

(No Model.)

A. N. MARTIN.
HEATING APPARATUS.

No. 410,844.

Patented Sept. 10, 1889.

Fig. 1

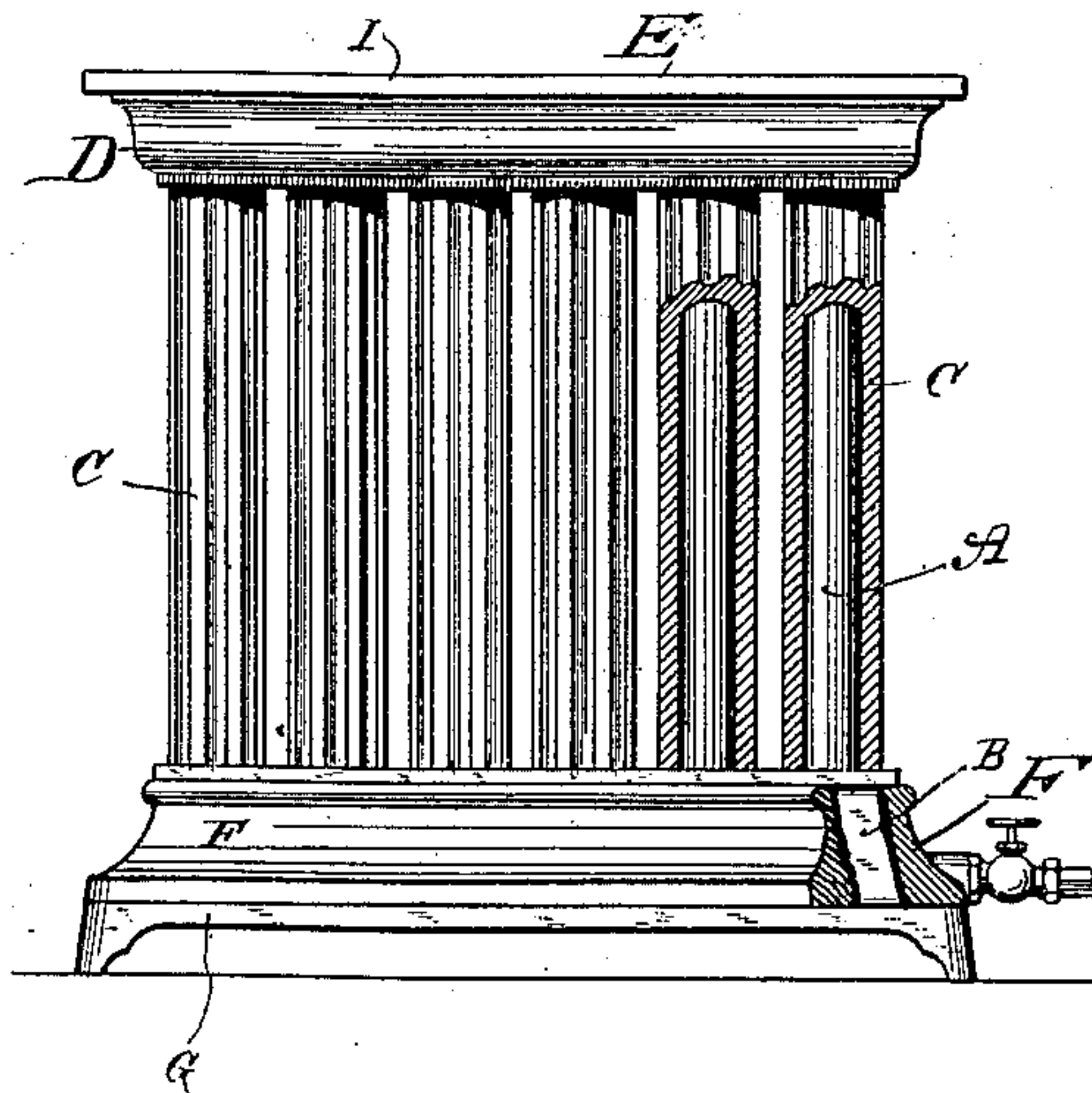
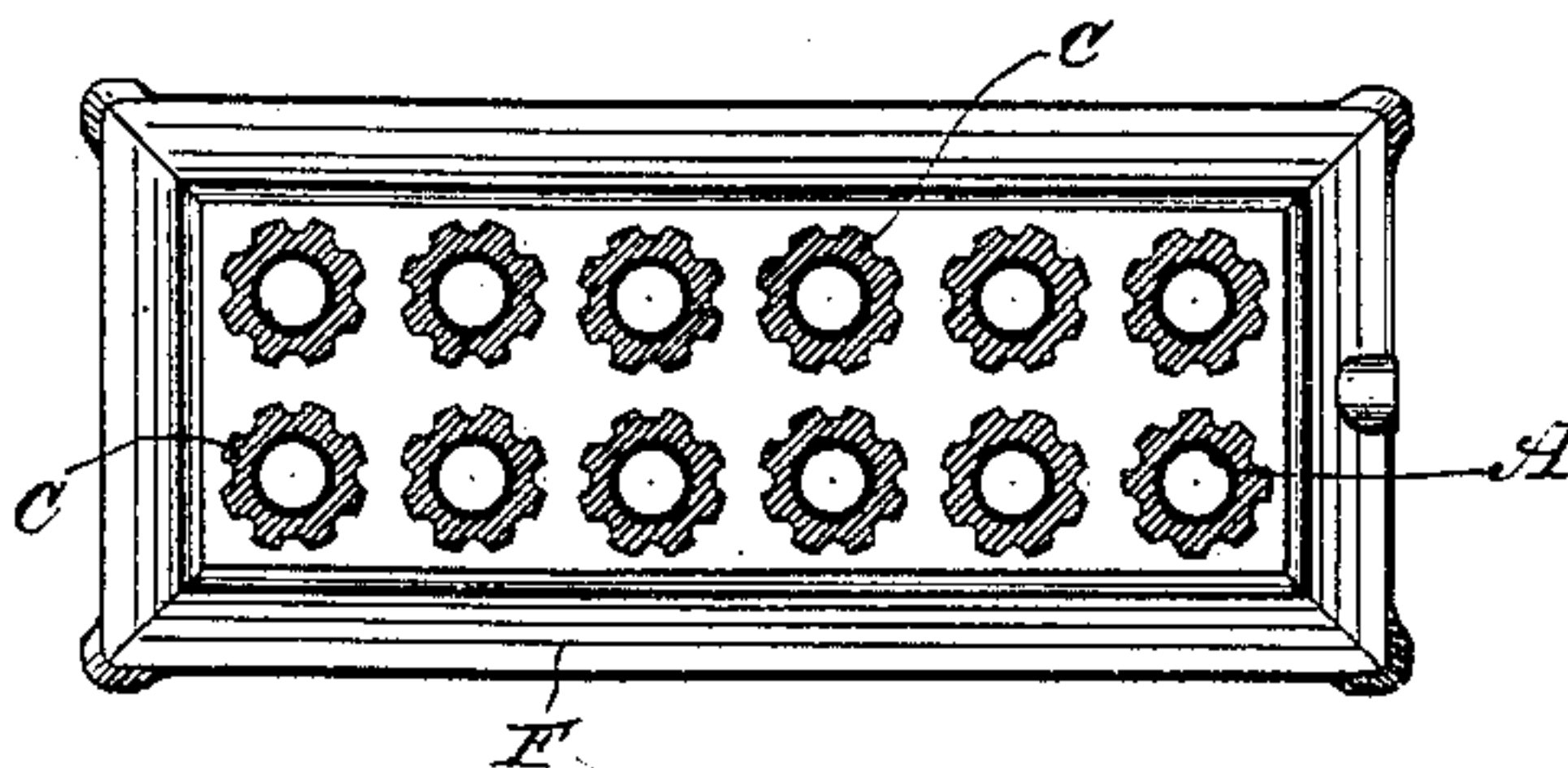


Fig. 2



Witnesses:

Kaplael Netter
Robt. F. Gaylord

Inventor

Archer N. Martin,
by
Duncan, Curtis & Page
Attorneys

UNITED STATES PATENT OFFICE.

ARCHER N. MARTIN, OF SUMMIT, NEW JERSEY.

HEATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 410,844, dated September 10, 1889.

Application filed February 25, 1889. Serial No. 301,055. (No model.)

To all whom it may concern:

Be it known that I, ARCHER N. MARTIN, a citizen of the United States, residing at Summit, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Heating Apparatus, of which the following is a full, clear, and exact description.

The present invention relates to apparatus for heating the air of apartments and rooms; and it relates particularly to that class of air-heating apparatus known as "radiators," in which a coil or collection of pipes is employed as the radiating-surface, such pipes being arranged to form a part of a circulating system of heated vapor or fluid.

It is well understood that with all such systems of heating apparatus where metal is employed to radiate the heat to the surrounding air the air becomes more or less vitiated by contact with the hot metallic surfaces. It is considered, also, that the air is to some extent deoxygenized, and thereby rendered partially unfit for breathing. It is the object, therefore, of the present invention to construct a radiator so that it shall raise the air to the proper temperature without overheating it or causing it to become unhealthful.

To this end the invention consists of a radiator composed of metallic pipes which are covered with a tubular casing of terra-cotta, earthenware, or similar material adapted to modify and reduce the action of the heat upon the surrounding air, so that it will not be vitiated or rendered unpleasant.

Referring to the drawings, Figure 1 represents a radiator in partial section that embodies my improvements, Fig. 2 being a cross-section of the same through its vertical pipes.

The letter A indicates the pipes, such as are used in steam-heating, which may be of the usual form and arrangement, being inserted in a metallic steam-box B, which is common to the lower ends of all the pipes. The pipes A are surrounded by casings or tubes of terra-cotta C, which cover their entire exterior surfaces. The crown of these pipes D may also be of terra-cotta, which may be surmounted by a slab E of slate or marble.

The base or box B is also surrounded by terra-cotta F, though the supporting base-plate G may be of metal without materially impairing the effect of the system.

By this construction of radiator the air may be heated without deterioration. It will not lose its natural moisture and become dry and superheated. It will not become vitiated by the loss of its oxygen, nor unhealthful and abnormal by the disturbance of its elements. Air thus heated will be soft and agreeable to the senses and unaffected, so far as imparting to it unhealthful qualities is concerned, by the heating thereof.

I have described the heating-surfaces as covered with terra-cotta, which I prefer by reason of its availability and cheapness, as well as ease of working. Other kinds of material will, however, serve the same purpose—such, for instance, as various clayey and earthy substances, porcelain, soapstone, and earthenware material, &c., all of which I regard as equivalent of terra-cotta. The material used should have heat-conducting qualities—that is, it should not be what is known as a "non-conductor of heat"—for the object sought is to prevent the intense and violent action upon the air of the metal surfaces of the steam-pipes, which necessarily are at a higher temperature than it is desired to heat the air, and to reduce and equalize and soften the heating action to a point where the air may be duly warmed without impairment in the matter of healthful requisites.

What is claimed as new is—

1. A radiator composed of a coil or series of connected pipes incased in tubes of terra-cotta, substantially as and for the purpose set forth.

2. A radiator composed of a series of pipes connected together by a box common to all the pipes, the said pipes and box being surrounded by casings of terra-cotta conforming in shape thereto, as set forth.

ARCHER N. MARTIN.

Witnesses:

PARKER W. PAGE,
ERNEST HOPKINSON.