(No Model.)

O. PEDERSON.

HEATING STOVE.

No. 319,018. Patented June 2, 1885.

Fig. 1.

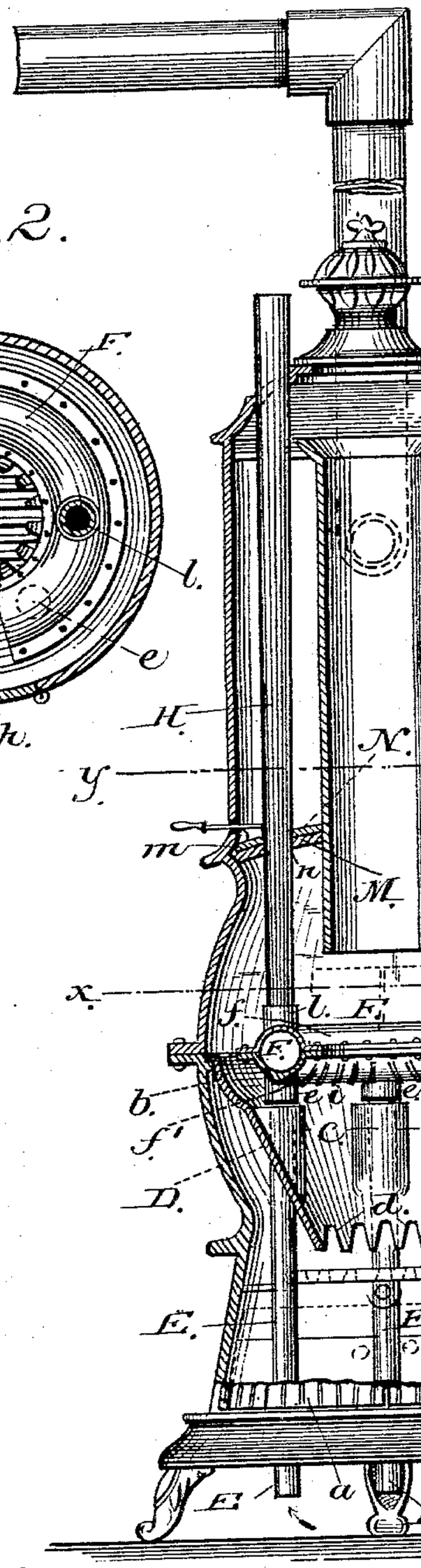


Fig. 2.

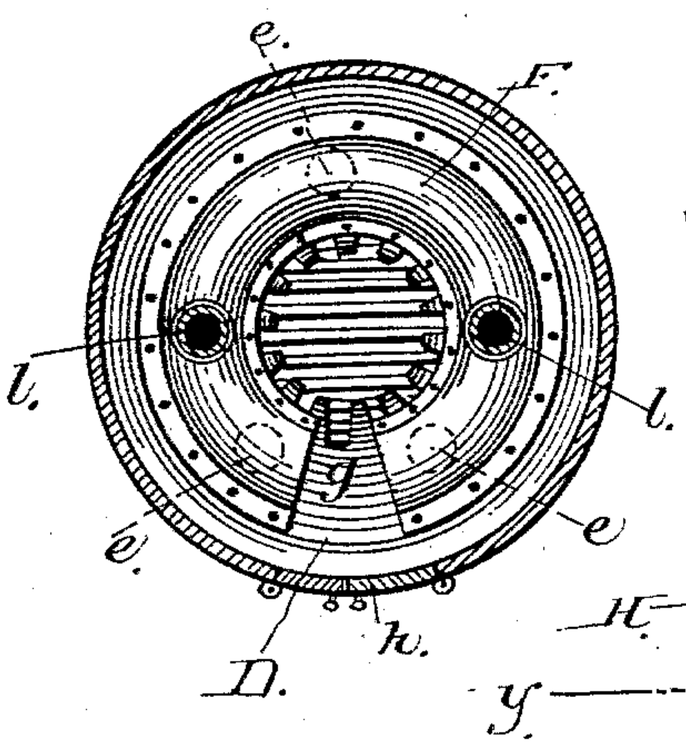


Fig. 4.

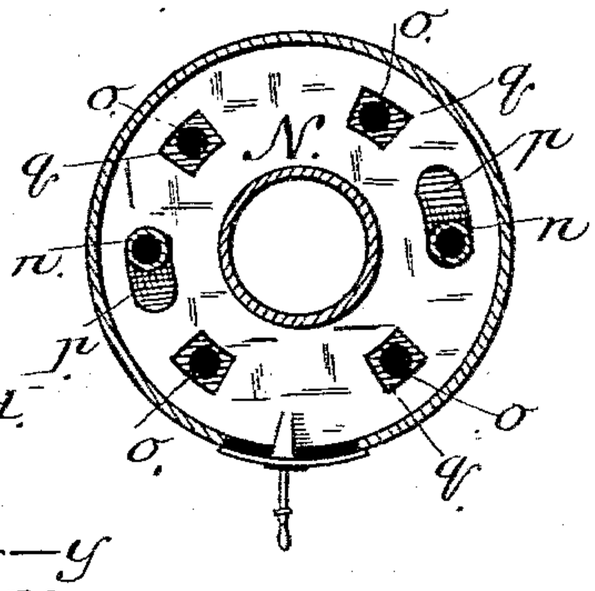
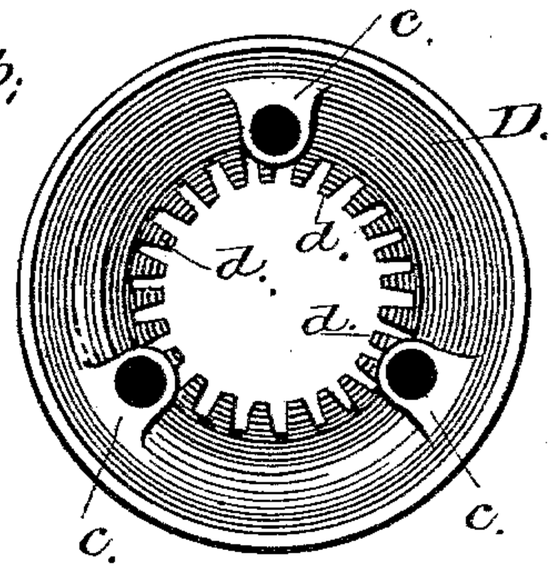


Fig. 3.



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UNITED STATES PATENT OFFICE.

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HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 319,018, dated June 2, 1885.

Application filed December 29, 1884. (No model.)

To all whom it may concern:

Be it known that I, OLE PEDERSON, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Heating-Stoves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical sectional view of a heating-stove embodying my improvements. Fig. 2 is a longitudinal cross-sectional view on the line *x x* of Fig. 1. Fig. 3 is a plan view of the fire-pot removed. Fig. 4 is a cross-sectional view on line *y y* of Fig. 1.

Similar letters of reference indicate corresponding parts throughout the several figures.

My invention relates to certain useful improvements in heating-stoves; and it consists in the combination of devices hereinafter described and claimed.

To enable others skilled in the art to make and use my invention, I will now proceed to describe the exact manner in which I have carried it out.

In the said drawings A represents a heating-stove provided with an ash-pit and combustion-chamber, all constructed and arranged in any well-known manner, and also provided with the usual grate, and the doors *a* for the removal of the contents of the ash-pan.

D represents a fire-pot suitably secured within the combustion-chamber and provided with the usual fingers, *d*. This fire-pot D is of peculiar construction, and is adapted to support a supplemental hot-air chamber arranged slightly above it and with its center on a line with the top of the fire-pot.

To accomplish the purpose just referred to I construct the fire-pot with a flaring upper end, *b*, and also form upon its inner circumference suitable lugs, *c*, preferably three in number, and arrange them at equal distances around the inside of the fire-pot, as shown in Fig. 3. These lugs are simply hubs or bearings for an equal number of downwardly-projecting pipes E, which pass through the bottom of the stove and terminate within a few inches of the floor.

Suitably supported upon the fire-pot D is a horizontally-arranged segmental tube or hot-air chamber, F, which is provided with three downwardly-projecting short tubes, *e*, corresponding with and into which fit the upper ends of the cold-air pipes E, above referred to. This segmental tube F is constructed with an upper and lower section, *f f'*, firmly secured together by bolts or otherwise, and is formed with closed ends, as seen at *g*, thereby forming an opening, which, in conjunction with an opening or door, *h*, (see Fig. 2,) permits of the coals being raked forward or the grate cleaned.

To partially protect the under surface of the section *f'* from the intense heat generated by the fire and to assist the circulation of air, I construct thereon a series of ribs or corrugations, *i*, as seen in Fig. 1. When the sections *f* and *f'* are put together, they form a chamber, into which the cold air received through pipes E and *e* enters, and in which this air is heated before it passes into the room. The upper section, *f*, of the segmental tube or hot-air chamber F is provided with two short tubes, *l*, arranged out of line with the openings or tubes *e*, and about midway between them, so that the cold air, after entering the horizontal tube F, is heated before it reaches these pipes and finds its exit.

Connected to the tubes *l* are the vertical pipes H, having a diameter greater at their top than at the point of juncture with the horizontal tube F, so as to produce a greater draft, and which extend through the top of the stove and convey the heated air into the room.

In order that the temperature of the room may be regulated I construct at the point *m* and slightly above the horizontal tube a register or damper, which consists, partly, of a plate, M, which forms an integral part of the drum, and is provided with openings, *n*, through which the pipes H pass, and a central opening in which may be placed any well-known form of magazine for feeding the coal to the combustion-chamber. This plate M is also provided with openings *o*, through which the heated air passes into the dome when the register is open, as shown in Fig. 4.

To complete my register I employ a sliding plate, N, with concentric slots, *p*, through

which the pipes H pass, and with openings, *q*, corresponding with the openings *o*, above referred to.

Any suitable means—such as a knob passing through a slot in the stove-front—may be employed to operate the slide N′ to open or close the openings *o* and thereby regulate the amount of heat passing into the room, the concentric slots permitting the plate to have a free sliding movement. I am thus enabled to construct a stove in a very economical manner, and one that has great heating properties.

I am aware a fire-pot provided with lugs engaging cold-air pipes is not broadly new.

I am also aware it is not broadly new to construct a fire-pot with bearings for cold-air pipes, and with hot-air chambers located above the fire-pot, and these features I therefore do not broadly claim.

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

1. In a heating-stove, the fire-pot provided with lugs *c*, and the cold-air pipes passing through the base of the stove, in combination with a horizontal segmental tubular chamber composed of two sections bolted together and formed with an opening between their ends, substantially as described.

2. In a heating-stove, the fire-pot in combination with a horizontal tubular chamber formed in two sections, *f f′*, the section *f′* having three short depending tubes, *e*, and the section *f* having a less number of short tubes, *l*, arranged out of line with the tubes *e*, and pipes E and H, substantially as described.

3. In a heating-stove, the fire-pot and two-part horizontal and tubular chamber, in combination with cold-air pipes protruding through the base of the stove and engaging the lower section, *f′*, and a less number of hot-air pipes extending from the upper section, *f*, through the top of the stove, substantially as described.

4. In a heating-stove provided with a perforated plate, M, the combination, with a fire-pot and horizontal chamber, as described, of a register consisting of a sliding plate, N, having openings front and rear, concentric slots engaging the pipes, and a means, such as a knob, for operating the plate to open or close the register, substantially as described.

OLE PEDERSON.

Witnesses:
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