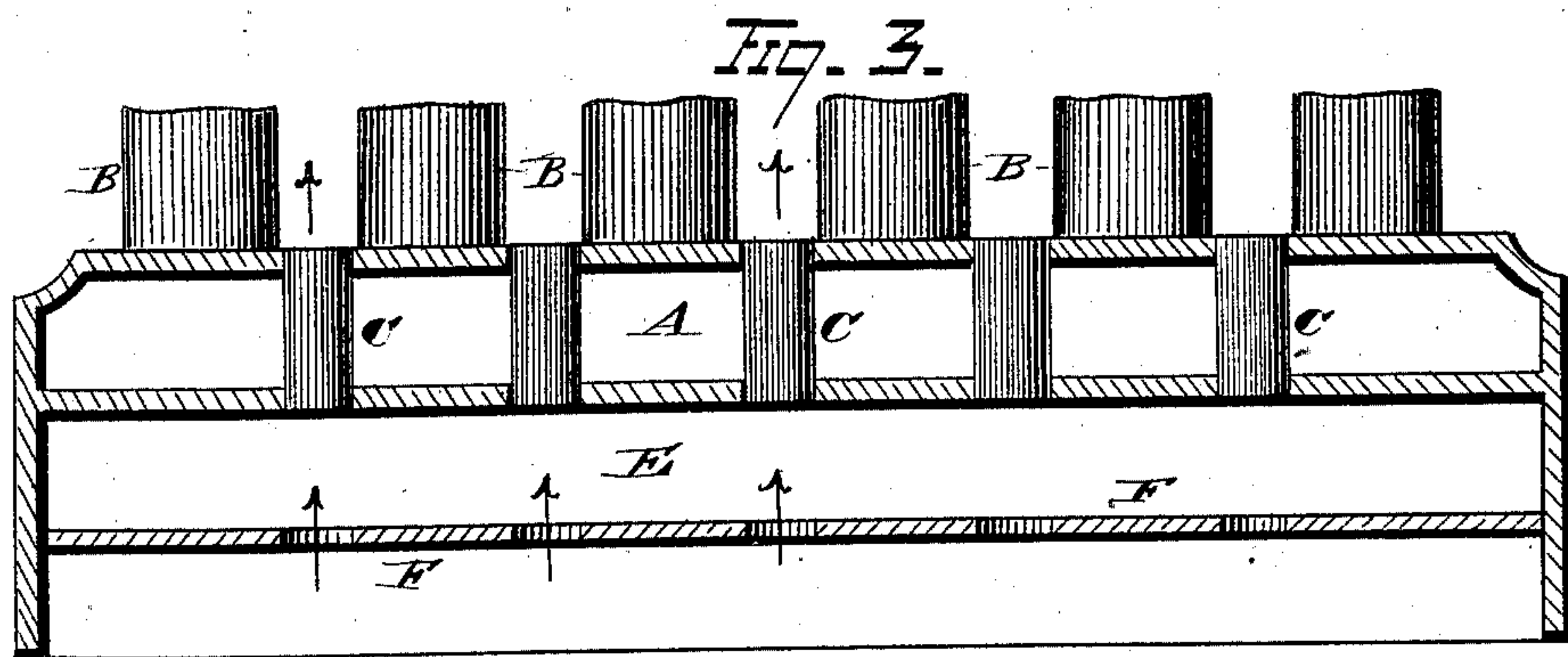
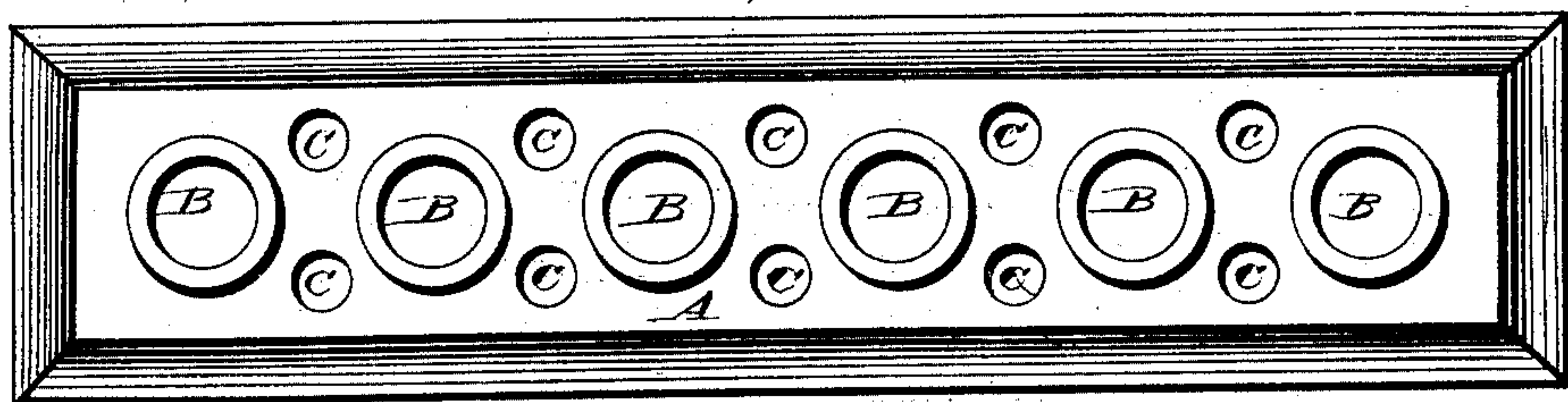
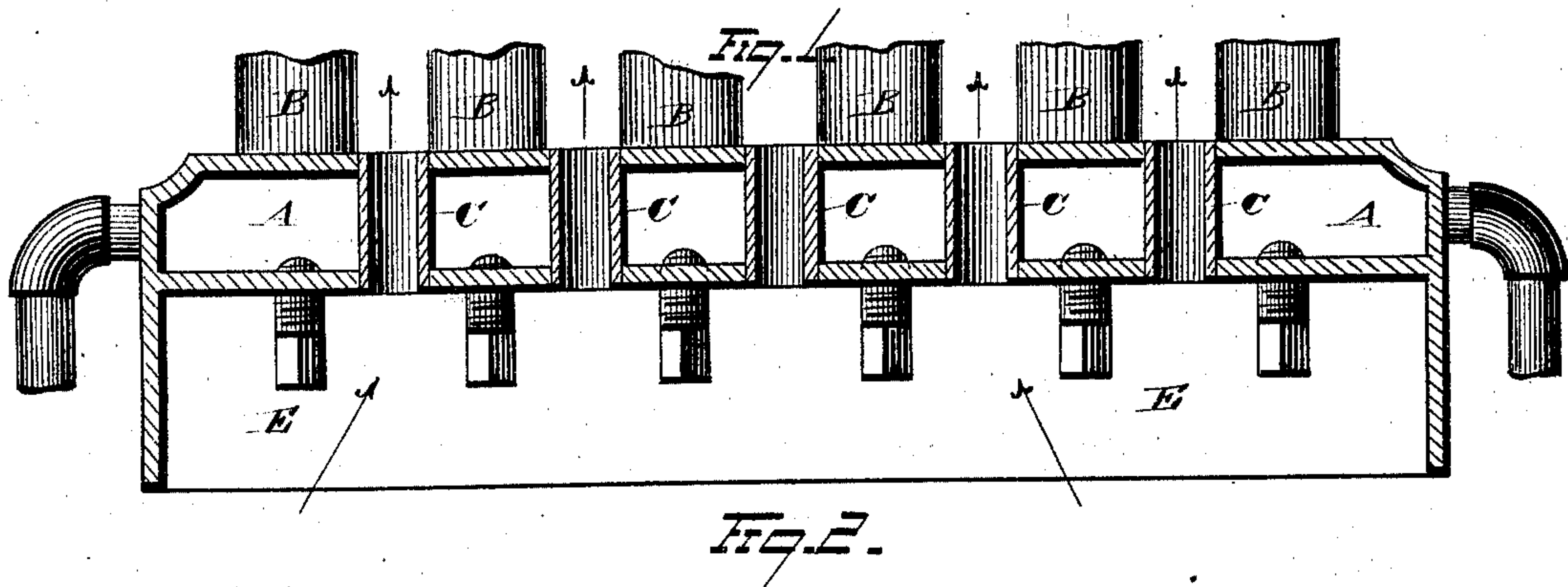


C. HART.
Steam-Radiator.

No. 216,324.

Patented June 10, 1879.



WITNESSES
C. J. Nottingham
A. M. Bright.

INVENTOR
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ATTORNEYS.

UNITED STATES PATENT OFFICE.

CLINTON HART, OF CLEVELAND, OHIO.

IMPROVEMENT IN STEAM-RADIATORS.

Specification forming part of Letters Patent No. **216,324**, dated June 10, 1879; application filed April 21, 1879.

To all whom it may concern:

Be it known that I, CLINTON HART, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in 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 steam-radiators; and consists of the combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a view in vertical longitudinal section. Fig. 2 is a plan view. Fig. 3 is a modification view.

A is the base, and B the heating-pipes, of ordinary steam-tubes formed in two longitudinal series, respectively, in the two side portions of the radiator-base, thus placing the steam-pipes B between said series, and causing the air which issues from the air-tubes to be discharged therefrom, so as to surround each steam-pipe, and thereby cause the heat from the latter to act at all points upon the cold air. E is an air cavity or chamber beneath the radiator, from which the air-pipes lead. F is a diaphragm, which may be employed, if desired, though it is not absolutely essential, its object being to uniformly distribute the air to the various air-tubes C.

It is apparent that in that class of radiators which have a steam-chamber at the top as well as at the bottom, the same arrangement of air-pipes may be made at the top chamber

as at the bottom; or the pipes may be made to extend through either steam-chamber and not through the other, or may be made to extend from beneath the lower one up through both steam-chambers and deliver above the upper one.

It is designed to employ this radiator in connection with a register beneath connecting with the external air, so that external air may enter beneath the radiator into the chamber E, and through the air-pipes C into the room, thus supplying the room constantly with fresh air, which is heated before being discharged into the apartment.

Of course, where it is designed solely for the introduction of external air, the base only need be provided with the pipes C.

I am aware that heretofore steam-radiators have been made which operate on the same general principle as mine, and hence I restrict my improvement to the specific construction recited in the claim.

What I claim is—

In a steam-radiator base, the combination, with the steam-pipes B, of the air-tubes C, formed in two longitudinal series, respectively, in lines which pass on opposite sides of said steam-pipes, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CLINTON HART.

Witnesses:

JNO. CROWELL, Jr.,
EMMA WRIGHT.