

A. P. PITKINS.
Steam Radiator.

No. 28,686.

Patented June 12, 1860.

Fig. 2.

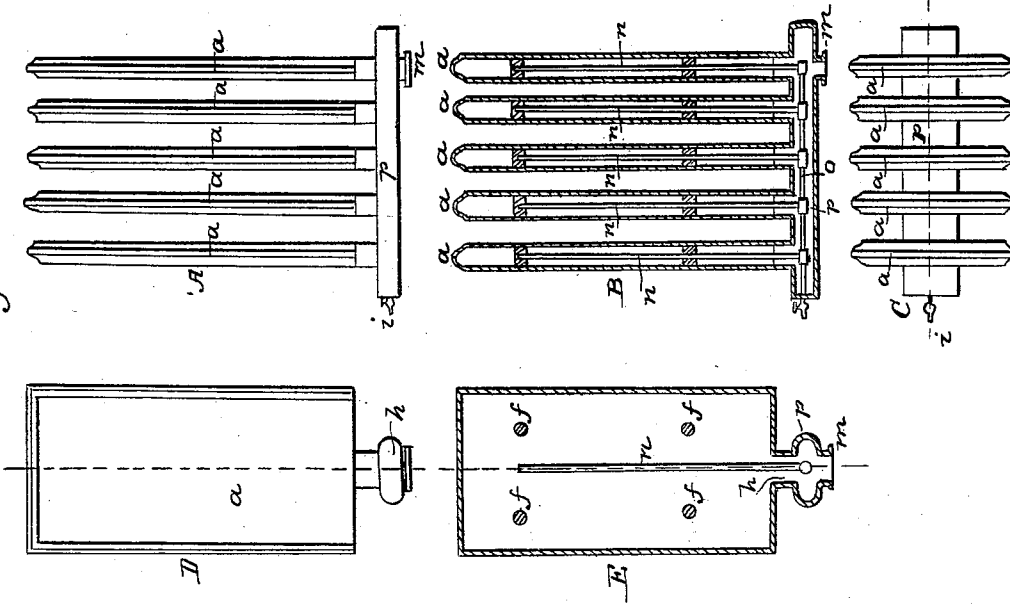
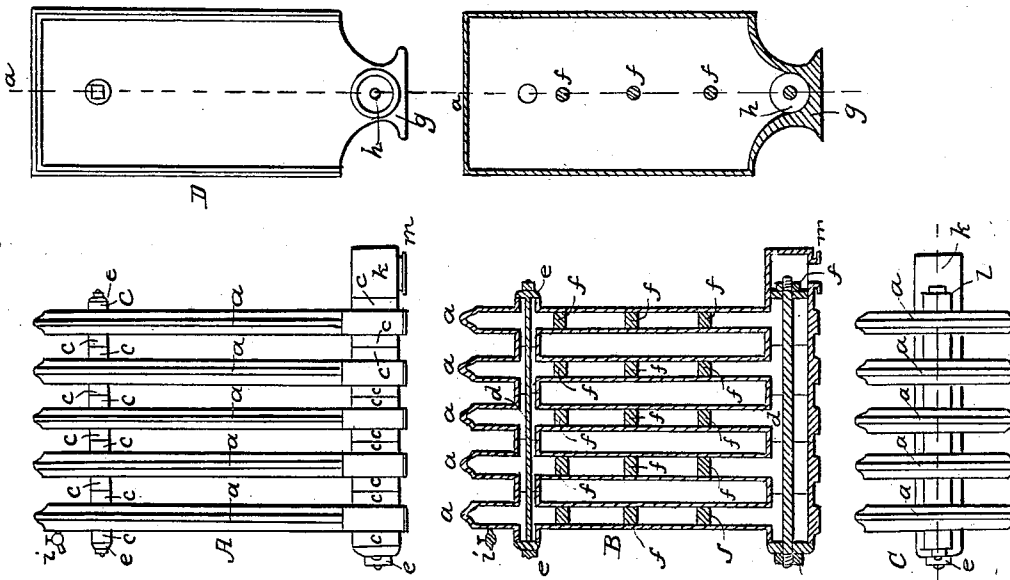


Fig. 1.



Witnesses:
Edward W. Allen
Journey to Bluff

Inventor:
A. P. Pitkin

UNITED STATES PATENT OFFICE.

A. P. PITKIN, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN STEAM-RADIATORS.

Specification forming part of Letters Patent No. 28,686, dated June 12, 1860.

To all whom it may concern:

Be it known that I, A. P. PITKIN, of Hartford, county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in Steam-Radiators; and I do hereby declare that the same is described and represented in the following specification and drawing.

To enable others skilled in the art to make and use my improvement, I will proceed to describe its construction and operation, referring to the drawing, in which the same letters indicate like parts.

The nature of this improvement in steam-radiators consists in making a perpendicular radiator of one piece of metal with the two sides cast or made together, having intermediate connections to support the plates—first, to prevent the bursting of the radiator from unequal expansion or from an overpressure of steam or water; secondly, as supports to prevent giving in or collapsing when being bolted together in clusters with the steam, water, and air passages on the sides or at right angles with the edge of the radiators, and so arranged when bolted together in clusters as to bring the edges of the radiators toward the center of the chamber or apartment to be heated for the purpose of allowing a better circulation of air between the radiators; and, further, the contracting of the bottom part of the radiator, first, to allow of the better circulation of air between the radiators; second, for the better strengthening of the radiator, and, third, for the purpose of forming a good conductor for the condensed steam or water into the feed-pipe.

In the accompanying drawing the figure shows detail views of the first and most important part of my invention.

A is a perpendicular edge view of a cluster of five radiators placed side by side constructed after the plan of the first and most important part of my invention.

B shows a vertical sectional elevation thereof cut through the center, as shown by red lines in the top view C and side sectional elevations D E.

a are the radiators, made of such length, breadth, and thickness as may be desirable, with plain or molded edges, the side plates made plain, concave, convex, corrugated, or

other desirable form to give strength and effect in appearance, and having hubs or bosses c, with orifices h to hold them in their proper position and at suitable distance apart to allow a circulation of air between them, and through which a bolt d (made of a rod or tube) passes, having nuts e or their equivalent on the end thereof, by which they are held firmly together.

f are intermediate supports made or formed in the castings to prevent giving in or collapsing, (and in number more or less, as desirable.)

g is the base on the lower end of the radiators, contracted so as to form a channel in line with the orifice h for the condensed steam or water, and a hub or boss c, of solid iron, at least one-half of its (the hub or boss) diameter in the direction of the tube or rod-bolt d, to prevent breaking by the expansion or strain of the bolts d.

i represents an air cock or valve, or its equivalent, by which the air may be allowed to escape from the radiators.

k is a T-coupling, having an inside flange or ears to receive a nut l, into which one end of the bolt d is screwed, by means of which it and the radiators are secured together. Said coupling is made with an orifice corresponding with the orifice h, and a flange or screw to receive the steam-feed pipe.

The advantages to be derived from this improvement over others now in use are believed to be as follows:

First. The cheapness of construction, each radiator being made whole, without seam or joint.

Second. Its compactness, as it allows of the greatest amount of radiating-surface in a given space of any radiator now in use.

Third. Its simplicity, as each and every radiator are alike, and will fit in any place in the cluster without regard to the ends.

Fourth. Its multiplicity, as it may be carried to any extent (however large the apartment to be heated) by simply adding more radiators.

Fifth. The readiness with which the recesses are supplied with air to be heated.

I have thus endeavored to describe the nature, construction, and advantages to be derived by the use of this improvement so as

to enable a skilled mechanic to make and use the same.

What I claim, therefore, and desire to secure by Letters Patent, is—

Making a perpendicular radiator *a* with the inside connections *f* and contracted at the bottom, forming the steam, water, and air pas-

sages at right angles with the sides, substantially in the manner as and for the purpose described.

A. P. PITKIN.

Witnesses:

EDWARD W. BLISS,
JEREMY W. BLISS.