

O. MARRIN.
Heat-Radiators.

No. 156,934.

Patented Nov. 17, 1874.

Fig. 1.

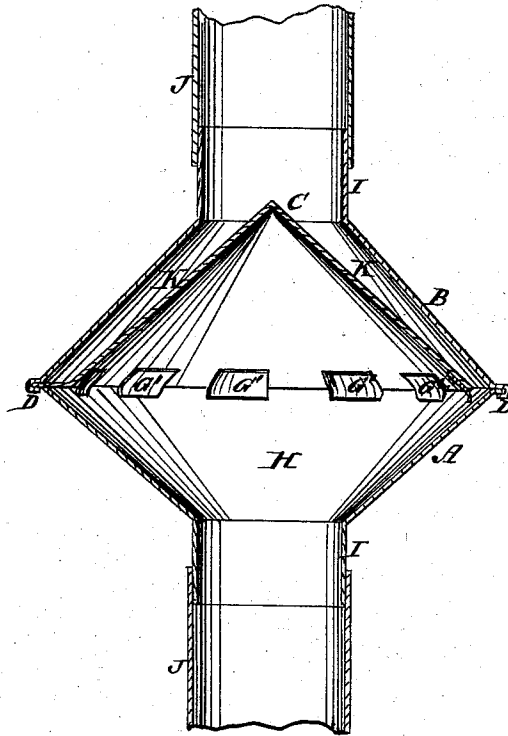
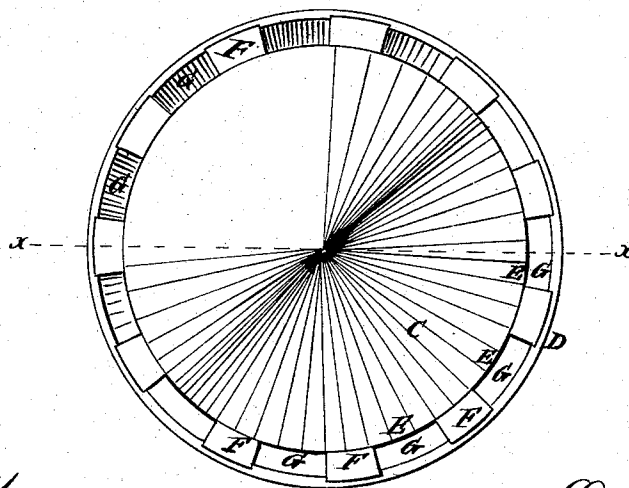


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

OWEN MARRIN, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN HEAT-RADIATORS.

Specification forming part of Letters Patent No. **156,934**, dated November 17, 1874; application filed October 3, 1874.

To all whom it may concern:

Be it known that I, OWEN MARRIN, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Heat-Radiators, of which the following is a specification:

The invention consists in providing the inner cone of the radiator with flexible plates projecting from its base, and arranged at suitable distances apart to regulate the size of the openings, through which the heated air, gases, and other products of combustion ascend in the flue, as hereinafter described.

Figure 1 is a central vertical section of the heater, taken on the line *xx* of Fig. 2. Fig. 2 is a top view, with the upper part of the outer casing removed.

Similar letters of reference indicate corresponding parts.

This heater consists of an upper and a lower cone, A B, (having their bases joined together) which inclose an interior cone, C, which is attached to the joint D, and nearly fills the upper portion B of the heater. This interior cone C is of less diameter than the outer casing, the circle E representing its base, but it is attached to the joint D by a series of lateral projections, F, which extend horizontally from the base E, between which projections are openings G, which allow the smoke and gaseous products of combustion to pass upward and around the outside of the inner cone C. These openings G may be diminished or increased in size by means of small flaps G',

which are bent downward from the inner side of the circle or base E. The size of these openings will depend upon the draft, and in making the heaters the flaps may be adjusted according to the draft of the chimney. The lower portion of the heater is a chamber, H, into which the smoke, &c., is discharged from the stove. At each end of the heater is a neck, I, which receives the stove-pipes J J, or the heater may be placed directly on the collar of the stove, as may be desired. Ordinarily it would be placed—say, one length of pipe—above the stove with pipe extending from its upper neck. There may be a number of these heaters connected with the pipe, arranged in any desired manner for heating chambers or other apartments.

The radiator is made of sheet metal. I do not claim a radiator formed of two or more cones; but

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

In a heat-radiator, the combination with the outer cone B of the inner cone C, having a supporting-rim provided with notches forming openings G, and with the flexible flaps or plates G' for regulating the admission of the products of combustion to the space K, as shown and described.

OWEN MARRIN.

Witnesses:

T. B. MOSHER,
ALEX. F. ROBERTS.