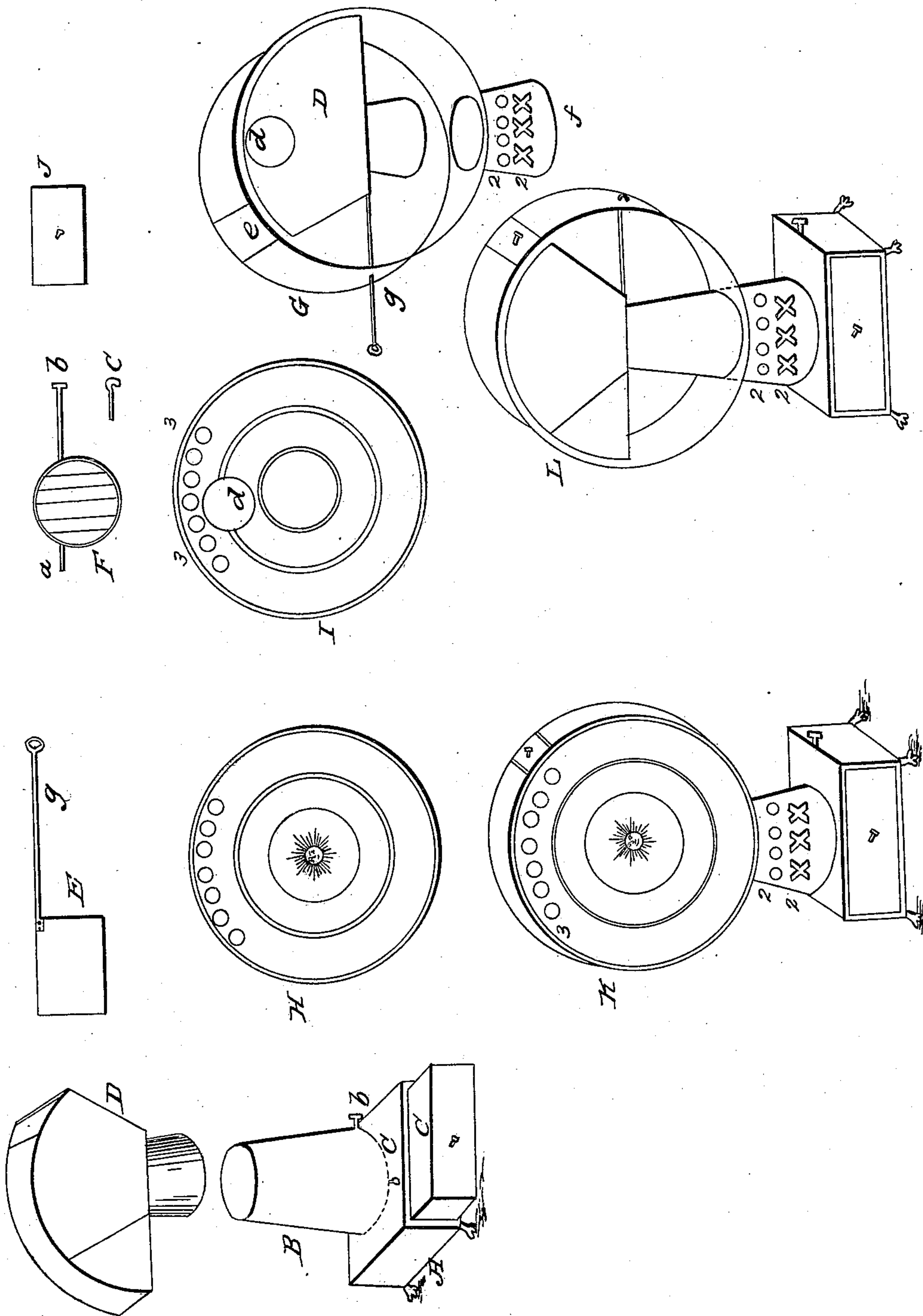


## Heating Stove.

No. 1540.

Patented April 8, 1840.





# UNITED STATES PATENT OFFICE.

JOHN SCOTT, OF PHILADELPHIA, PENNSYLVANIA.

## STOVE.

Specification of Letters Patent No. 1,540, dated April 8, 1840.

*To all whom it may concern:*

Be it known that I, JOHN SCOTT, of the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Kind of Stove for the Purpose of Diffusing Heat, Economizing Coal, and Preventing Dust and Gas; and I do hereby declare that the following is a full and exact description.

The nature of my invention consists in inclosing the greater part of a furnace in a circular drum, so as to cause the heat to radiate downward on the feet, as well as in every other direction, and in inclosing an air-tight hopper inside of the drum to conduct the coal into the furnace, and at the same time heat the cold air admitted into the drum, diffusing it through every part until thoroughly heated, and allowing it to escape in its heated state into the room, and in providing a slide with which to cover the top of the furnace and shut off the dust and gas while the coal is being put into the hopper, and after shutting the stove-door letting it drop into the furnace.

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

I construct a circular furnace (represented by B in the drawing) of cast-iron, with space in the lower part of it to admit a packing of asbestos, or any other fire-proof material. The grate is circular (as represented by F in the drawing) to fit the bottom of the furnace, having on each side of it a pivot (*a* and *b* in the drawing) a little one side of the center resting on the base. The other side of the grate is supported by a pin which comes out in front of the stove (represented by *c* in the drawing). On this pin, on the inside of the furnace, rests the front edge of the grate. By pulling out this pin, the grate turns and the cinders fall into the drawer (C) below when it is desired to empty the furnace. Almost the whole of the furnace is inclosed by a circular drum of any desired dimensions, according to the size of the room intended to be warmed. For a room of ordinary size, a drum of from two to three feet perpendicular diameter, and from eleven to eighteen inches horizontal diameter is believed to be sufficient. The front and back surfaces or heads of the drum are made of cast iron, with a flange around their edges, to admit

the sheet-iron rim, and may be ornamented according to fancy. The rim of the drum which is between the two ends and unites them, is made of sheet iron. The two ends or heads of the drum are fastened together, with the rim of sheet-iron between them, by three rods with screws in the usual way of putting up stoves, making the whole perfectly tight.

H in the drawing represents the front, and I the back end or head of the drum, and G the rim of sheet-iron. The whole combined is represented by the figure K in the drawing. This combining of the sheet-iron rim with the cast-iron heads, constitutes a part of my improvement. The sheet-iron being immediately heated, and the heads being thick cast-iron plates, retain the heat. The back head of the drum has a hole for a stove-pipe (as represented by *d* in the drawing). The rim has a slide door (at *e*) for putting in the coal. The rim is made with a projection or neck on the lower side (as at *f*) to fit down over the furnace, leaving a small space all around between it and the furnace, and perforated with holes in the usual way (as at 2—2 in the drawing) to admit the cold air. The front and back plates of the drum are perforated with holes (as represented at 3—3 in the drawing) to allow the escape of the heated air into the room.

The operation is this: The cold air rushes in at the holes (as at 2—2) in the neck of the drum, circulates around and in contact with the hopper, in the space left between them for that purpose, becomes thoroughly heated, and escapes in its heated state into the room, through the holes (at 3—3) in the upper part of the plates.

Within the drum and on the top of the furnace I place a hopper (represented in the drawing by D) which is air-tight and made fast to the rim G by riveting or otherwise where it receives the coal at the door *e* in the rim, and conducts it to the furnace underneath.

L in the drawing gives a sectional view of the drum, showing the position of the hopper. This hopper serves at the same time to distribute the heat around the whole surface of the drum, and thoroughly heat the cold air admitted through the holes at 2, 2 in the neck below.

Over the top of the furnace, and at the



bottom of the hopper is a slide or valve (represented by E in the drawing) to prevent gas or dust escaping into the room, while filling the hopper. This slide or valve  
5 is connected with a rod (represented by g) extending through the rim to the outside, so as to be easily shoved back or pulled forward. When the furnace is to be charged, the rod is to be pulled forward, drawing the  
10 slide over the top of the furnace. The coal is then poured into the hopper, the door of the stove closed, and the rod pushed back, pushing the slide from off the top of the

furnace, and suffering the coal to fall into the furnace below. 15

What I claim as my invention in the above described stove, and desire to secure by Letters Patent, is—

The manner in which I have combined and arranged the hopper and the furnace; 20 the whole apparatus being connected and combined substantially as herein set forth.

JOHN SCOTT.

Witnesses:

THOS. P. JONES,  
G. M. DEXTER.