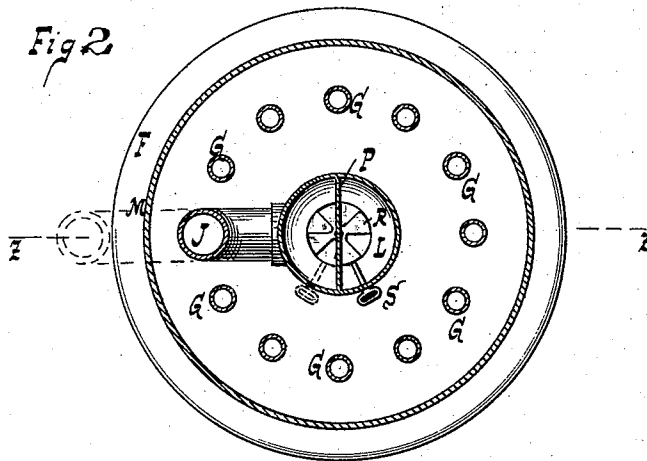
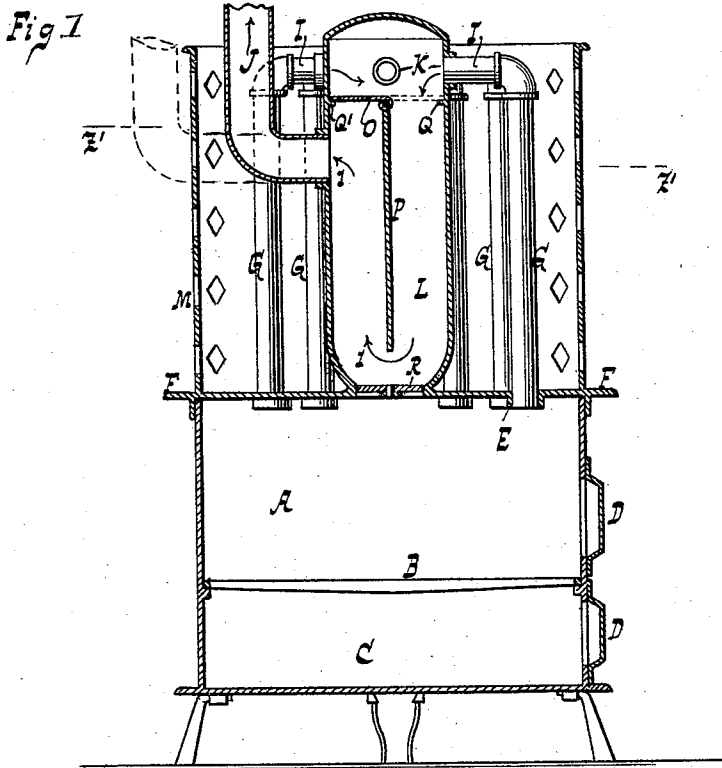


(No Model.)

J. NELSON.
HEATER.

No. 488,131.

Patented Dec. 13, 1892.



WITNESSES:

William Miller
Edward Wolff

INVENTOR:

John Nelson

BY

Van Santvoord & Hauff
his ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN NELSON, OF BROOKLYN, NEW YORK.

HEATER.

SPECIFICATION forming part of Letters Patent No. 488,131, dated December 13, 1892.

Application filed June 9, 1892. Serial No. 436,122. (No model.)

To all whom it may concern:

Be it known that I, JOHN NELSON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Heaters, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section of the heater, taken on the line xx of Fig. 2; and Fig. 2 is a cross-section taken on the horizontal line $x'x'$.

In carrying out my invention I employ a body and fire-pot A, which is provided with a grate B. Under the fire-pot is an ash-pit C. Both the fire-pot and the ash-pit are provided with doors D. The fire-pot and its grate and the ash-pit may be of any desired form or construction and of such dimensions and arrangement of parts as shall be desired by the manufacturer and be suitable for carrying out my invention. From the fire-pot and going through the upper plate F thereof rises a series of pipes G, which are arranged in a circle and which conduct the products of combustion from the fire-pot upward to the chamber L, into which they severally discharge through horizontal pipes I, that connect with openings K, provided in the upper part of the chamber. From the chamber L the products of combustion are conducted to the chimney-flue J, through which they are finally discharged. The chamber L is provided with a vertical partition P, which is extended downward nearly to the lower end of the chamber, and the upper part of the chamber is provided with a reversible damper O, situated just below the level of the flue-openings K—that is to say, just below the upper horizontal pipes I. The damper O is operated by a handle, (not seen in the drawings,) which may project through the side of the heater, the damper being arranged so that its end may rest either on the shoulder Q or Q', according to which side of the partition P it has been turned to. When it is resting on the shoulder Q', as in the drawings, the products of combustion conveyed through the pipes G are conducted into the chamber L downward along the right-hand side of partition P and below said partition and thence upward along the left-hand side and thence to the exit-pipe J, following the course indicated by the arrows 1. When the damper O is operated so that its end rests on the shoulder Q, the pro-

ducts of combustion pass over the damper and into the exit-pipe J without going below and under the bottom of the partition. The chamber L receives the soot and embers of the fire that pass through the pipes G, and the lower part of the chamber is provided with a slide or damper R, which is operated by means of the handle S, so that it may be cleaned of any soot that may have collected in it. The lower end of the chamber L is curved inwardly, so as to facilitate the cleaning of the soot therefrom. It is obvious that by opening damper R a direct draft is obtained from the fire-pot through the chamber L and exit-pipe J, so that the starting of a fire in the heater is facilitated. The heater is provided with an exterior surrounding case M, which may be made with perforated sides to allow the passage and circulation of air between and around the pipes.

The heater may be provided with a perforated top, and the case and top may be made of such ornamental character as may be desired.

The fire-pot and stove-body and pipes may be provided with the usual dampers to control and regulate the fire.

In Fig. 1 I have shown the exit-pipe J passing from chamber L upward between the pipes G and thence through the top; but it may instead be extended through case M and then be turned upward without passing through the top, as the manufacturer may prefer. This modification is indicated in dotted lines in the drawings.

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

1. In heaters, the combination, with the body or fire-pot A, of the pipes G I, the exit-pipe J, and the chamber L, provided in its bottom with a slide or damper R, substantially as shown and described.

2. In heaters, the combination, with the body or fire-pot A, of the pipes G I, the exit-pipe J, and the chamber L, provided with a partition P and reversible damper O, substantially as shown and described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN NELSON.

Witnesses:

MICHAEL F. FOLEY,
WILLIAM BEDFORD.