

L. CRANDALL.

Stove.

No. 29,249.

Patented July 24, 1860

Fig. 1.

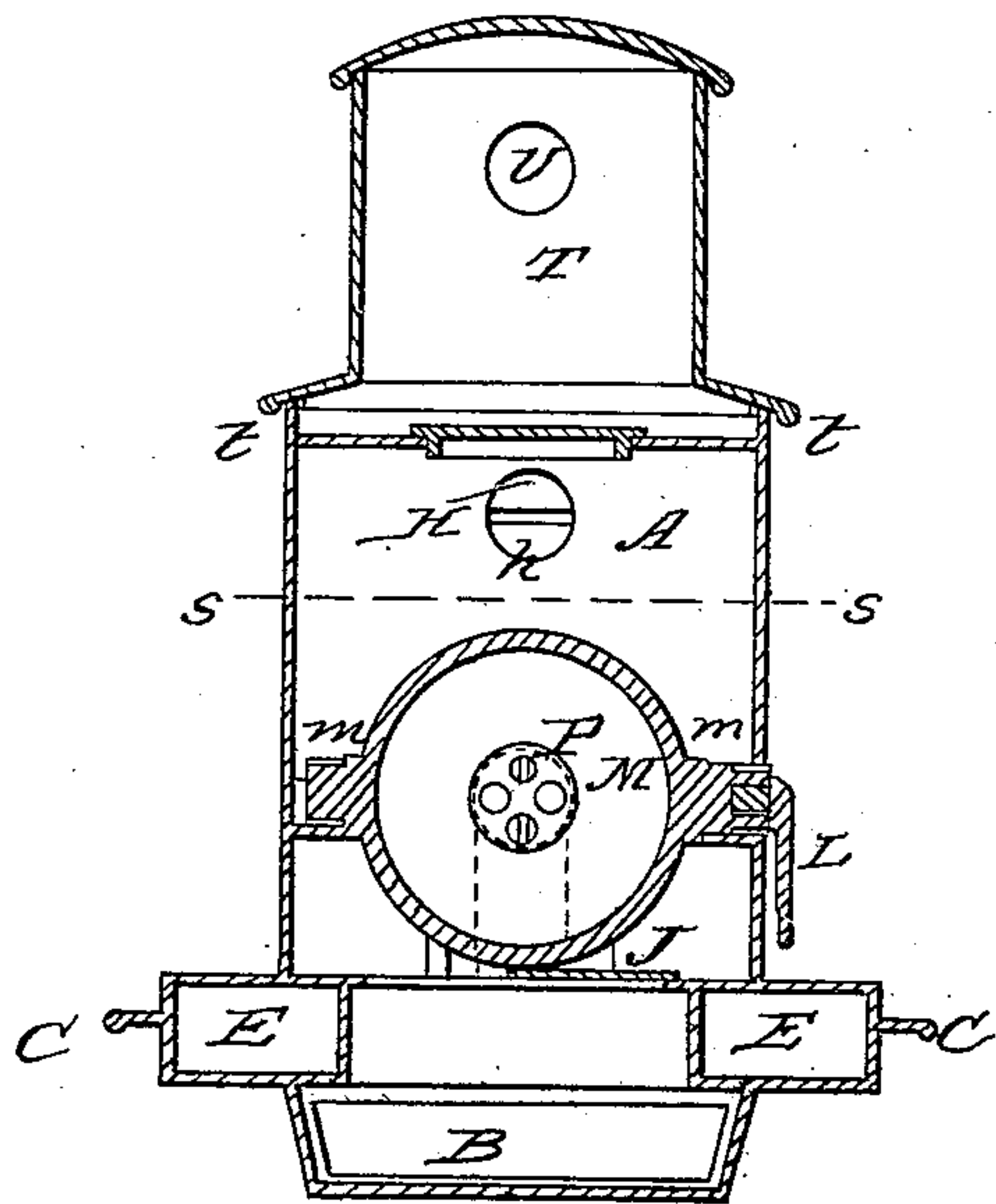


Fig. 2.

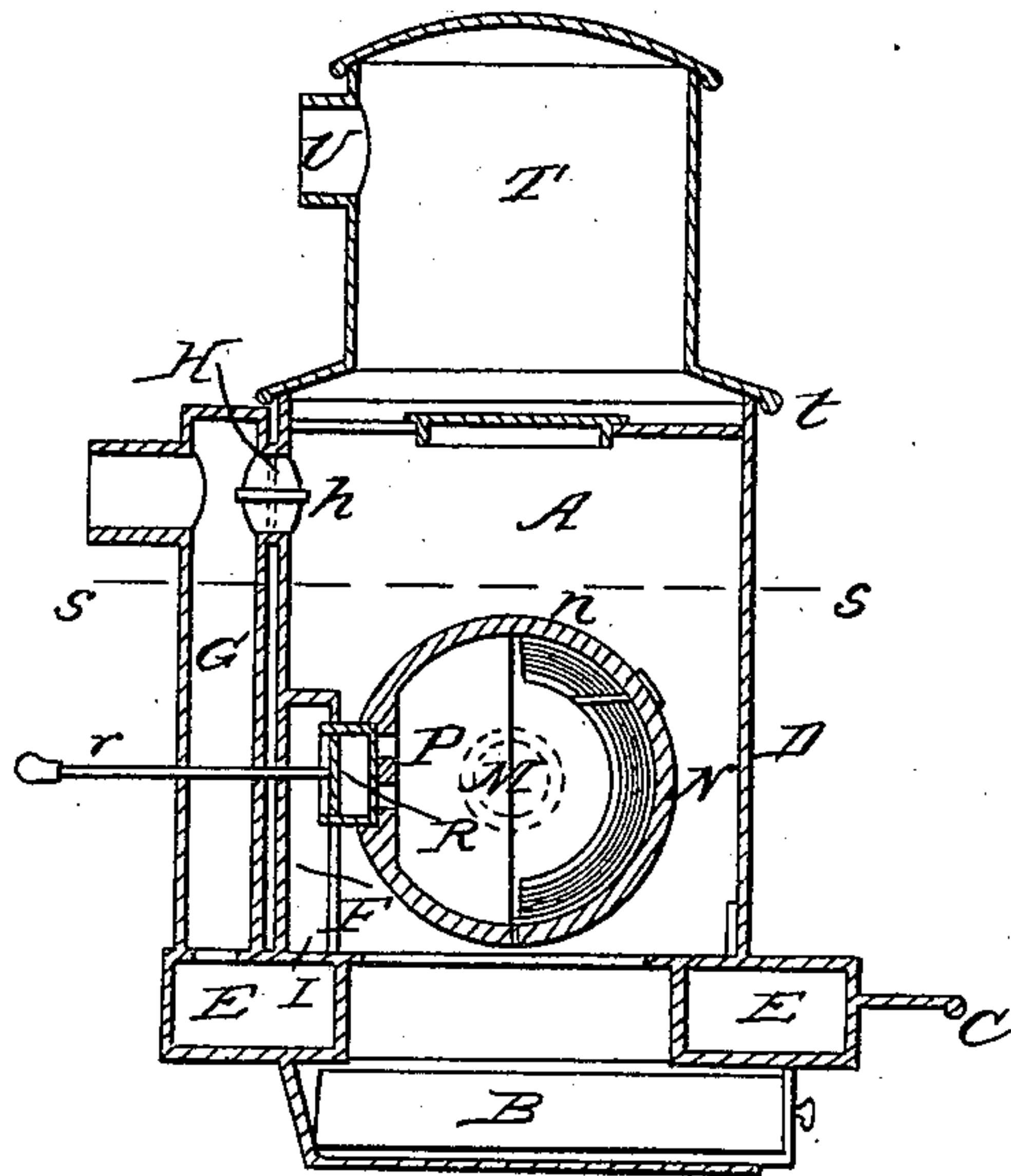
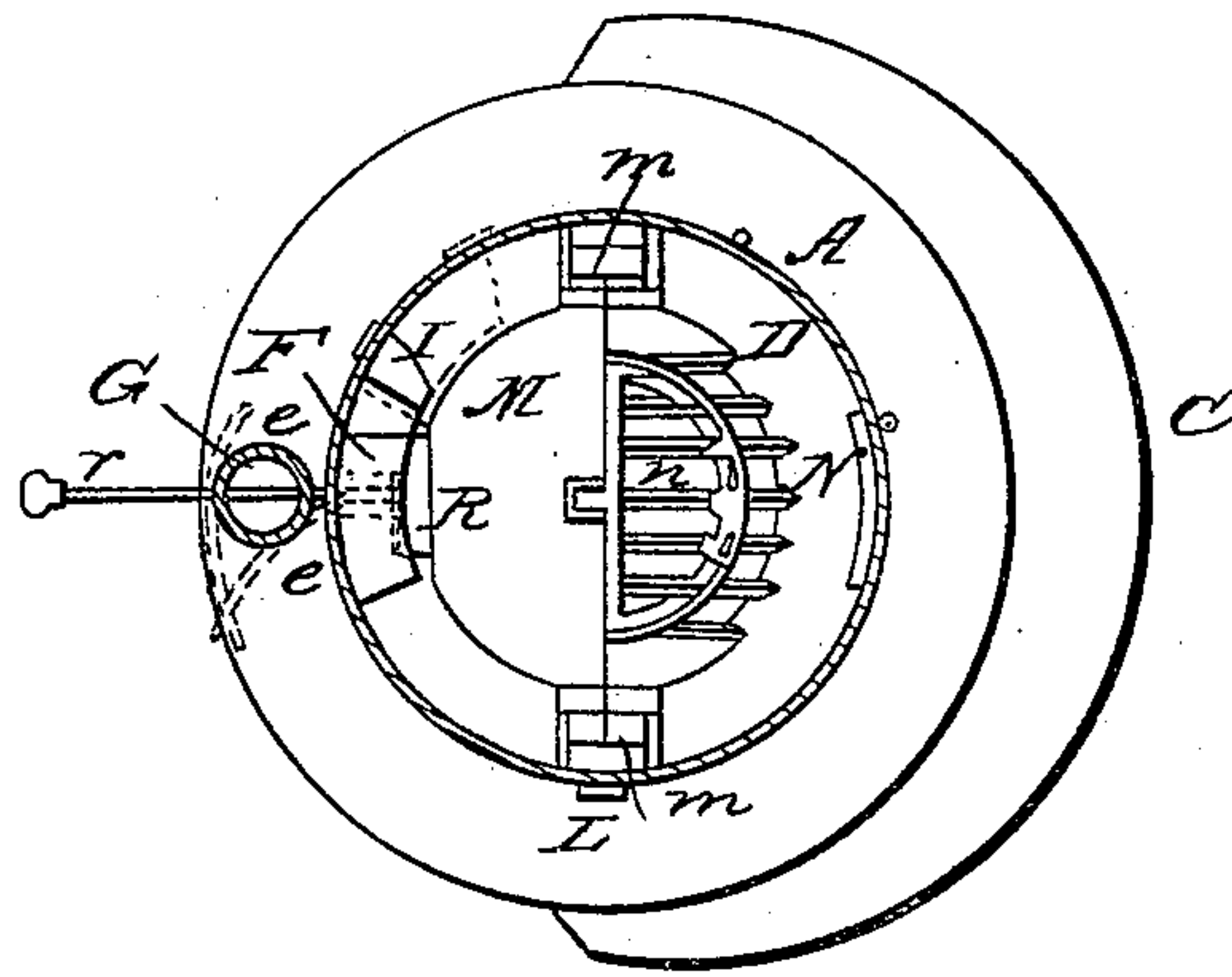


Fig. 3.



Witnesses:

J. P. Hillman
L. H. Baker

Inventor:

Lucas Crandall.

UNITED STATES PATENT OFFICE.

LUCIUS CRANDALL, OF PLAINFIELD, NEW JERSEY.

COAL-STOVE.

Specification of Letters Patent No. 29,249, dated July 24, 1860.

To all whom it may concern:

Be it known that I, LUCIUS CRANDALL, of Plainfield, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Coal-Stoves; 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, in which—

Figure 1 is a vertical section. Fig. 2, is a similar section at right angles to Fig. 1, and Fig. 3, is a horizontal section through the line S, S, in Figs. 1 and 2.

Similar letters indicate like parts in all the figures.

The nature of my invention consist in the combination of a peculiarly constructed fire box, capable of revolving on its axis with a peculiar means of connecting the same with the flues and also in connection therewith in certain specific arrangements of parts.

To enable others skilled in the art to make and use my invention, I will proceed to describe it by the aid of the drawings.

A, A, is a cylindrical or other convenient shaped case, with an ash pit at B; a hearth at C, and a large door at D, as represented. At the base of A a partition *a* forms an annular flue E extending completely around A and communicating therewith only through a vertical flue F at the rear. A pipe G leads from E to the chimney, and a short pipe H connects direct therewith from the case A as shown, which pipe is closed by a damper *h*. Another damper *e* is so arranged that when in the position shown at *e*, it permits a direct draft from F to G, but when in the position shown at *e'*, the draft is compelled to traverse the circuit of E before reaching G. A sliding damper I is arranged at the base of F so as to allow a larger opening therein if required and may be used for allowing a direct draft to G instead of *e*.

In suitable bearings in the case A, I mount a hollow sphere M upon trunnions *m* cast thereon, so that it is free to revolve around its axis. One of the trunnions is fitted to receive a crank L by which M may be readily rotated. About one-half of this

sphere M is grated, as shown at N, and a cover *n*, is so fitted as to be readily removed for the purpose of charging it with coal. On the opposite side from N is an opening P partially closed by a grate. This opening is adapted to receive a sliding pipe R which connects with the flue F. A handle *r* extends through A to a convenient position, for the purpose of operating R so as to connect or disconnect M and F at pleasure.

In the top of A is a hot air chamber T which receives its air through suitable openings *t*, *t*, and discharges it through a flue U which may open into any room desired. The openings *t* may be replaced by tubes extending through the interior of A if desired.

The operation is as follows: The chamber M is filled with coal and ignited, the draft passing direct to the chimney at first but through E when the fire is well started. The globular form of M causes the coal to burn to the best advantage while the whole of its surface is free to radiate heat. The arrangement of the draft at the rear of M causing the air to pass horizontally through the fire enables the whole front surface of the fire to be exposed to view without permitting the escape of gas. When the fire needs raking or cleaning out, the case A is closed tightly, the damper *h*, is opened to carry off the dust, the pipe R withdrawn from M and the latter rotated until all the ashes are shaken out at the grate N. The pipe R is then connected, damper *h* closed, and the stove is in readiness for burning. In kindling a fire the old coal need not be removed, but by turning M the kindlings may be introduced beneath or in front of the coal without difficulty.

I am aware that a rotating grate or fire chamber was invented by Benjamin Franklin and has been used by others, and to such, broadly, I make no claim, but

Having now fully described my improved coal stove what I claim as new therein and desire to secure by Letters Patent is,

1. The combination and arrangement of the spherical fire chamber M grated at the side N and capable of revolving on the trunnions *m*, with the sliding tube R substantially as herein set forth.

2. The arrangement of the revolving vessel M sliding tube R case A and dust damper h substantially in the manner and for the purpose herein set forth.

5 3. In combination with the above the arrangement of the flues F, E, G and dampers I and e, substantially as herein shown.

In testimony whereof I have hereunto set my name in the presence of two subscribing witnesses.

LUCIUS CRANDALL.

Witnesses:

I. P. STILLMAN,

H. H. BAKER.