

L. S. DANIELS.
STEAM RADIATOR.

No. 108,978.

Patented Nov. 8, 1870.

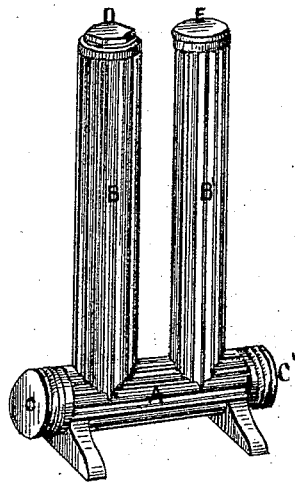


Fig. 1.

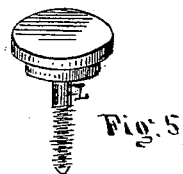


Fig. 5



Fig. 4

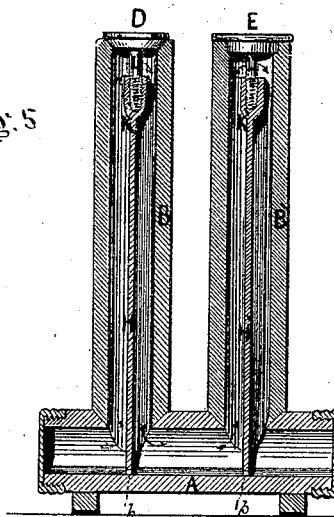


Fig. 2

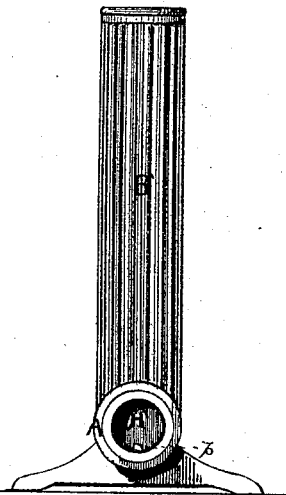


Fig. 3

Witnesses

Lewis S. Daniels Inventor
Frank M. Parker
Charles E. Rogers

United States Patent Office.

LEWIS S DANIELS, OF FOXBOROUGH, MASSACHUSETTS.

Letters Patent No. 108,978, dated November 8, 1870.

IMPROVEMENT IN STEAM-RADIATORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

I, LEWIS S. DANIELS, of Foxborough, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Steam-Radiators, of which the following is a specification.

The Nature of the Invention

The nature of my invention consists in the arrangement of the parts of a cast-iron radiator; by which I provide for the circulation of the steam, and also for return of the water of condensation in a novel manner, which can be best understood by inspection of the drawing.

Description of the Accompanying Drawing.

Figure 1 represents my improved radiator, in perspective.

Figure 2 is a vertical section of the same.

Figure 3 is an end view, showing a portion of the division-plate H' within the lower part A of the radiator.

Figure 4 is a cross-section of one of the vertical pipes.

Figure 5 is a perspective view of one of the caps and its stem.

General Description.

One of the leading features of my invention is that the uprights B B' are cast as a single piece with the horizontal part A, the number of the uprights B B' being varied to suit the amount of heating-surface desired.

Another feature is the vertical division-plate H, shown in fig. 2.

This division-plate starts from the lower part of the lower pipe A and extends upward nearly to the top of the vertical pipe, as shown in fig. 2.

The upper ends of the division-plates are provided with bosses K K', into which the stem of the caps D and E screw.

The cap D is beveled, as shown in fig. 2, and is held in position by means of the stem L, which screws into the socket K.

The cap E is rabbeted, as shown in fig. 2, and is held in position by means of the stem L', which screws into the socket K'.

The caps C and C' are screwed onto the ends of the lower radiator, as shown in figs. 1 and 2.

The division-plates H and H' are perforated near the bottom, as shown at p and p, figs. 2 and 3, so as to allow the water of condensation to flow through.

The connecting-pipe for direct steam and for return may be attached by any of the improved methods.

By my arrangement I secure great economy of construction as well as simplicity and security against leakage.

Another, and perhaps the most important feature of this invention, is that I secure a most perfect circulation of steam over and against the entire surface of the radiator, and without interfering in the least with the circulation of the water of condensation.

I claim as my invention—

A steam-radiator, consisting of the tube A, uprights B B', the vertical perforated divisions H H', secured by means of stem L and socket K, surmounted by cap D, when constructed and arranged as shown and described, and for the purpose specified.

LEWIS S. DANIELS.

Witnesses:

FRANK G. PARKER,
CHARLES E. ROGERS.