

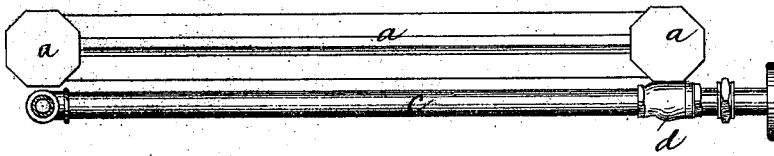
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Connections for Steam-Radiators.

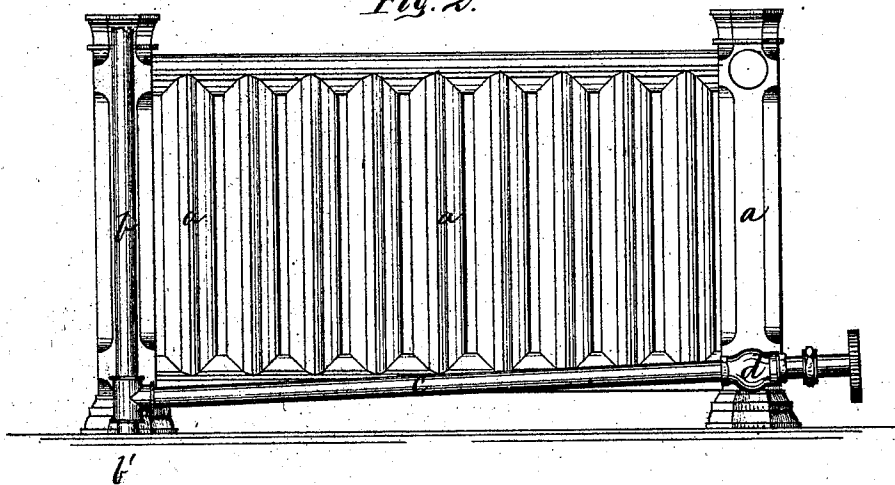
No. 154,561.

Patented Sept. 1, 1874.

*Fig. 1.*



*Fig. 2.*



Witnesses:  
George E. Phelps.  
Maurice Andren

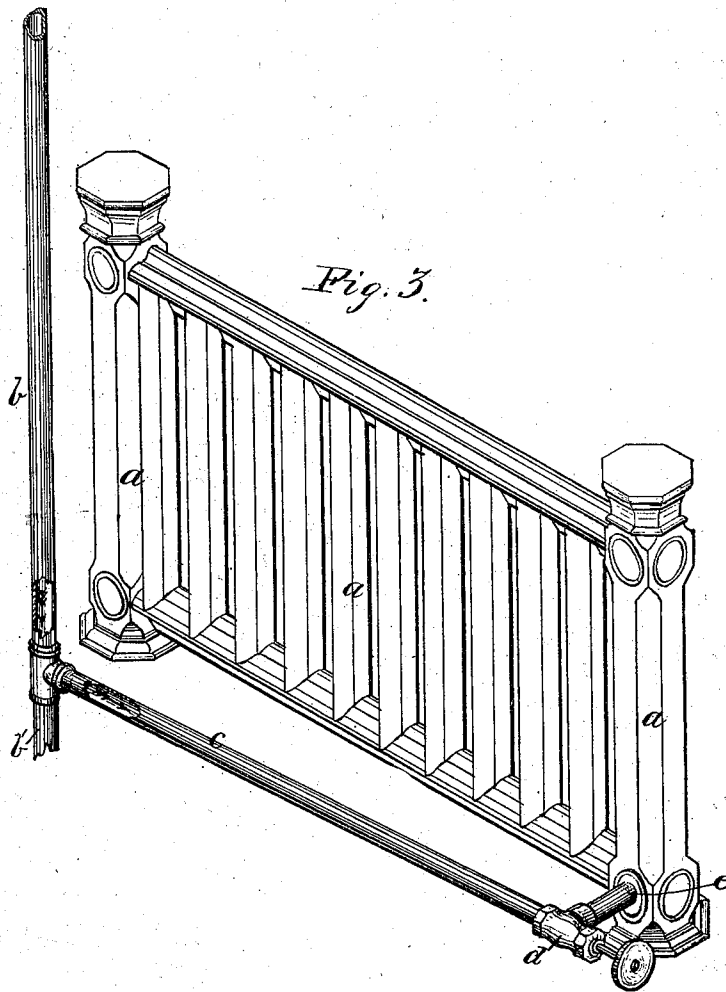
Inventor:  
John H. Mills  
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# UNITED STATES PATENT OFFICE

JOHN H. MILLS, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN CONNECTIONS FOR STEAM-RADIATORS.

Specification forming part of Letters Patent No. **154,561**, dated September 1, 1874; application filed March 17, 1874.

*To all whom it may concern :*

Be it known that I, JOHN H. MILLS, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Connections to Steam-Radiators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in the connections to steam-radiators; and consists in the combination, with an overhead steam-supply pipe, of a single connection and its valve entering the bottom of the radiator, as will herein be more fully shown and described.

On the drawings, Figure 1 represents a ground plan, Fig. 2 represents a side elevation, and Fig. 3 represents a perspective view, of my invention.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

Hitherto it has been common to employ two or more connecting-pipes for radiators heated by steam, one of which pipes was used for the admittance of the steam, and another one for the discharge of the condensed water. It has also been common to use two valves for each radiator for the same purposes. This is objectionable on account of expensive pipings, fittings, and valves.

To avoid this difficulty and extra expense, I arrange and combine, with an overhead steam-supply pipe, a single connection and a single valve that enters the radiator at its lowest point, as shown in the accompanying drawing, on which *a* represents a steam-radiator, and *b* an overhead steam-supply pipe. A single connecting-pipe, *c*, provided with a single valve or cut-off, *d*, establishes a communication from the supply-pipe *b* to the bottom or lowest part *e* of the radiator *a*, as

shown in the drawings. The single connecting-pipe *c* is placed in an inclined position, as shown in Fig. 2, in such a manner that the valve or cut-off *d* is a little higher than the end of the pipe *c* where it enters the supply-pipe *b*, so that the condensed steam may flow unobstructed from the radiator *a* through the lower part of the pipe *c*, and at the same time allow the steam from the overhead pipe *b* to enter the radiator through the upper part of the single pipe *c*. The extension *b'* of the supply-pipe *b* serves for the purpose of conducting the steam to another radiator on a story below, and also for the conveyance of the condensed steam from the radiator *a*.

Thus it will be seen that I am able to use a single connecting-pipe and its valve from the overhead supply-pipe, for the purpose of conveying the steam to the radiator, and to allow the condensed steam to exit therefrom without obstruction, and thereby dispense with additional pipes and valves.

I do not claim the use of a single pipe and valve, when arranged in combination with an underhead supply-pipe, as shown in C. A. Wilson's patent of September 4, 1860, as I use my single pipe and valve in combination with an overhead supply-pipe, by which the advantage is obtained of letting the steam and condensed water travel unobstructed in one and the same direction.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent, and claim—

In combination with an overhead steam-supply, *b*, of a single pipe, *c*, and its valve *d* entering the bottom of radiators, as and for the purpose herein set forth and described.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of March, 1874.

JOHN H. MILLS.

Witnesses:

ALBAN ANDRÉN,  
GEORGE E. PHELPS.