

(No Model.)

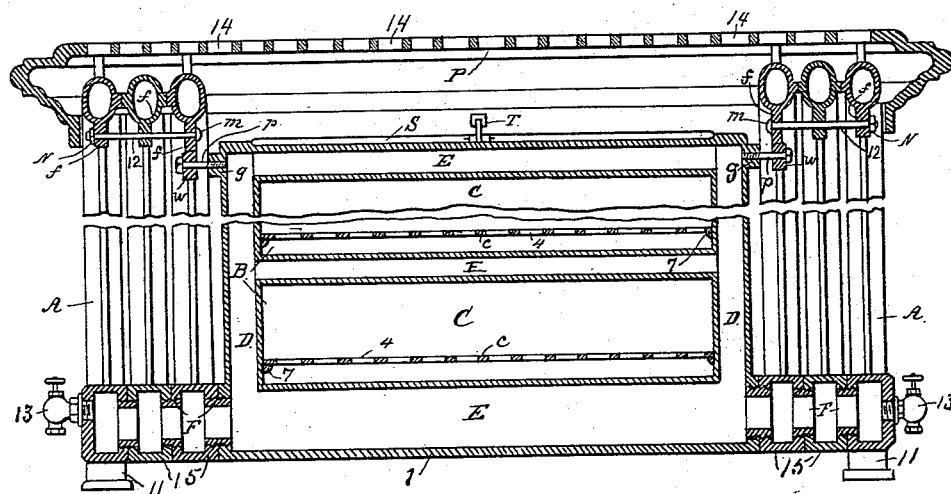
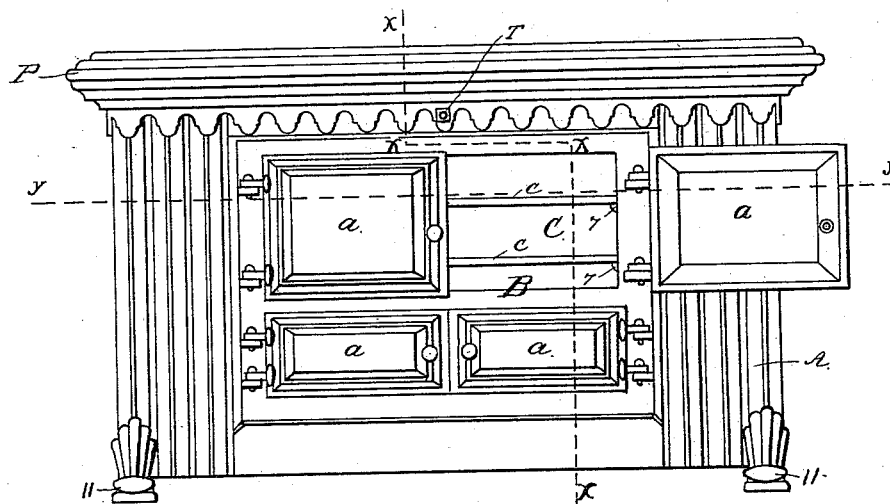
2 Sheets—Sheet 1.

M. L. HERR.  
HOT CLOSET FOR STEAM RADIATORS.

No. 420,066.

Patented Jan. 28, 1890.

*Fig. 1.*



*Fig. 2.*

WITNESSES

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(No Model.)

2 Sheets—Sheet 2.

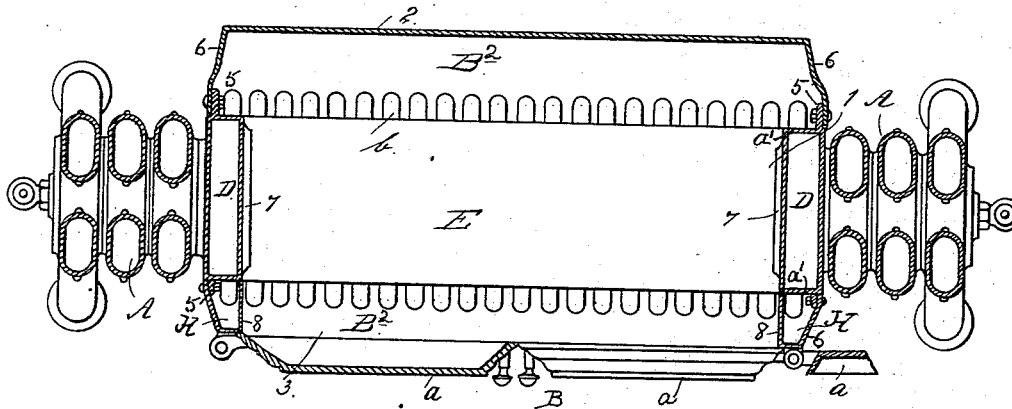
M. L. HERR.

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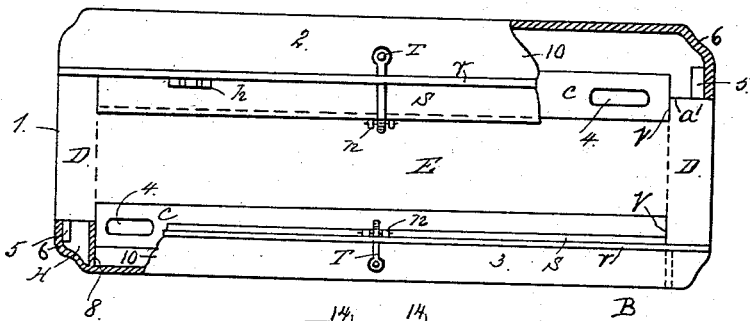
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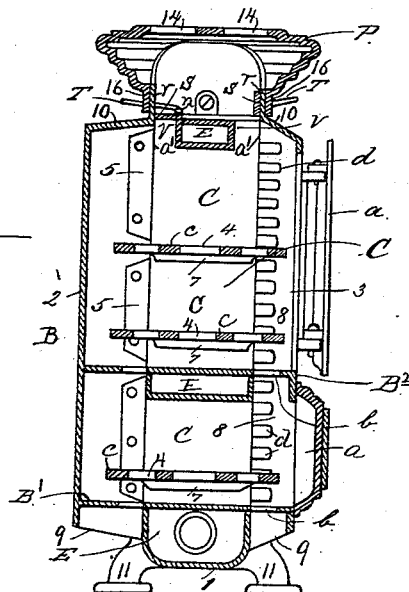
*Fig. 4.*



*Fig. 5.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

MARTIN L. HERR, OF LANCASTER, PENNSYLVANIA.

## HOT CLOSET FOR STEAM-RADIATORS.

SPECIFICATION forming part of Letters Patent No. 420,066, dated January 28, 1890.

Application filed February 23, 1888. Serial No. 265,019. (No model.)

### *To all whom it may concern:*

Be it known that I, MARTIN L. HERR, a citizen of the United States, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain Improvements in Hot Closets for Steam-Radiators, of which the following is a specification.

This invention relates to improvements in that class of hot closets built in connection with steam-radiators and heated by the steam used for the radiators; and the objects of my improvements are, first, to construct a closet which can be more easily cast and put together than those now in use; second, to provide for free and continuous circulation of the heat through and between the different compartments of the closet; and, third, to utilize the entire interior heating-surface for warming the room when the closet is not in use for the special purpose for which it is constructed. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a closet embodying my invention, showing the radiator-loops connected therewith and one of the closet-doors open. Fig. 2 is a vertical longitudinal section of the closet and radiator-loops. Fig. 3 is a vertical transverse section on the line *x x*, Fig. 1. Fig. 4 is a horizontal section on the line *y y*, Fig. 1, the shelves above the intermediate horizontal flue E being removed. Fig. 5 is a top or plan view of the closet, portions being cut away to show the interior construction, and the cap, radiator-loops, and doors of the closet being removed.

In Figs. 4 and 5, different shapes of the side plates 6 of the outer castings or sections 2 and 3 are shown.

In the drawings, A represents the radiator-loops, B the closet, and P an ornamental cap covering the whole construction and provided with perforations 14, cut through the top plate thereof.

The bases 15 of the adjoining radiator-loops are connected with the lower horizontal flue of the closet, to be hereinafter described, and the bases of contiguous loops with each other by nipples F, screwed into the adjoining parts, as shown in Fig. 2.

To connect the upper part of the closet and the adjoining loops the former is provided with lugs *g*, having threaded openings therein. These openings are engaged by tap-bolts *p*, passing through washers *w*, fitted in the space between the upright parts of the loops. Each group of loops is held together above the bolts *p* by a rod 12, passing through perforations in webs *f*, located in the upper end of the space between the vertical portions of said loops, the rods being secured at the inner ends by heads *m* and at the outer by nuts N, and each end loop is provided with a stop-cock 13, as is usual, the whole structure being supported by ornamental feet 11, connected with the bases of the outer loops. These connections of the different parts are fully illustrated in Fig. 2.

The hot closet B is constructed of three castings or sections—the center 1, the back 2, the front 3. The center section 1 consists of two vertical flues D, forming the ends of the section, and these are connected by horizontal flues E at the top, the bottom, and between the top and bottom. In the drawings there is but one intermediate flue E shown, but the number may be increased as circumstances may require. This intermediate flue, with corresponding plates of the front and back sections, to be described hereinafter, divides the closet into compartments C, and these compartments are again divided by shelves *c*, projecting beyond the vertical flues D and provided with perforations 4 to permit the free circulation of the heat and rest on shoulders 7, formed on the inner faces of the vertical flues D. The bottom and intermediate flues E are of the same width as the vertical flues D; but the topmost flue E is not so wide, so that there is an opening or passage V between each of its outer edges and the outer edges *a'* of the flues D. On the faces of the outer edges of flues D there are flanges 5 formed, by which the center section is connected with the front and back. The back and front sections 2 and 3 have inwardly-projecting side plates 6 and top plates 10 formed thereon. Each side plate 6 laps and is bolted to the flanges 5, projecting from one of the edges of the vertical flues D. The top plates are of equal depth with the side plates and have upwardly-projecting flanges

5  $r$  formed on their inner edges, which are engaged by the sides 16 of the cap P. To the lower inner edges of the flanges  $r$  doors S S are hinged, as at  $h$ , Fig. 5, which are operated by rods T, pivoted to the free edges thereof, between lugs  $n$ , and passing through openings in the flanges  $r$ . At the bottom the sections 2 and 3 are open, as shown at 9, Fig. 3; but they are provided with inwardly-projecting plates B' B<sup>2</sup>, placed opposite the lower and center flues E, respectively, and having their upper surfaces lying in the same plane with the similar surfaces of the corresponding flues. Each of the plates B' B<sup>2</sup> has openings 15  $b$  cut through it to permit the circulation of air between the compartments. Over openings in the front of section 3 there are fitted doors  $a$ , leading into the several compartments; and near each end of the same section 20 there are transverse vertical partitions 8 formed, the inner edges of which bear against the vertical flues D to steady and strengthen the front against the jarring occasioned by the movement of the doors. These partitions 25 are also provided with openings  $d$  to allow the compartments the benefit of the heat radiating from the edges of the vertical flues D back of them.

I am in the habit of forming the radiator-groups at each end of the closet of three loops each, as giving satisfactory results in heating both the closet and any ordinary sized room; but I do not confine myself to that number.

The extension of the plates  $c$  beyond the sides of the center section and the projecting of the plates B' B<sup>2</sup> of the side sections to meet the horizontal flues widen the parts used for shelves and render the entire width of the closet available for use, while the perforations through those parts permit the free 40 circulation of heat through the whole closet.

Constructing the partitions of flues and perforated plates, as described, supplies heat

to the compartments from the partitions themselves and at the same time permits the circulation of air through them. 45

While the closet is being used to keep articles hot, the doors  $s s$  are kept closed, but when such is not the case and the heating of the room is the main consideration those 50 doors are left open. This permits a constant current of hot air to escape through the top of the closet and the entrance of a corresponding supply of cooler air through the open bottoms of the side castings, the perforations through the horizontal plates permitting 55 the air in the closet to be brought into contact with all heated surfaces therein. Any way other than that described may be used for connecting the loops and the closet, nor 60 do I claim any particular kind of loop or manner of joining them; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a hot closet, with 65 vertical flues, of one or more partitions dividing the closet into compartments and composed of transverse flues and perforated plates, substantially as specified.

2. The combination, in a hot closet having 70 openings in the top and bottom thereof and devices for opening and closing the openings in the top, of an open-sided central section constructed of vertical and transverse flues dividing it into compartments, and sections 75 forming the front and back of the closet and having top and side flanges which form a portion of the top and sides of the closet; and perforated plates projecting inward to meet the flues dividing the central section into com- 80 partments, substantially as and for the purpose specified.

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Witnesses:

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