

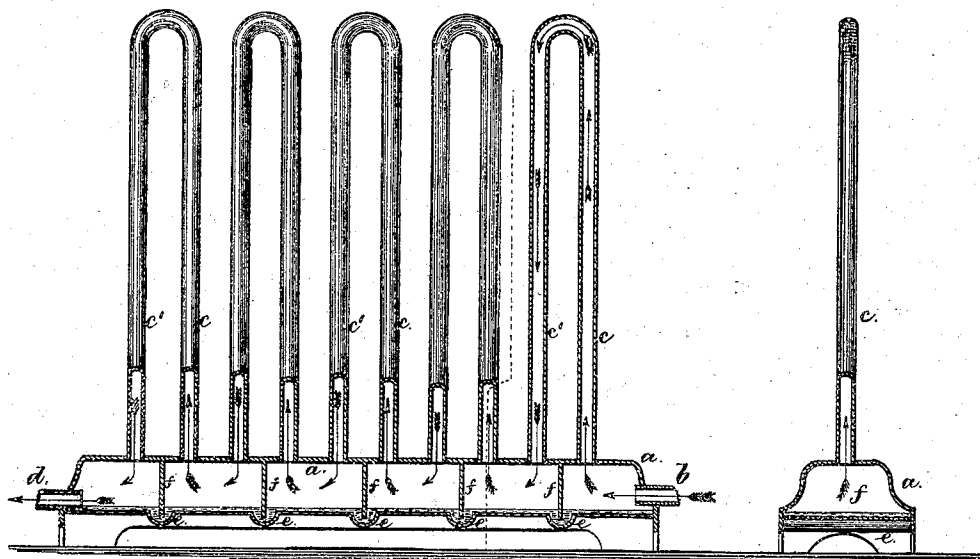
J. P. WILSON.
Steam Radiators.

No. 138,722.

Patented May 6, 1873.

Fig. 1.

Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES P. WILSON, OF YONKERS, NEW YORK, ASSIGNOR TO ADAM CARR,
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IMPROVEMENT IN STEAM-RADIATORS.

Specification forming part of Letters Patent No. 138,722, dated May 6, 1873; application filed
February 14, 1873.

To all whom it may concern:

Be it known that I, JAMES P. WILSON, of Yonkers, in the county of Westchester and State of New York, have invented an Improvement in Steam-Radiators, of which the following is a specification:

Steam-radiators have been made with vertical pipes upon a base into which the steam is admitted, and these pipes have been connected in pairs by return bends to enable the steam to pass up one pipe and down the other, and the base has been divided longitudinally by a plate to separate the inlet and outlet pipes and cause the current of steam to be continuous.

My invention consists in a water-seal between the inlet and outlet pipes formed by transverse division plates and depressions in the bottom plate of the base, by which means I am enabled to place the heating-pipes in a range or ranges. The steam passes in a continuous stream up one pipe and down the next while the water of condensation flows freely along the base to the outlet.

In the drawing, Figure 1 is a longitudinal elevation, partially in section, of my radiator, and Fig. 2 is a cross-section.

The base *a* is provided with the inlet steam-pipe *b* and outlet-pipe *d* at opposite ends. The vertical pipes *c c'* are screwed into the top plate of the base *a*, and are connected at their upper ends by return bends, or these may be formed as a single bent pipe, as shown. The bottom plate of the base *a* is provided with depressions or channels *e* transverse of the base. These depressions are beneath the division-plates *f*, which extend to or are formed

with the upper and side plates of the base *a*. The said division-plates *f* extend down into the depressions *e*, so that their lower edges are below the general bottom surface of the base, and also below the outlet-pipe *d*. If steam is admitted at *b* it will fill the base *a* and pipes *c c'*, and as soon as it commences to condense the water will run into the depressions *e*, and before any water can escape by the outlet *d* it will cover the lower ends of the plates *f*, and with them form a seal to prevent the steam passing directly to the outlet *d* and compel it to circulate up one pipe, *c*, and down the pipe *c'* to the next pair of pipes, and so on until it reaches the outlet *d*. As soon as the water rises above the level of the outlet it will flow in a continuous stream and the seal will remain as before.

It will be evident that if the division-plates *f* extend below the outlet the seal is formed, also, even when the depressions are omitted, but a larger quantity of water is required, as the entire bottom of the base must then be covered. The depressions *e* may extend entirely or partially across the base *a*.

I claim as my invention—

An opening between the inlet and outlet steam-spaces located below the level of the water of condensation to form a water-seal for insuring the circulation of steam in a radiator, substantially as set forth.

Dated this 12th day of February, A. D. 1873.
JAMES P. WILSON.

Witnesses:

GEO. D. WALKER,
GEO. T. PINCKNEY.