S. M. KELLOGG.

Heat Regulator.

No. 43,313. Patented June 28, 1864.

Fig: 1.

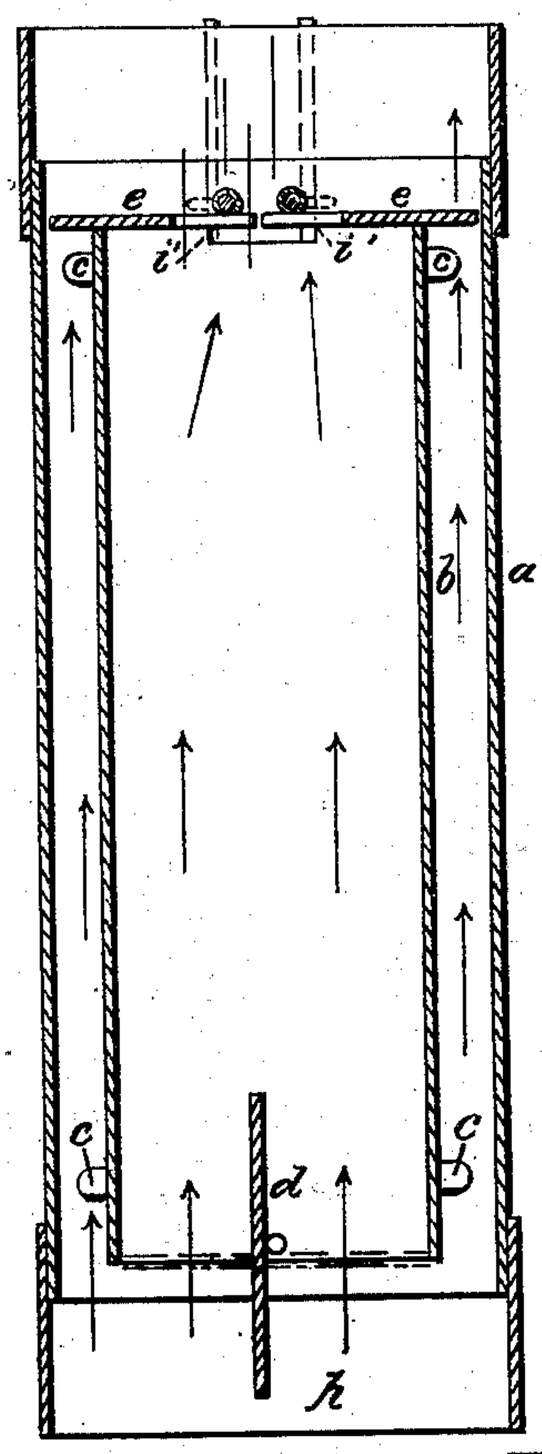


Fig: 4.

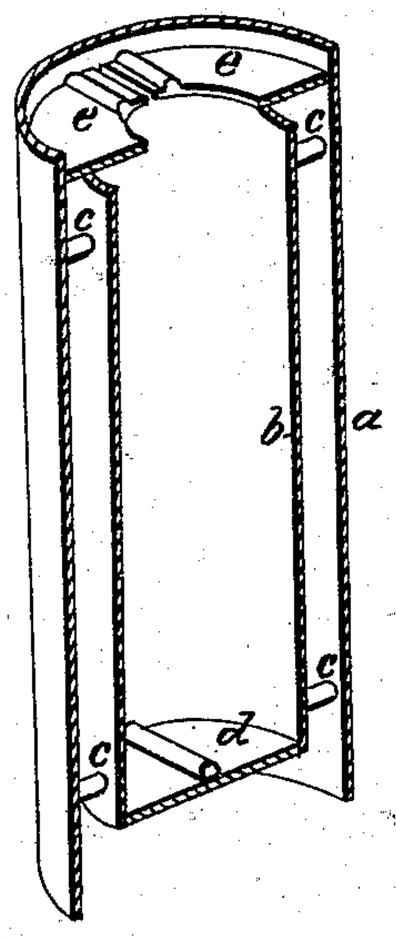


Fig: 2.

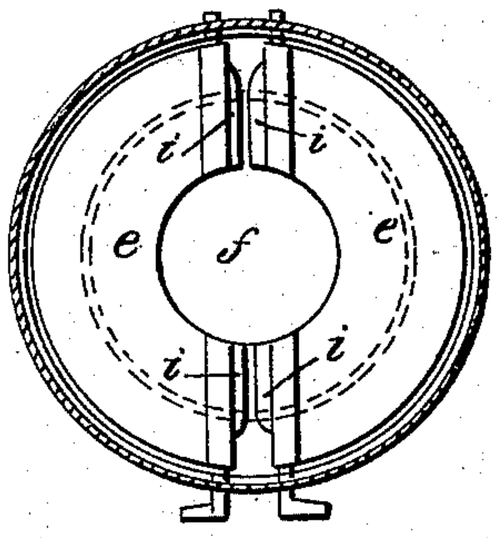
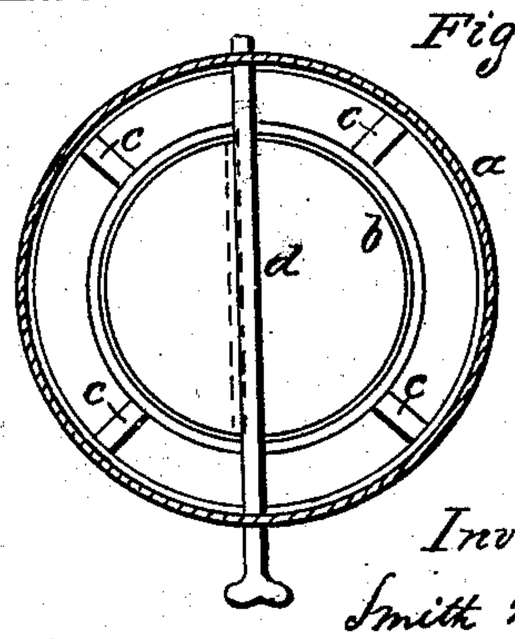


Fig: 3.



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UNITED STATES PATENT OFFICE.

SMITH M. KELLOGG, OF BATTLE CREEK, MICHIGAN.

IMPROVEMENT IN HEAT-REGULATORS.

Specification forming part of Letters Patent No. **43,313**, dated June 28, 1864.

To all whom it may concern:

Be it known that I, SMITH M. KELLOGG, of Battle Creek, in the county of Calhoun and State of Michigan, have invented a new and useful Heat-Regulator; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and letters of reference marked thereon, forming a part of this my specification, like letters in the several figures in dicating the same parts, and in which drawings—

Figure 1 is a longitudinal section of my improved heat-regulator; Fig. 2, a top view of Fig. 1; Fig. 3, a bottom view of Fig. 1, and Fig. 4 a perspective section of the heat-regulator.

The object of my invention is to provide the means whereby the heat which passes through the stove-pipe of a stove may be so regulated as to pass off without sensibly affecting the temperature of the room so far as its emission from the pipe is concerned, or be emitted in a powerful manner either from the front or rear side of the pipe, as may be desired, at the will of the operator, according to circumstances of use.

By reference to the figures it will be seen that my heat-regulator consists in part of a section of double pipe, the outer one, *a*, of which incloses the inner one, *b*, as shown, the latter being sustained in position within the former by supports *c*, permanently secured to both pipes. At the lower end of the inner pipe, *b*, a single circular valve, *d*, is applied, as clearly represented in Fig. 3, which valve, when closed, as indicated in dark lines in this figure, entirely shuts off the entrance of the smoke and products of combustion from passing within said pipe. At the upper end of the inner pipe, *b*, two half-valves, *e e*, are applied, as clearly shown in Fig. 2, each of which are cut out at their central portions, so as to form a circular opening, as at *f*, through which the products of combustion may be made to pass when desired. These half-valves *e e* do not, when closed, as represented in dark lines in Figs. 1 and 2, entirely fill the outer pipe, *a;* or, in other words, the diameter of said half-valves is not quite equal to the diameter of the outer pipe, *a*, thus leaving, when they are closed, a small space between their periphery and the inner surface of their inclosing-pipe for the passage of a small portion of the products of combustion, as will be hereinafter described.

As seen in Fig. 1, these half-valves, when closed, overlap the top end of the inner pipe, *b*, resting thereon for a support, and when thrown into a vertical or open position, as indicated in red lines in said figure, they are supported in such position by reason of their inner edges, as at *i*, coming in contact with a shoulder, *i'*, formed by cutting away a portion of the upper end of the inner pipe, *b*, as indicated in Fig. 1.

Thus constructed, my heat-regulator is particularly adapted to kitchen use during the operation of cooking in summer weather, when it is desirable to have as little heat imparted to the room from the stove-pipe as possible. For such purpose we will suppose it to be applied to a cook-stove, its lower portion, *h*, being fitted to the collar of the smoke-hole of the stove. In this position the damper *d* is opened and the valves *e e* closed, as represented in dark lines in Fig. 1, whereupon the draft of the stove will pass directly into and through the inner pipe, *b*, and out through the opening *f*, central of the valves *e e*, thereby in a great measure preventing the heat from being imparted to the room. If, on the contrary, the weather is cold, and it is desirable to have as much heat imparted to the room from the pipe as possible, the half dampers or valves *e e* are made to assume a vertical position, as indicated in red line, and the damper *d* a horizontal position, as shown in red line in Fig. 1, whereupon the draft will pass between the inner and outer pipes, thereby imparting the heat of the products of combustion directly to the outer pipe, and thence into the room in which the stove is situated. In case, however, it is desirable for any reason to have a great amount of heat imparted to the room from one side of the pipe, and not from the other or opposite side, this also can be done by closing the damper *d*, opening the half-valve at the side on which it is desirable to impart the heat, and closing the opposite half-valve, whereupon the products of combustion will pass between the inner and outer pipe on the side of the pipe which has the half-valve opened.

For night use, and in order to preserve the fuel from consumption, the lower damper, *d*, and half valves or dampers *e e* are closed, as

indicated in Fig. 4, whereupon the draft will be between the inner and outer pipe, but retarded by the valves *e e*, overlapping the inner pipe *b*, thus compelling the draft to slowly pass between the periphery of the valves *e e* and the inner surface of the outer pipe, *a*.

It is apparent that my heat-regulator may be used in connection with any of the ordinary classes of stoves, whether for parlor or kitchen use.

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

The dampers *e e*, having supporting-edges *i i* thereon, in combination with the pipe *b*, provided with shoulders *i' i'*, outer pipe, *a*, and damper *d*, the whole operating substantially in the manner and for the purpose set forth.

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