

(No Model.)

S. DUCOLIN.
HEATER.

No. 261,838.

Patented Aug. 1, 1882.

Fig. 1.

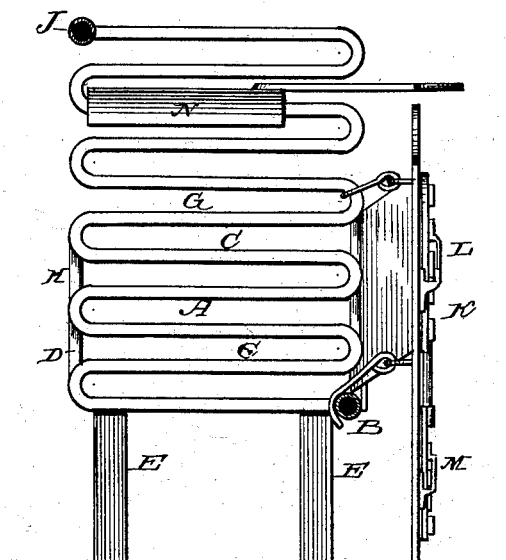


Fig. 2.

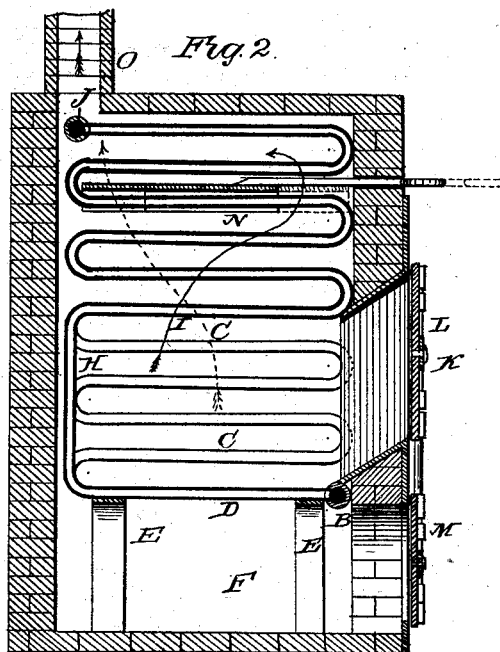
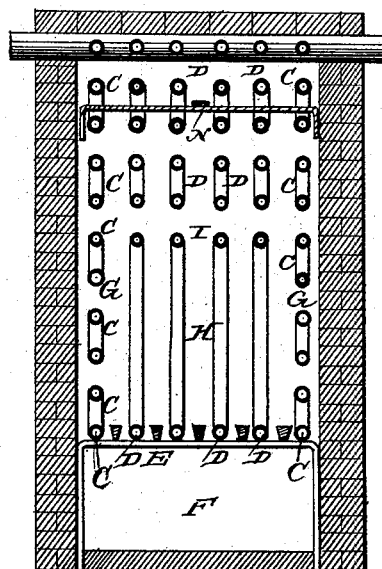


Fig. 3



WITNESSES:

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UNITED STATES PATENT OFFICE.

STEPHEN DUCOLIN, OF NORWOOD, NEW YORK.

HEATER.

SPECIFICATION forming part of Letters Patent No. 261,838, dated August 1, 1882.

Application filed May 26, 1882. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN DUCOLIN, of Norwood, in the county of St. Lawrence and State of New York, have invented certain new and useful Improvements in Heaters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a side view of my improved heater. Fig. 2 is a longitudinal vertical sectional view of the same, and Fig. 3 is a vertical cross-section.

Corresponding parts in the several figures are denoted by like letters of reference.

This invention relates to heating apparatus; and it consists in certain improvements in the construction of the same, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, A represents the fire-box of my improved heater. This is constructed in the following manner:

B is a horizontally-located water-supply pipe, from which a series of branches, C D, extend in a rearward direction, parallel to each other. Said branches, which are supported upon suitable legs, E, form the bottom of the fire-box, under which and between the legs E is the ash-pit F. The outer branch pipes, C C, are coiled upward, as shown, in two vertical parallel planes, so as to form the sides G of the fire-box and heater. The rear ends of the middle branch pipes, D D, are bent upward, forming the back H, and thence forward to form the top I, of the fire-box. From thence they are coiled upward in horizontal and vertical parallel courses between the upper ends of the sides G. The rear ends of all of the branch pipes C D are connected to a horizontal water discharge or outlet pipe, J.

K is a cast-iron front, suitably connected to the fire-box, and having fuel and ash doors L M.

N is a damper consisting of a longitudi-

nally-sliding plate, adjustable between any of the horizontal courses of pipes above the fire-box.

My improved heater is to be built in suitable brick-work, having a chimney or smoke-flue, O, commencing at the upper rear end of the heater.

In operation water passes constantly through the pipes composing the fire-box of my improved heater, and coiled above the same, which water, being thus heated, may be carried off through the exit-pipe J and utilized in any manner desired. The water also prevents the pipes forming the grate-bars and the sides, ends, and top of the fire-box from burning out. When the damper is drawn forward the draft is direct through the chimney. When it is pushed back the draft takes the direction indicated by arrows in Fig. 2, thus exposing all of the upper pipes to the heat.

The construction herein described may be applied to hot-air furnaces or to heaters of any kind.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a heater, the combination of the fire-box formed of pipes, as described, the continuations of said pipes coiled above the fire-box, the water supply and exit pipes, and the adjustable damper-plate, all constructed and arranged substantially as set forth.

2. As an improvement in heaters, the here-described fire-box, formed of pipes connected to a water-supply, the continuations of said pipes coiled above the fire-box and connected to the water-exit pipe, the cast-iron front, and the adjustable damper-plate, all arranged and operating substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

STEPHEN DUCOLIN.

Witnesses:

CHAS. N. BIXBY,
F. R. SMITH.