

G. CHILSON.  
Parlor Stove.

No. 35,506.

Patented June 10, 1862.

Fig. 1.

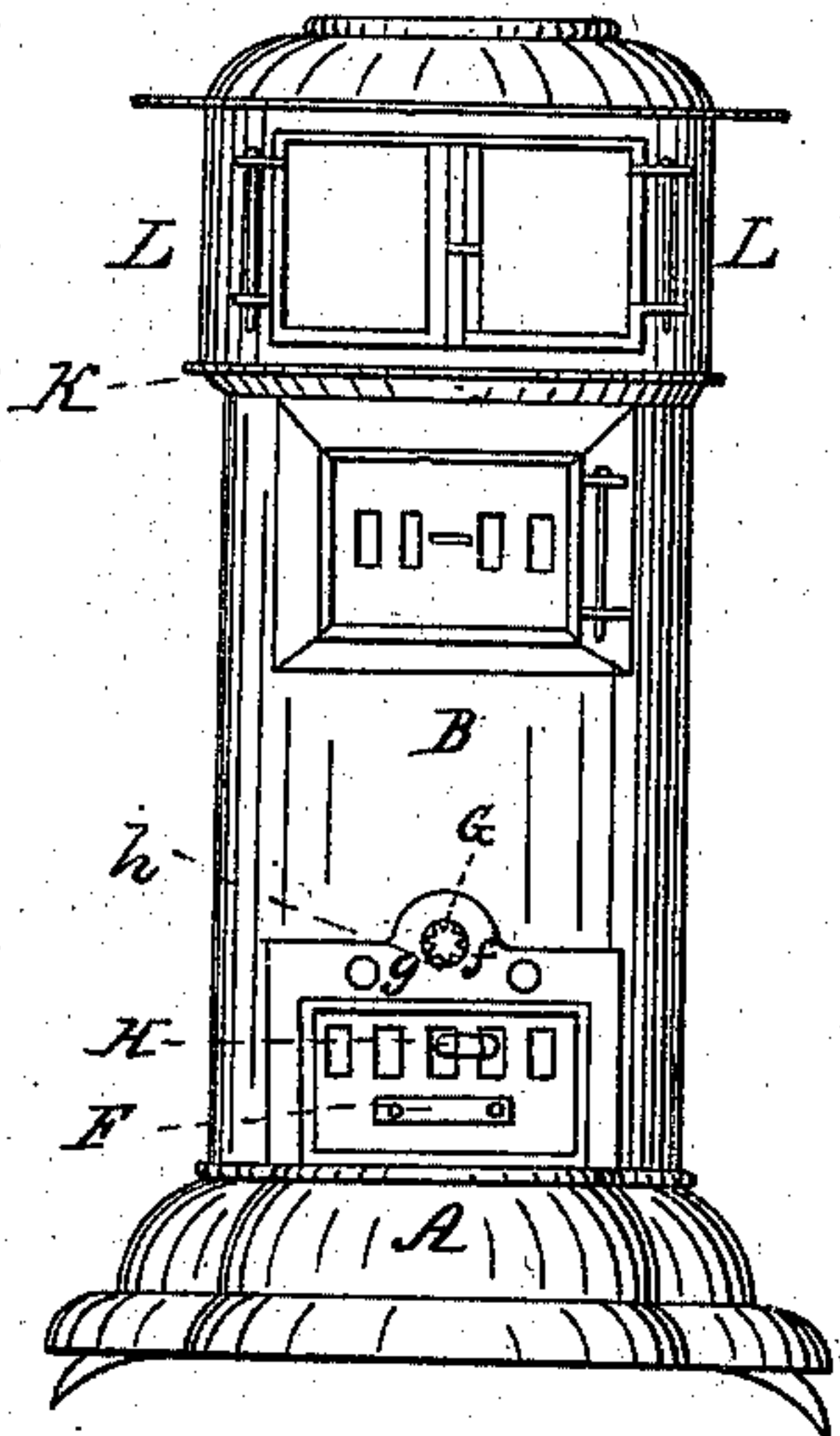


Fig. 2.

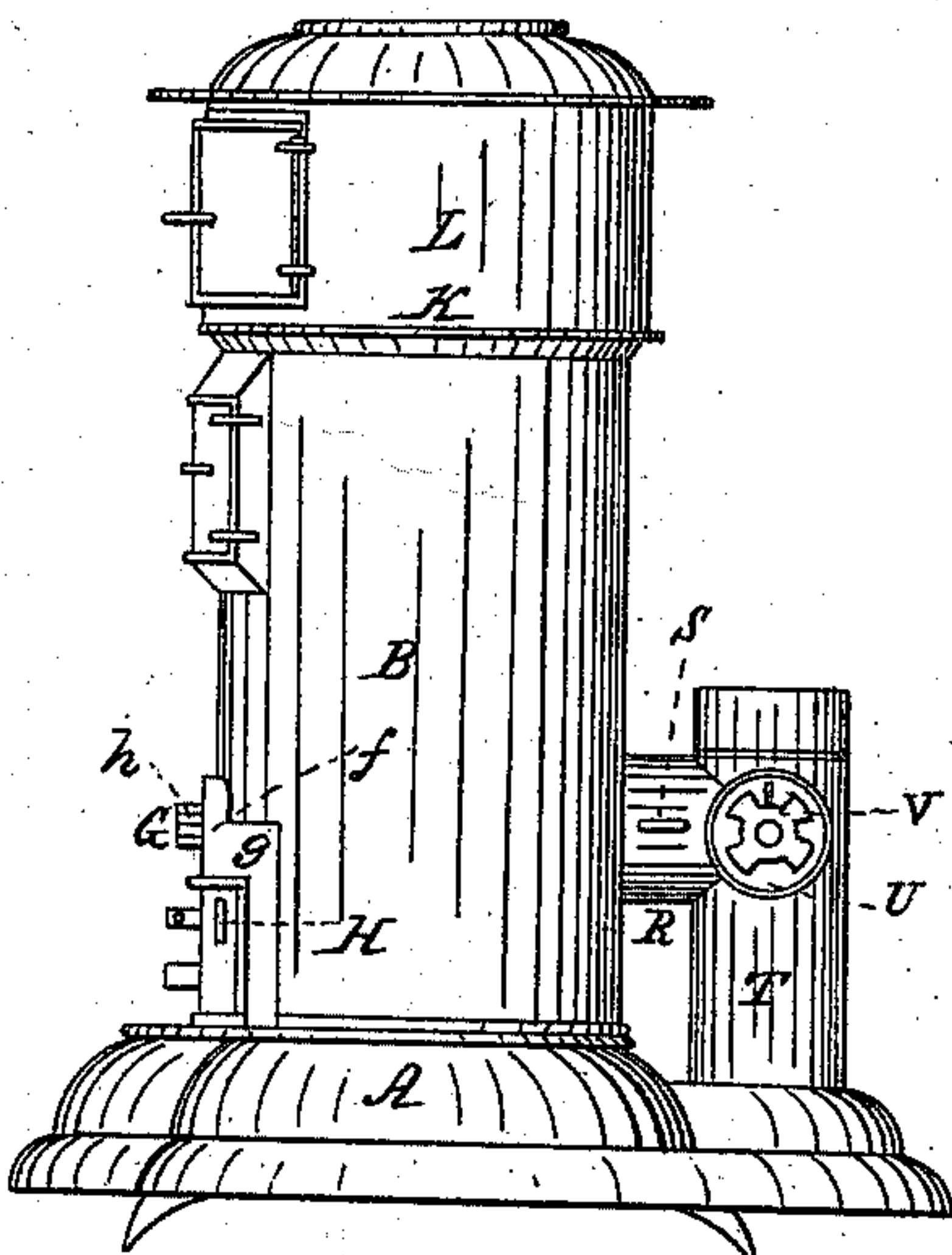


Fig. 5.

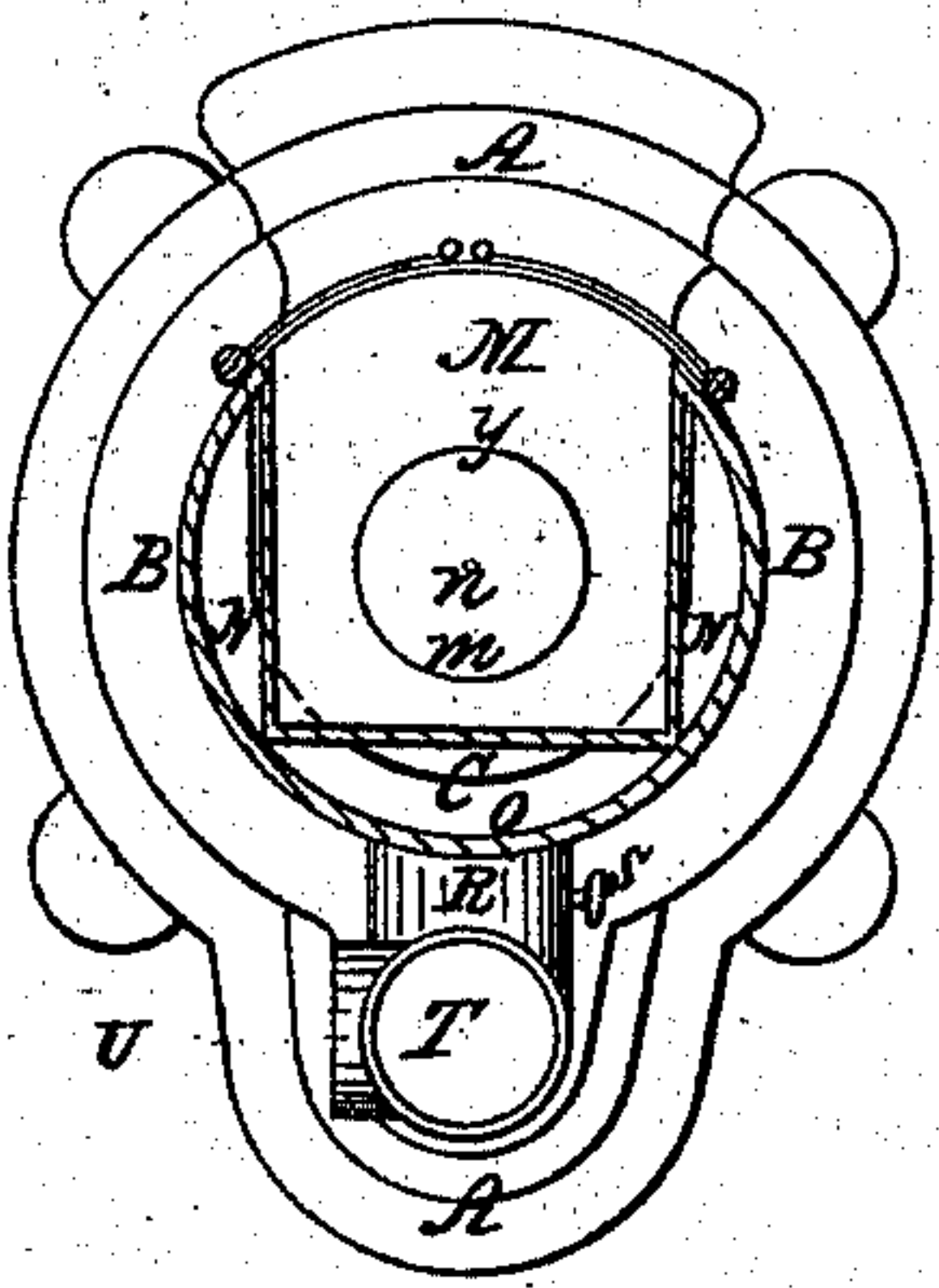


Fig. 3.

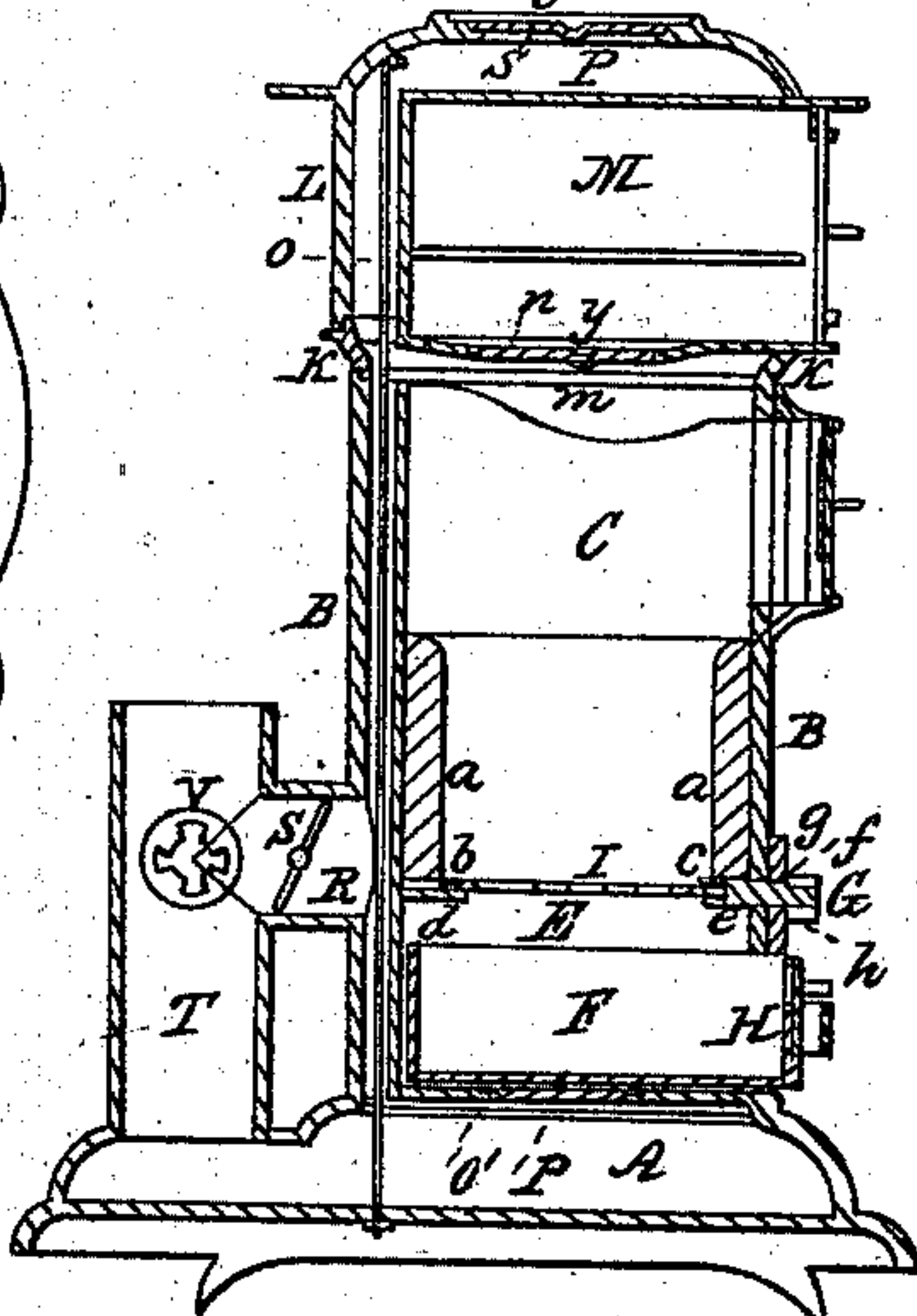
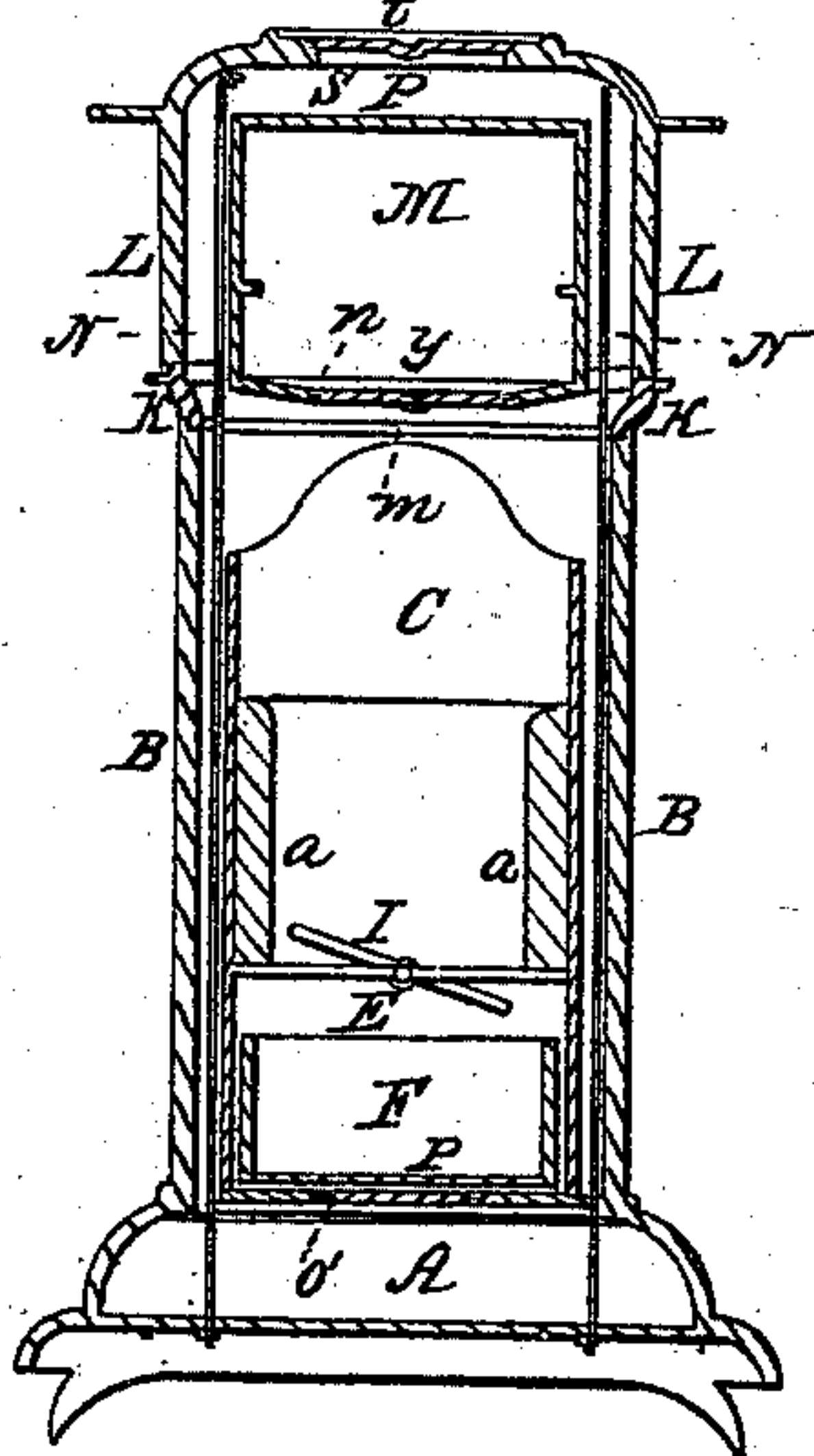


Fig. 4.



Witnesses:

R. H. Eddy  
Ch. P. P. P.

Inventor:

Gardner Chilton



# UNITED STATES PATENT OFFICE.

GARDNER CHILSON, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN PARLOR-STOVES.

Specification forming part of Letters Patent No. 35,506, dated June 10, 1862.

*To all whom it may concern:*

Be it known that I, GARDNER CHILSON, a citizen of the United States of America, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Parlor-Stove, which I do hereby declare to be fully described in the following specification, and illustrated by the accompanying drawings, of which—

Figure 1 is a front view, Fig. 2 a side elevation, and Figs. 3 and 4 vertical sections, of it. Fig. 5 is a horizontal section of it, the plane of section being through the oven.

My stove is not only for heating an apartment, but particularly for warming that part of the same which is near the floor—a matter in which many stoves fail. Furthermore, my stove is constructed so as to afford a proper ventilation of the room without abstracting from it the great body of air which is close to the floor. With my stove baking, boiling, or various other culinary operations can be carried on at the same time. The stove is employed for the purpose of heating an apartment.

In the drawings, A exhibits a close hollow box or base, on which the body or outer cylindrical case, B, and the inner or fire-chamber case, C, of the stove are supported, one of these cases being arranged within the other, and so as to have a flue-space between them. In the lower part of the inner case there is an ash-chamber, E, for the reception of an ash box or drawer, F, such chamber being made to open through the front of the case and to have its ash-drawer furnished with an induction air-valve register, H.

The fire-place may have a soapstone or fire-brick lining, *a*, and should be furnished with a grate, I, having two journals, *b c*, to rest and revolve in suitable bearings, *d e*. These bearings should be so constructed as not only to allow the grate to be moved out of them, but to have the end of its front bearing inserted in a revoluble grate-rotator, G, which is entirely separate from the grate and rests in a bearing or round socket, *f*, made within a frame, *g*, arranged with respect to the mouth of the ash-chamber, as shown in the drawings. The rotator G projects through and out of its socket and has the part *h*, so projecting, made star-shaped or prismatic, in order that a key or le-

ver may be applied to it for the purpose of putting the rotator G in revolution in such manner as to produce the motions of the grate, such as at any time may be desirable, whether for discharging either fuel or ashes therefrom.

The advantage of the grate-rotator made and applied in a socket, as described, is that while it will admit of removal of the grate either for renewal or repairs it will produce with its socket a tight joint, through which ashes cannot escape while the grate may be in the act of being rotated.

The inner cylinder, C, is not so high as the surrounding case B, which is surmounted by a conical enlargement-ring, K, on which another cylindrical case, L, is placed, the latter case being larger in diameter than the case B. An oven, M, consisting of a cubical or square chamber or box with an open end, is placed within the case L and opens through it, the oven being surrounded on its three vertical sides by the case L, and so as that the latter may be in contact, or nearly so, with the juncture of each turn of the sides. In this way there will be a flue-space against each of the two sides and the rear end of the oven, these flues being marked N O N. These flue-spaces all lead out of the fire-chamber and open into another or domed chamber, P, arranged over the oven and provided with a boiler-hole, *s*, and cover *t*, as shown in the drawings.

A short pipe, R, provided with a damper, S, leads horizontally out of the flue-space between the cases B and C and opens into a vertical pipe, T, which rises from the base A and leads out of the hollow part or chamber thereof. A short pipe, U, extends laterally out of the pipe T and on a level with the pipe R. The said pipe U has at its outer end an air-register, V, by which air may be admitted into the pipe T, and the amount of such air be increased or diminished, as circumstances may require, whether for ventilation of the apartment in which the stove may be situated or for affecting the draft of the stove.

The lower plate, *y*, of the oven is made dish-ing or concavo-convex around a circular opening, *m*, made through it, the convexity of the said plate being toward the fire-place. The object of this is threefold. It facilitates the application of a cover, *n*, to such opening; it strengthens the said oven-plate *y* and prevents



it from being warped and broken by the heat of the fire, and, finally, it operates to deflect the heat and smoke toward the sides of the stove and into the lateral vertical flue of the oven.

That part of the top of the base which is within the ash-chamber is furnished with an opening, *o*, and a cover, *p*, therefor. This hole is for the purpose of enabling a shovel or other proper implement to be introduced at any time into the base, in order to clear it of any ashes or deposits which may have formed or been collected therein.

By removing from either of the holes *m s* its cover a kettle or boiler may be introduced into such hole.

In order to have sufficiently large flue spaces against the two sides and rear end of the oven, and to properly direct the heat of such flues, I employ the enlargement-ring, as above described. The natural tendency of the heat is to rush upward through all the three flues. This takes place when the fuel is first set on fire; but soon afterward the draft will be up the side flues and into the domed chamber above them, and from thence down the flue at the rear of the oven, and thence into the flue-space between the two cases B and C. From thence the smoke and heat will escape through the direct-draft pipe R, provided its damper be open; otherwise they will descend into the base of the stove and pass out of the same, and finally make their exit by the upright pipe T. By arranging the ventilating-register close to the juncture of the two exit-pipes I have found that there will be no such back currents or reacting draft tending to force the smoke and volatile gases out of the joints of the stove as result when the register is located in or close to the base of the stove, where there is always the weakest draft. With my arrangement of the register the descending draft, or that

through the base, will be favored or facilitated in passing into the vertical exit-pipe, the action of the pipe and register with respect to the base being analogous to that of a water-siphon. Besides, the said arrangement of the air-register is more advantageous with reference to its action on the direct-draft pipe than would be the case were the register placed below it and close to the base.

The base of my stove contains a chamber extending entirely underneath the ash-chamber, and therefore it will hold a large amount of smoke and heated volatile products, which being thus kept in the vicinity of the floor will cause the base to radiate heat to great advantage into the lowest portion of the apartment in which the stove may be. The ashes in the ash-box, covering the entire bottom of the ash-chamber, will, as a non-conductor of heat, operate to prevent the abstraction of the heat by the bottom of the ash-chamber, and as a consequence such heat will be diffused against and into the edges and bottom of the base.

I claim—

1. The separate grate-rotator as made not only with a grate attachment or device for connecting the grate with it, but with a head or its equivalent for receiving a key or lever.

2. The construction of the ash-pit mouth-frame with a socket for the reception of the said grate-rotator made separate from the grate, and also in manner and so as to operate the grate, as specified.

3. The arrangement of the conical enlargement-ring, the fire-chamber, the oven, and the flue-spaces about the sides and top of the oven.

GARDNER CHILSON.

Witnesses:

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F. P. HALE, Jr.