W. B. SNOW.

Steam-Radiator.

No. 166,901. Patented Aug. 17, 1875.

Fig. 1.

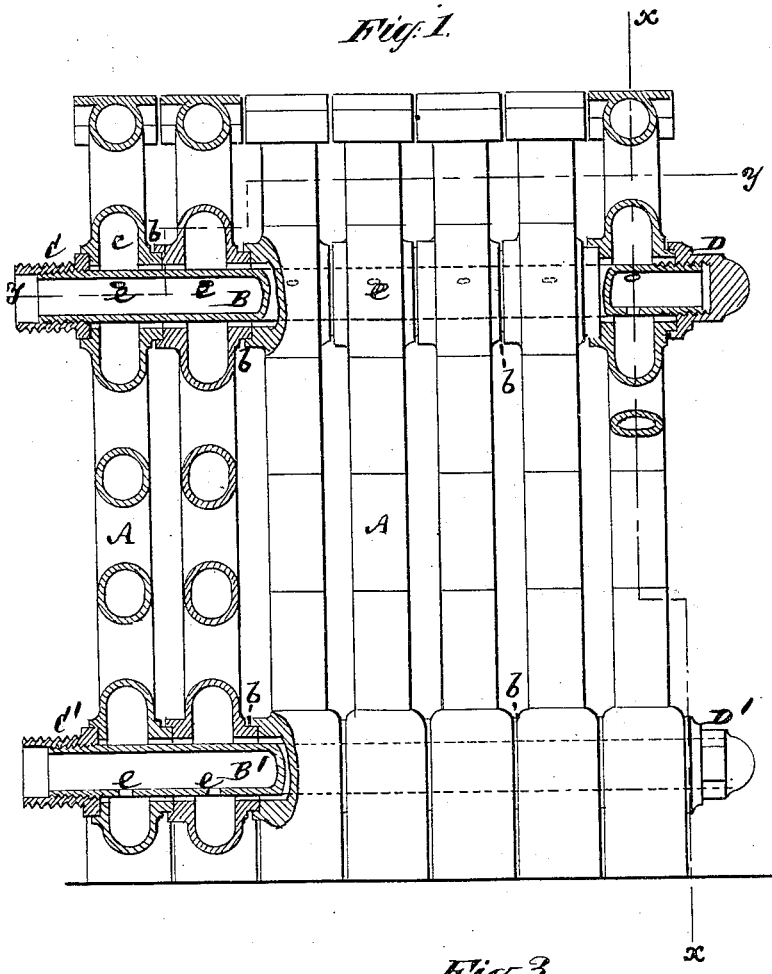


Fig. 2.

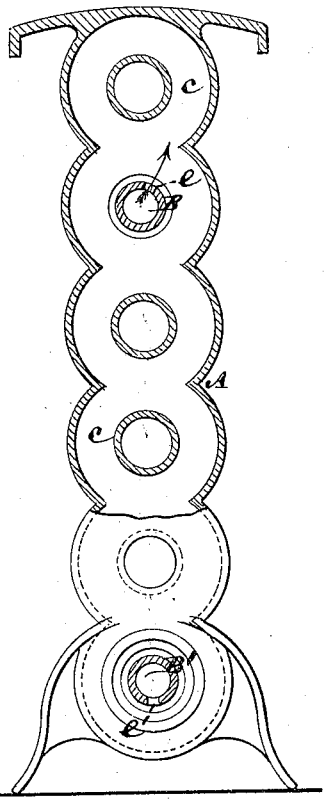
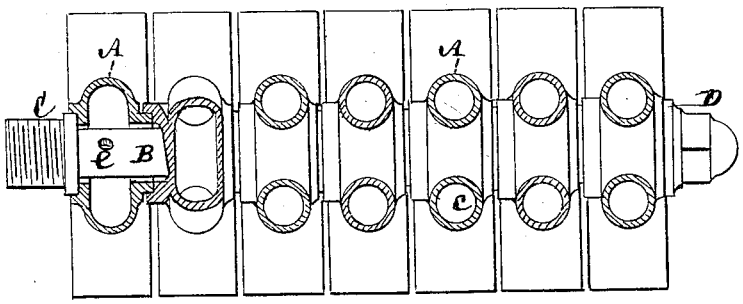


Fig. 3.



Witnesses
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WILLIAM B. SNOW, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF AND EATON, COLE & BURNHAM COMPANY, OF BRIDGEPORT, CONN.

IMPROVEMENT IN STEAM-RADIATORS.

Specification forming part of Letters Patent No. **166,901**, dated August 17, 1875; application filed August 2, 1875.

To all whom it may concern:

Be it known that I, WILLIAM B. SNOW, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Steam-Radiators; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

This invention relates to steam-radiators, mainly composed of independent upright sections in communication both above and below, for the purpose of establishing a circulation through them; and it consists in a novel construction of such radiator, and of the details thereof, including perforated ingress and egress pipes, which also serve the purpose of holding the sections together and of securing their joints. The invention also provides, by means of screw-threaded flanged heads on the one end of said perforated or distributing and tie pipes, alike for the tightening up of the sections by nuts on the opposite ends of said pipes, and for the ready attachment and detachment of the inlet and outlet connections. An elastic and tight fit of the sections with each other at their joints is also obtained, and a very perfect circulation established.

Figure 1 represents a partly broken face or side view of a steam-radiator constructed in accordance with my invention; Fig. 2, a transverse vertical section on the irregular line *x x*, and Fig. 3 a horizontal section of the same on the irregular line *y y*.

A A are the hollow sections or uprights arranged side by side, and which may be made of cast-iron. These sections are independent of each other, but are united above and below in a free or yielding yet close manner by means of socket-joints *b*, which also serve to keep the main bodies of the sections apart. The general contour of these sections may be that of a series of rings mounted upon and in communication with each other, whereby a very efficient radiating-surface is obtained, and a series of curved or annular passages, *c*, promoting circulation within each upright or section, is obtained. These independent sections A are positively connected with each other by means of perforated ingress and egress pipes B B′. These pipes, of which there may be any number but two, the one arranged above and the other below, will suffice, may be formed of or from ordinary gas-pipe, and are passed through the socket-joints *b* of the sections A, extending at both ends beyond the outside sections. On such outer extensions of said pipes screw-threads are cut, and on the one of such screw-threaded ends of each of the two pipes B B′ screw-threaded flanged heads C C′ are screwed. These heads not only serve for the inlet and outlet pipes or connections to screw onto, but they also serve, by means of their flanges, as shoulders for the pipes B B′ when tightening up the sections A A, and for holding the latter together by means of cap-nuts D D′ at the opposite ends of the pipes B B′. The pipes B B′ have perforations *e e* in them at different points throughout their length, preferably one perforation for and within or opposite each section A. The upper pipe B is the steam-ingress pipe, and its perforations *e*, which are on the upper side, should be arranged obliquely to a vertical line, so that the steam, as it issues through said perforations, will be directed to sweep round the upper circular passage *c*, and thereby promote circulation.

The perforations *e* in the under pipe B′, which serve to pass off the waste steam or water of condensation, may be on the lower side of said pipe. The disposition of these perforations *e e* may be changed, however, as may also the shape or construction of the sections A A.

I claim—

1. In a radiator composed of independent upright sections, the combination, with said sections, of perforated ingress and egress pipes, constructed to unite or tie the several sections together at their joints, substantially as specified.

2. The screw-threaded flanged heads C C″ in combination with the perforated pipes B B,

and the radiator-sections A A, such heads forming shoulders, between which and the nuts D D′ on the said pipes the radiator-sections are clamped, substantially as herein set forth.

3. The obliquely-arranged perforations *e* in the ingress-pipe B, in combination with the upper curved or circular passages *c* of the sections A, substantially as and for the purpose specified.

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Witnesses:

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