

A. T. CLARK.
RADIATOR.
APPLICATION FILED MAR. 5, 1918

1,313,518.

Patented Aug. 19, 1919.

FIG. 1

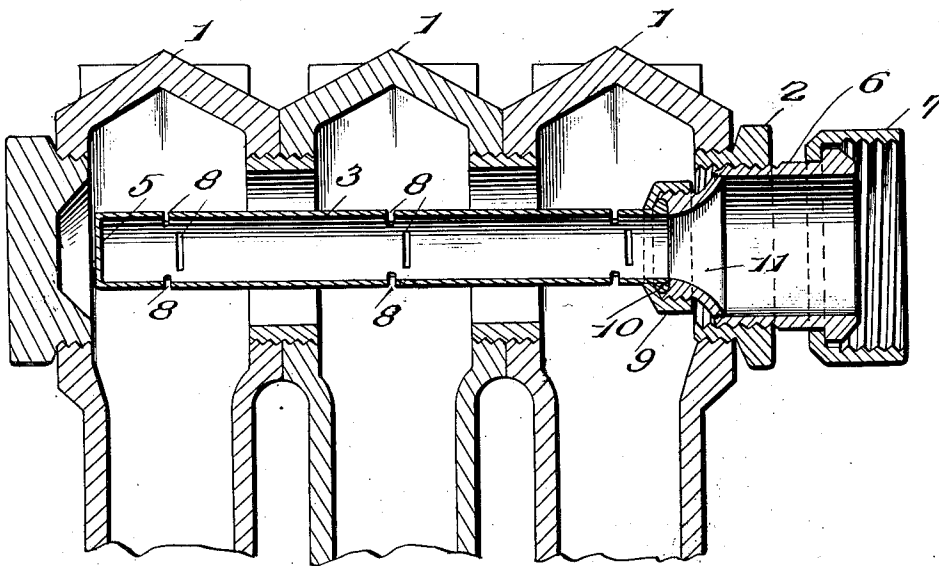


FIG. 2.

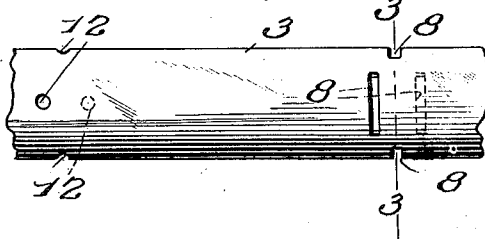
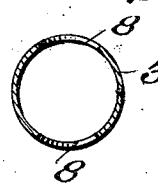


FIG. 3.



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RADIATOR.

1,313,518.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ARTHUR T. CLARK, a citizen of the United States, residing at Saranac Lake, in the county of Franklin and State of New York, have invented certain new and useful Improvements in Radiators, of which the following is a specification.

This invention has for its object the provision of a simple, inexpensive and efficient device which may be readily connected to any radiator and by which the heating medium will be distributed equally to all the sections of the radiator.

The invention is illustrated in the accompanying drawings and will be hereinafter fully described, and it resides in certain novel features which will be particularly pointed out in the claim following the description.

In the drawings:

Figure 1 is a sectional view of a portion of a radiator showing my improved device in position therein.

Fig. 2 is an elevation of a portion of the heating nozzle.

Fig. 3 is a transverse section on the line 3—3 of Fig. 2.

The radiator is composed of a plurality of sections 1 which may be of any well-known structure and are connected in the usual manner. At the supply end of the radiator is a collar or nut 2 through which is inserted a nozzle 3 consisting of a pipe or other tubular member which is preferably of metal and has one end open, while the opposite end is closed, as shown at 5. The collar 2 receives a coupling member 6 which is engaged by a coacting coupling member 7 threaded onto the pipe which supplies the steam or other heating fluid. At intervals along the nozzle 3 are openings 8 which are so spaced that a group or set of openings will be located at or near the central plane of each radiator section and it will be noted that the openings are formed in sets or groups so that the vapor may escape from the nozzle at all sides of the same and play upon all the walls of the several radiator sections.

The open end of the nozzle may be fitted directly to the inner end of the coupling 6 but I prefer to employ a union 9 engaging a

convex annular rib or flange 10 on the nozzle and having threaded engagement with a pressure-increaser member 11 which flares outwardly, as shown, and is brazed or otherwise secured to the inner end of the coupling 6 so as to be rigid and fluid tight. The connection shown and described is necessary when the radiator valve is of large diameter and is advantageous in all cases in fitting the attachment to the radiator. There is a tendency of the nozzle to gyrate within the radiator, especially during assembling, and the union connection with the convex rib accommodates this movement while maintaining a perfect joint.

The operation of the device is thought to be obvious. The radiator is set up in the usual manner and the coupling 6 is fitted in the collar 2 which, in turn, is secured in one end section of the radiator, the nozzle being thereby extended through the several radiator sections, as clearly shown in Fig. 1. When the steam or other vapor is turned into the supply pipe, it will flow into the nozzle 3 and will fill the same instead of passing directly into the radiator sections successively. Consequently, one radiator section will not be heated while the others remain cold nor will the heat remain at one end of any radiator section, but the heating fluid will be admitted to all the radiator sections simultaneously and the radiator will be heated uniformly throughout its extent and, consequently, a more rapid distribution of the heat within the room or compartment will be effected. The device is obviously very simple in its construction and may be manufactured and applied to any radiator at a slight cost. The outlet openings 8 may be formed in any desired manner and may be conveniently made by employing a saw to cut slots across the circumferential surface of the nozzle at diametrically opposite points. The openings may be formed by punching or otherwise, however, and I have illustrated circular perforations at 12 in Fig. 2. The openings will preferably be staggered as illustrated so as to avoid weakening of the nozzle tube to an undue extent.

Having thus described the invention, what I claim as new is:

The combination with a radiator, of a col-

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lar fitted therein, a coupling carried by the collar and having an outwardly flared member at its inner end, a nozzle extending into the radiator and having its outer end abutting the inner end of said flared member and provided with an external annular rib,

and a union secured upon the flared member and engaging over said annular rib on the nozzle, the nozzle being provided with escape openings between its ends.

In testimony whereof I affix my signature.
ARTHUR T. CLARK. [L. S.]