

A. H. THORP.
Heating and Ventilating Device.

No. 166,825.

Patented Aug. 17, 1875.

Fig 1

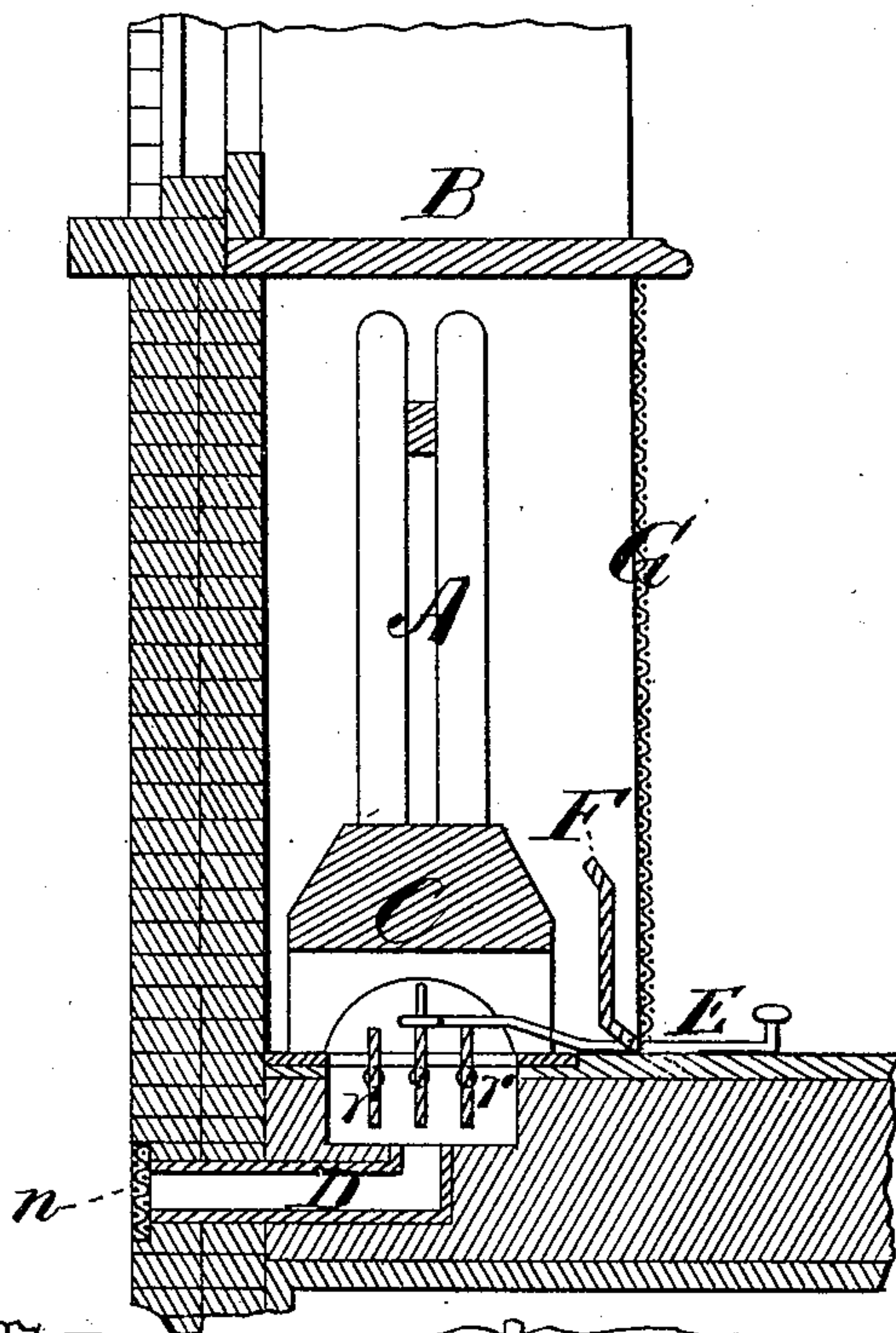
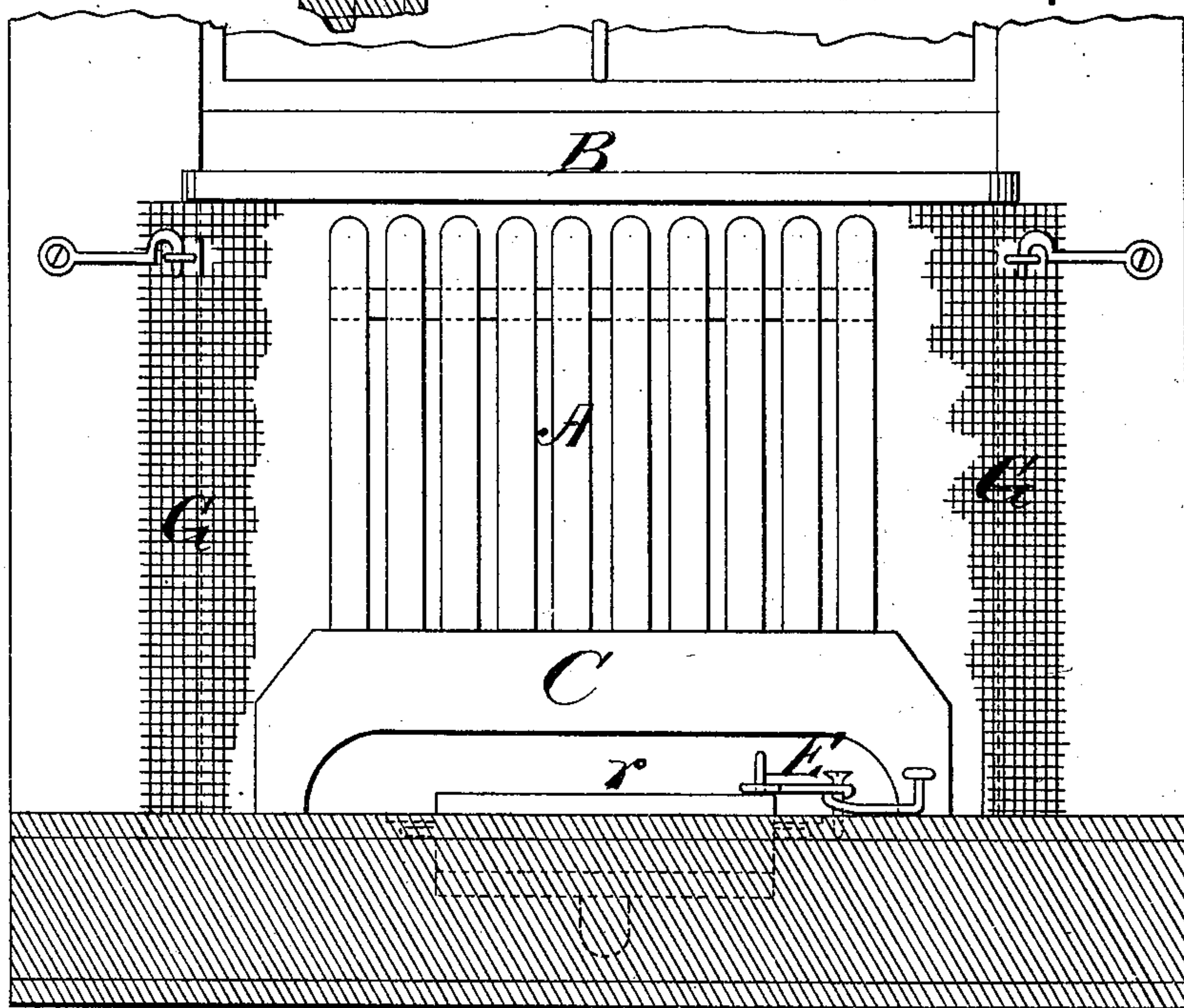


Fig 2



WITNESSES
Francis J. Chasie
E. H. Bates

INVENTOR
Alfred H. Thorp
Chipman and Sumner & Co
ATTORNEYS

UNITED STATES PATENT OFFICE.

ALFRED H. THORP, OF NEW YORK, N. Y.

IMPROVEMENT IN HEATING AND VENTILATING DEVICES.

Specification forming part of Letters Patent No. **166,825**, dated August 17, 1875; application filed June 26, 1875.

To all whom it may concern :

Be it known that I, ALFRED H. THORP, of New York, in the county of New York and State of New York, have invented a new and valuable Improvement in Heating and Ventilating Devices; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a transverse vertical section of my device, and Fig. 2 is a longitudinal vertical sectional view of the same.

This invention has relation to improvements in devices for heating and ventilating rooms, as will be hereinafter more fully set forth.

In order that those skilled in the art may construct and use my improved devices, I shall now proceed to explain my invention.

In the annexed drawings, A designates an ordinary steam-coil or register, which I design to be placed under the marble slab B, in a recess under the window-frame, in the interior face of the wall of the room. This register is mounted, in the usual well-known manner, upon a base, C, and is connected by means of suitable pipes with a steam-generator.

In heating devices of a similar nature it has been customary heretofore to supply this radiator with air from above by raising the window-sash, and conducting the air thus admitted down between the window-back and a sheet-iron plate or screen to the lower portion of the radiating steam-coil. This device has proved a failure for the reason that the plate becomes rapidly heated, and hence raises the air behind it to a higher temperature than that of the room; consequently, in lieu of supplying fresh air to the radiator, it acts as a flue to draw the warm air out of the bottom of the window. This defect I have successfully remedied in the following manner, to wit: I have caused a metallic elbow, D, communicating at one end with the exterior of the building, and terminating at its inner end directly under the radiator, to be let into the wall between the joists of the floor, as seen in Fig. 1, by means of which the air is positively

delivered into the recess under the radiator, passing between and through the coils of which it will be thoroughly heated. In order to regulate the ingress of air through this tube I close its upper inner end by means of a register, *r*, which is operated by means of a rod, E, and, when entering, the current of air thus obtained is prevented from escaping into the room before being heated by means of a close plate, F, rigidly secured to the floor, and extending completely across the recess, as shown in Fig. 1. This plate extends considerably above the base of the radiator, and thus conducts the air upward in contact with the heated tubes of the coil, at the same time preventing a counter-current of air from getting under the base of the radiator, and escaping into the open air through induction tube or pipe D.

In practice, the outer end of the pipe will be closed by means of a netting, *n*, of suitable reticulated material, which netting will be attached to an iron frame let into the outer face of the wall so as to be flush therewith. It will also be painted so as to simulate the color and general appearance of the outside of the building, for the purpose of causing it to present a neat, homogeneous appearance. In practice, also, the recess under the marble slab B, containing the radiator, will be closed by a perforated iron screen, G, and I propose to make this screen either of wrought or cast metal. It may also be made in any style which I may elect, and of any degree of ornamentation.

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

1. The radiator A, having a cold-air-induction pipe and register arranged below it, in combination with the deflecting and conducting plate F and screen G, substantially as described, and for the purpose set forth.

2. The combination of the deflecting and conducting plate F with the induction-tube D and steam-coil A, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ALFRED H. THORP.

Witnesses:

J. G. CAMERON,
SAML. D. MACK.