

F. C. RONK.
 STEAM RADIATOR.
 APPLICATION FILED MAR. 14, 1916.

1,202,896.

Patented Oct. 31, 1916.

Fig. 2.

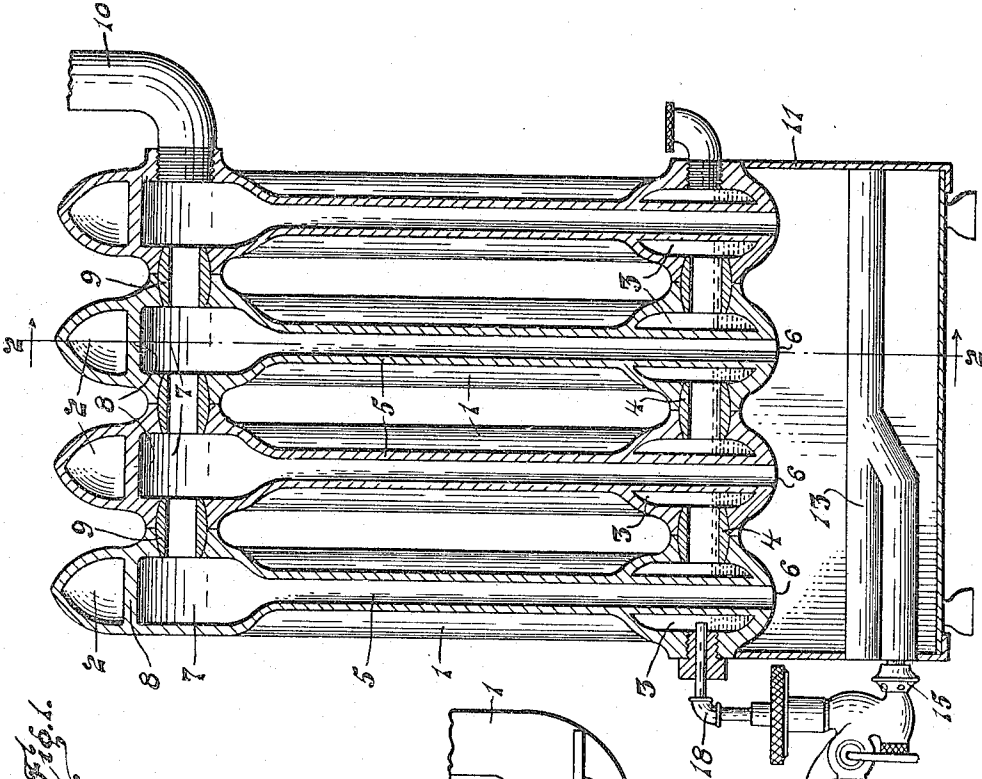
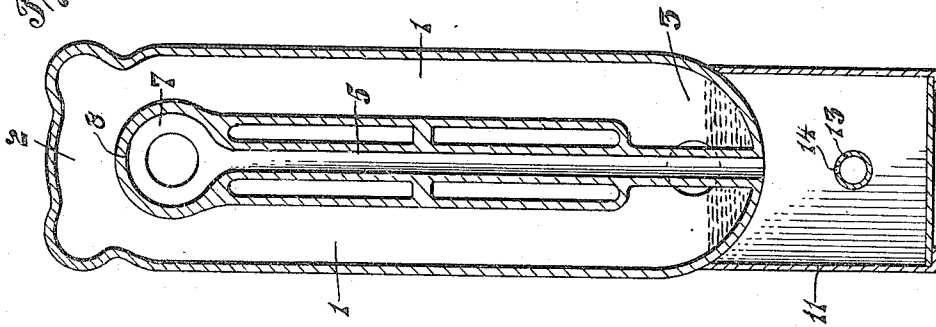
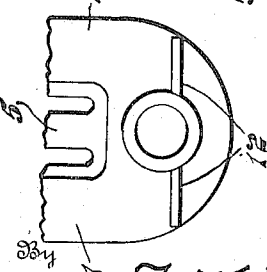


Fig. 1.

Fig. 3.



Witness

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STEAM-RADIATOR.

1,202,896.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK C. RONK, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented a new and useful Steam-Radiator, of which the following is a specification.

My invention relates to improvements in steam radiators and has more especial reference to radiators of this character which are heated by gas.

The object of this invention is to provide a radiator of the character referred to in which the steam will be superheated in the upper portion of the radiator.

A further object is the provision of a radiator of this character in which a gas heated column is provided between each pair of steam columns, thus increasing the radiation surface.

With these objects in view the invention consists in the novel construction and arrangement of parts, hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claim, it being understood that various changes in the form, proportions, size and minor details of construction may be made within the scope of the appended claim, without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings: Figure 1 is a longitudinal section through a radiator constructed in accordance with my invention. Fig. 2 is a section on the line 2—2, Fig. 1. Fig. 3 is a fragmentary view of a portion of one of the radiator sections.

Similar numerals of reference indicate corresponding parts throughout all the figures of the drawing.

Referring more especially to the construction illustrated in the accompanying drawing, the radiator comprises a series of sections, each section comprising a pair of steam columns 1 communicating at their upper and lower extremities by means of the passage 2 and the water chamber 3 respectively, each of said water chambers communicating with the water chamber of the next adjacent section by means of the ordinary nipple 4. Located between the steam columns of each section and spaced therefrom is a gas column or flue 5, said flue passing through the water chamber and being open at its lower extremity as indicated

at 6, the upper extremity of said flue communicating with a chamber 7 partitioned off from the steam column and steam passage 2 by means of a wall 8, said chambers 7 communicating by means of the ordinary nipples 9.

A pipe 10 communicates with the chamber 7 at one extremity of the radiator, said pipe leading to a chimney, the chamber 7 at the other extremity of the radiator being closed. A box 11 preferably formed of sheet metal is provided around the lower portion of the radiator, the upper edges of said box at each extremity of the radiator engaging the flanges 12 which are provided upon the radiator sections. Any suitable form of burner 13 is provided within the box 11, said burner being provided along its upper edge with apertures 14. The usual air mixer 15 is connected to the burner and if desired a thermally controlled valve 16 of any usual and well known construction is provided between said air mixer and the gas inlet pipe 17 for the purpose of regulating the gas pressure to the burner 13 to maintain a uniform temperature in the room, a pipe 18 connecting said thermally controlled valve and steam chamber 3 of the adjacent end section of the radiator. It will of course be understood that this thermally controlled valve is not essential to the present invention and may be dispensed with if desired.

By the construction above described and illustrated in the accompanying drawings the steam generated in the radiator sections by means of the gas burner 13 is allowed to circulate entirely around each section and through all of the sections by means of the nipples 4 at the lower extremities of the sections. The gas fumes pass up through the gas columns or flues 5 to the chambers 7, superheating the steam in the upper extremities of the several sections, said gas fumes passing off through the pipe 10. Thus a greater amount of heat is produced with a small amount of steam pressure, the columns 5 adding to the radiating surface of the radiator and at the same time being so inclosed between the steam columns 1 as to prevent any one from coming into contact therewith, the heating chambers 7 superheating the steam at the point farthest from the burner.

Although the drawings and above specification disclose the best mode in which I have contemplated embodying my invention

I desire to be not limited to the details of such disclosure, for, in the further practical application of my invention, many changes in form and construction may be made, as circumstances require or experience suggests, without departing from the spirit of the invention, within the scope of the appended claim.

I claim:

23 A radiator of the character described, comprising a series of sections, each section comprising a water chamber, a pair of spaced upwardly extending steam columns communicating at their lower extremities with
25 said water chamber and a passage connecting said steam columns at their upper ex-
28 tremities, a flue for the passage of products

of combustion extended upward through said water chamber and between the pair of steam columns and spaced therefrom, the lower extremity of said flue being open, a heating chamber communicating with the upper extremity of said flue, said heating chamber being located adjacent the passage connecting said steam columns, nipples connecting said water chambers, nipples connecting said heating chambers, an escape pipe communicating with said heating chambers and a burner located beneath said sections.

In testimony that I claim the above, I have hereunto subscribed my name.

FRANK C. RONK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."