

S. D. STAUFFER.
RADIATOR.
APPLICATION FILED APR. 2, 1909.

962,061.

Patented June 21, 1910.

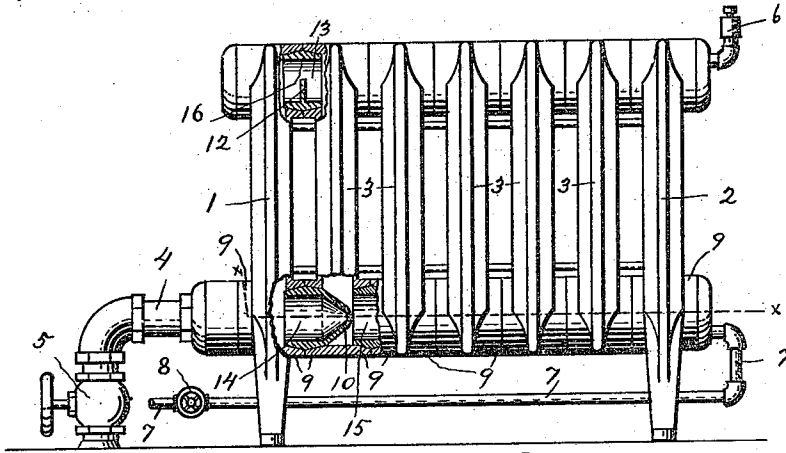


Fig 1

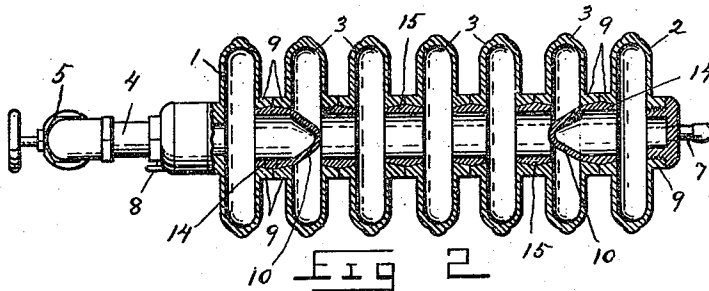


Fig 2

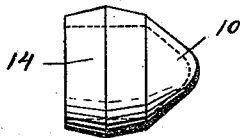


Fig 3

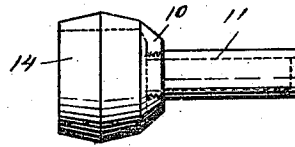


Fig 4

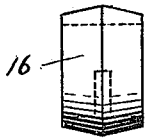


Fig 5

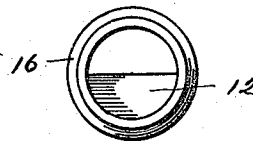


Fig 6

WITNESSES:

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RADIATOR.

962,061.

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Application filed April 2, 1909. Serial No. 487,517.

To all whom it may concern:

Be it known that I, SAMUEL D. STAUFFER, a citizen of the United States, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Radiators, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to a radiator, and more particularly to that class, which are known as combined steam and hot water radiators, and by my novel nipple it is intended to partially or wholly cut off communication between the adjacent coils of the radiator, so that part of the radiator may be used to retain a water supply which can be heated by the free circulation of the surrounding steam, the steam being admitted to the upper ends of the water legs and the water being prevented from escaping therefrom by the novel construction of my improved nipple.

While I have accomplished the same object by my combined radiator, which I have described and claimed in a former application, filed December 15, 1908, Serial No. 467,608, I find that the same result can be obtained by the use of my novel nipple hereinafter fully described and which constitutes a simpler, cheaper and more efficient means of attaining the same results, as by the use of my novel nipple the usual stock radiator coil may be employed and arranged as desired, and further, old radiators now in use may be converted into combined radiators without much trouble or expense.

With these and other objects in view my invention consists in certain construction and combination of parts as will hereinafter be fully described and claimed, and illustrated in the accompanying drawings, which form a part of this application, and in which like figures of reference refer to corresponding parts in all of the views; but it is fully understood that while I have here described my invention as herewith shown, I do not confine myself to the exact construction as shown, as slight changes may be made without departing from the spirit of the invention.

Referring to the drawings forming a part of this application:—Figure 1, is a side elevation of a radiator, broken away in places to show the application thereto of my invention. Fig. 2, is a horizontal sectional view

of Fig. 1, taken on the line X—X. Fig. 3, is a side elevation of one form of my nipple. Fig. 4, is another form of the same nipple. Fig. 5, is a side elevation of my nipple, showing still another form. Fig. 6, is an end view of the same.

In the drawings, 1, and 2, indicate the two end sections or coils of the usual double hub hot water radiator, and 3, the intermediate sections or coils; while 4, is the inlet steam pipe, which is attached to the end section 1, and controlled in the usual way by the valve 5, the upper end of said section 2, being provided with the air cock 6, and the lower end of section 2, with a drain pipe 7, which may be led back to the pipe 4, or to any suitable drain and which is controlled by a valve 8.

Between the end sections 1, and 2, and the adjacent sections 3, within the lower hubs 9, is placed one of my closed or plug nipples 14, which is in the form of the usual tapered radiator nipple, with the exception that one end is entirely closed by the wall 10, which may be flat, but which is preferably in the form of a cone, as shown in Fig. 3, and which may be also supplied with a tube 11, having a closed outer end, the object being to produce as large a radiating surface as possible.

I have here shown my nipple 14, as being placed between the end sections 1, and 2, and the adjacent sections 3, but they may be placed between every other adjacent pair of sections, or wherever desired, the usual nipple 15, being used in all other places, except where the upper ends of the coils are joined, as above every plug nipple 14, I use a similar nipple 16, having a wall 12, which closes about one-half of its opening as shown in Figs. 5, and 6, and which forms a dam to allow of the water attaining a sufficient level to produce a circulation and still be restrained from escaping through the steam chamber, or end sections 1, and 2, and in this manner it will be seen that the water having been admitted through the steam pipe 4, and the radiator entirely filled and then allowed to drain back through the steam pipe 4, the water will be retained from leaving the intermediate sections 3, or entering the end sections 1, and 2, by the plug nipple 14; and the height of the water in the water legs of the intermediate sections and upper longitudinal passage 13, is controlled by the wall or dam 12, in the nipple 16, so that the

water has a free circulation in the sections 3, and is heated by the steam passing through the passage 13, and entering the plug nipple 14, the conical end of which forms a large
5 heating surface, as it extends into the water compartment of the intermediate sections 3.

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

10 In a combined steam and water radiator, a steam section and an adjacent water sec-

tion, a nipple formed with a closed conical end and adapted to be placed between said sections with the conical end of said nipple extending into the water section to increase 15 the heating surface thereof.

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

SAMUEL D. STAUFFER.

Witnesses:

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MABEL L. LEFEVRE.