

(No Model.)

H. RUPPEL.  
OIL RADIATOR.

No. 517,242.

Patented Mar. 27, 1894.

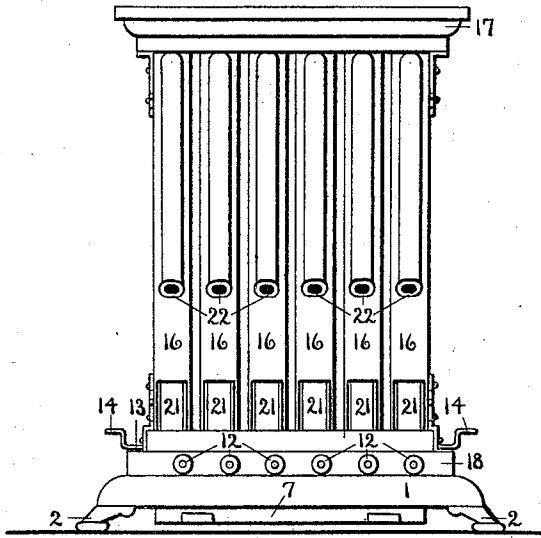


FIG. 1.

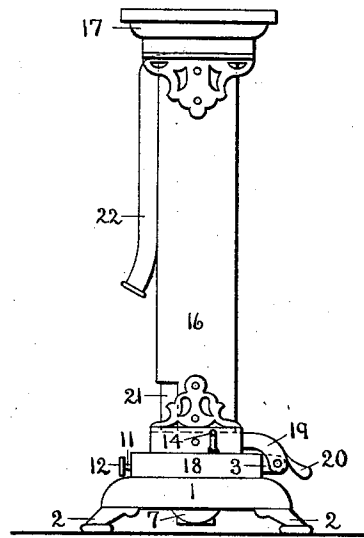


FIG. 2.

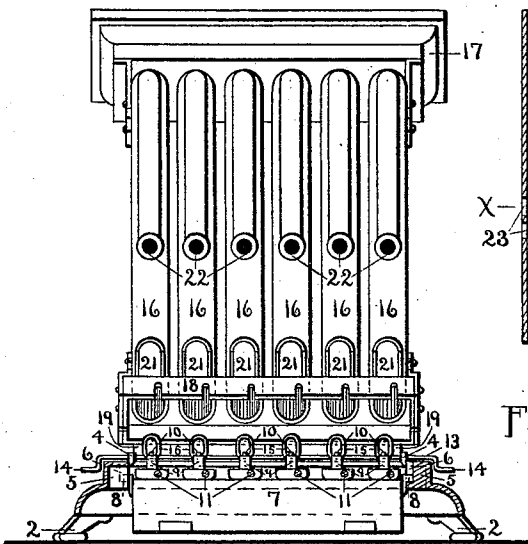


FIG. 3.

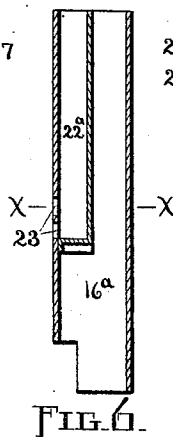


FIG. 6.

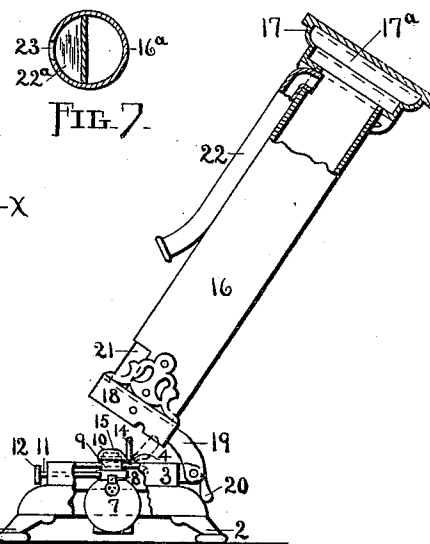


FIG. 4.

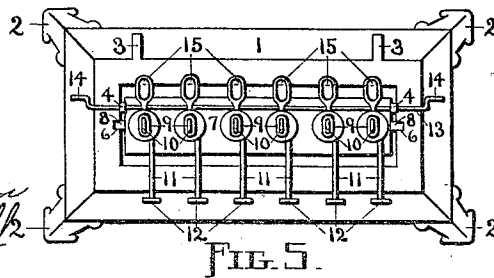


FIG. 5.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

HENRY RUPPEL, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF TO A. E. GILBERT, OF SAME PLACE.

## OIL-RADIATOR.

SPECIFICATION forming part of Letters Patent No. 517,242, dated March 27, 1894.

Application filed July 10, 1893. Serial No. 480,044. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY RUPPEL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Oil-Radiators, of which the following is a full, clear, and exact description.

My invention consists of a removable oil-reservoir suspended from a base with extinguishers arranged to operate simultaneously and a series of pipes secured to frames pivotally connected to said base, said pipes provided with return-draft tubes.

The object of my improvement is to provide a radiator, to burn oil for heating purposes, capable of being regulated so as to produce much or little heat as desired and of throwing said heat directly into the room.

This radiator is simple in construction, may be safely manipulated with little or no previous experience and is economical.

That my invention may be seen and fully understood by others skilled in the art, reference will be had to the following specifications and annexed drawings forming a part thereof, in which—

Figure 1 is a front view of my oil radiator; Fig. 2, an end view of the same; Fig. 3, a front view and partial section of the radiator with the top and extinguishers thrown back; Fig. 4, an end view and partial section of the top which is thrown back, a part of the base being broken away to show the end of the reservoir and the closed extinguishers; Fig. 5, a top view of the base showing the extinguishers open; Fig. 6, a modification of the pipe and return-draft tube and Fig. 7, a cross-section on line *x, x*, Fig. 6.

Similar figures of reference designate like parts in the drawings and specifications.

The base 1, of essentially the form shown in the drawings, rests upon the feet 2 and is provided at the back with two or more lugs 3. The ears 4 project upward from the top of the base 1 to receive the rod 13. The lugs 5, Fig. 3, are cast on the under side of the top of the base 1, at opposite ends, and have the slots 6 therein. The reservoir 7 is provided with the trunnions 8 and the burners 9, said trunnions being received into the slots 6 in the

lugs 5. The wicks 10, in the burners 9, are elevated or depressed in the ordinary manner by means of the stems 11 and the thumb-disks 12. The trunnions 8 of the reservoir 7 are preferably square or triangular to prevent said reservoir from swinging when in position, since the bottoms of the slots 6 conform to the shape of said trunnions. The rod 13 bent at one or both ends to form the handles 14, has the extinguishers 15 rigidly attached thereto, and said rod is securely held in place by the ears 4. The extinguishers 15 are hoods or caps which fit over the tops of the wicks 10 and the burners 9 to smother the flames and correspond in number to said burners. The extinguishers 15 are thrown back or opened, as shown in Figs. 3 and 5, and by dotted lines in Fig. 4, and forward or closed, as shown by the full lines in Fig. 4, simultaneously by means of the rod 13. In place of the extinguishers 15 a trough may be employed, extending over all of the burners 9 and operated in the same manner as said extinguishers.

A series of pipes 16, corresponding in number to the burners 9, is held together securely at the top by the frame 17 and at the bottom by the frame 18. The frame 17 has within the compartment or chamber 17<sup>a</sup> into which the upper ends of the pipes 16 open. The frame 18 is open at the bottom and connected with the base 1 by the arms 19 pivoted to the lugs 3. The frame 18 is suitably notched to fit over the rod 13 and the stems 11. The arms 19 are provided with the stops 20 and said stops engage the base 1 when the pipes 16 and the frames 17 and 18 are tilted back, as shown in Fig. 4. The pipes 16, when in position, for use, are directly over the burners 9, each of said burners being beneath the center of each of said pipes. The pipes 16 have openings in front, above the frame 18, said openings being filled with the isnglasses 21, or other suitable transparent material, in order to render the flames visible when the radiator is in operation. The return-draft tubes 22 are in open communication with and attached to the upper extremities of the pipes 16, at the front, and extend downward a little more than half the length of said pipes, where the open, free terminals

of said tubes bend slightly forward. The return-draft tubes 22 are in contact, at the back, with the pipes 16 for the greater part of the length of said tubes, the purpose of which is hereinafter explained. It would make no material difference if the tubes 22 were placed on the back of the pipes 16 instead of in front, or said tubes may be utilized in both positions without departing from the nature of my invention. The isin-glasses 21, or their equivalent, may be employed both in the front and back of the pipes 16, if desired. The pipes 16 and the frames 17 and 18 may be of more or less an ornamental character to suit the taste.

A modification of one of the pipes 16 and the return-draft tubes 22 is shown in Figs. 6 and 7, wherein a simpler and less expensive construction is set forth. The pipe 16<sup>a</sup> has the return-draft tube 22<sup>a</sup> inside instead of outside, as before described. One or more holes 23 are situated in that part of the pipe 16<sup>a</sup> which forms the front of the tube 22<sup>a</sup>, near the base of said tube. The practical utility of the tube 22<sup>a</sup> is the same as that of the tube 22.

The operation of my invention is as follows:—Tilt back the pipes 16 and the frames 17 and 18, until the stops 20 come in contact with the base 1, and light the required number of wicks 10 according to the amount of heat which it is desired to generate, the extinguishers 15 having first been opened if closed. After regulating the size of the flames by means of the stems 11 and disks 12, draw the pipes 16 into position again over the burners 9 with the frame 18 resting on top of the base 1. Fresh air entering beneath the base 1 supplies oxygen to the flames, becomes heated, rises through the pipes 16 and passes out through the return-draft tubes 22, since a continuous passage is provided through the several parts enumerated. If the tubes 22 were not in contact with the pipes 16 said tubes would be cooler than said pipes, thereby causing smoke to form and pass into the room. But by reason of the contact between the tubes 22 and the pipes 16 said tubes quickly become heated to the same degree as

said pipes and steady, smokeless flames on the wicks 10 are the result. A certain amount of heat is radiated from all parts of the pipes 16, the tubes 22 and the frames 17 and 18, but a large proportion of said heat is thrown directly into the room through the open lower terminals of said tubes. When it is desired to dispense with the heat simply close the extinguishers 15 through the medium of the rod 13.

To remove the tank 7 from the base 1, for the purpose of refilling or cleaning and trimming the wicks 10, it is only necessary to open the extinguishers 15, tilt back the pipes 16 and raise said tank until the trunnions 8 are clear of the slots 6. The tank 7 may be as easily replaced under the radiator, after receiving the necessary attention, when the pipes 16 are tilted forward and said radiator is again ready for use.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an oil radiator, the base 1 having the ears 4 and lugs 3, the removable reservoir 7 suspended from said base by trunnions and provided with a series of burners and wicks, a rod bearing in said ears, and one or more extinguishers rigidly attached to said rod, in combination with the frames 17 and 18, a series of pipes having return-draft tubes, connecting said frames, the frame 18 pivotally attached by the arms 19 to said lugs 3, and the stops 20 on said arms, in the manner substantially as and for the purpose set forth.

2. In an oil radiator, a series of pipes 16<sup>a</sup>, return-draft tubes 22<sup>a</sup>, said tubes provided with the holes 23, the chambered frame 17 at the top of said pipes and the frame 18, having the arms 19 and stops 20, at the base, in combination with the base 1 provided with the lugs 3, in the manner substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY RUPPEL.

Witnesses:

HARRY W. HOUSE,  
W. B. SAYR.