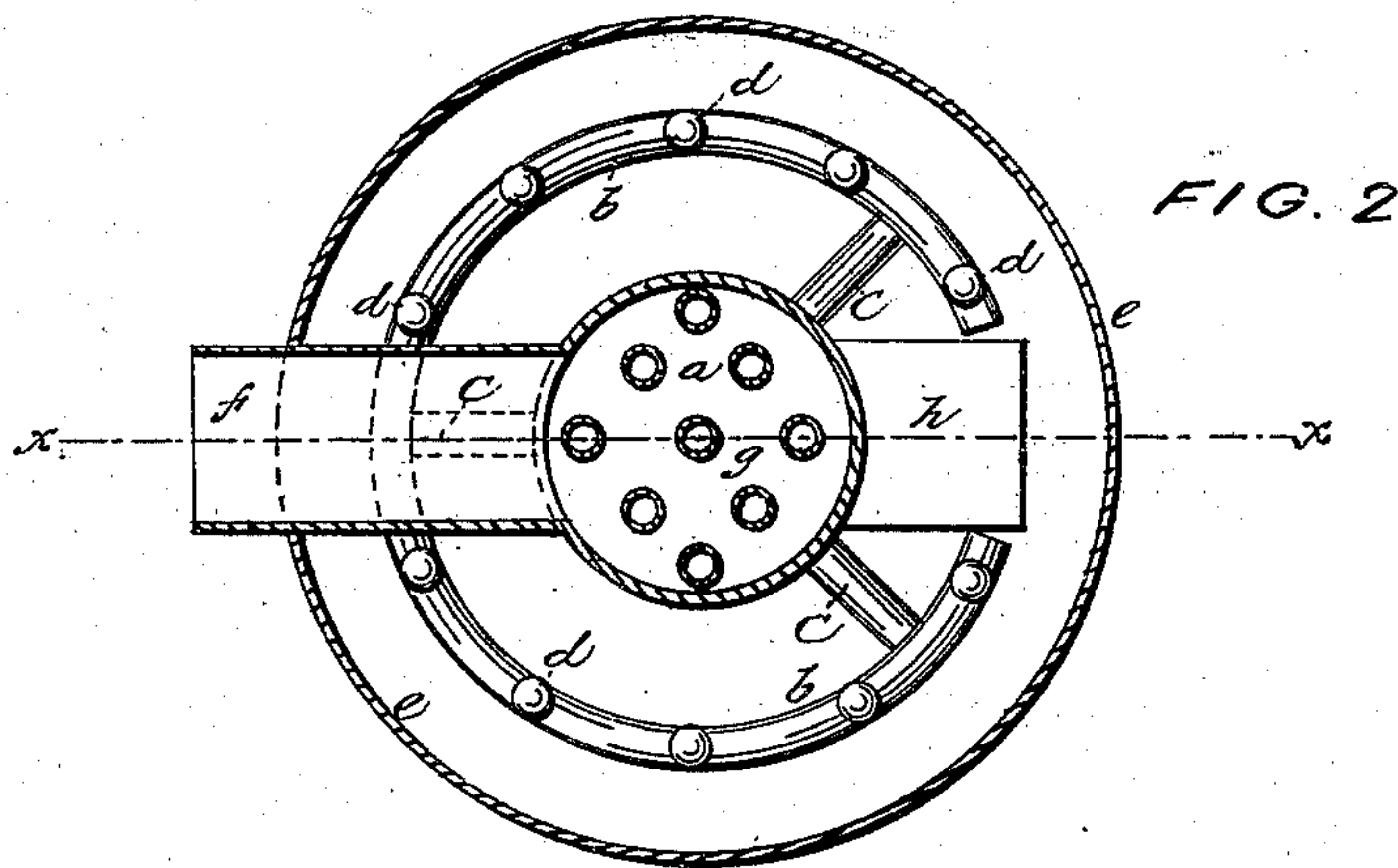
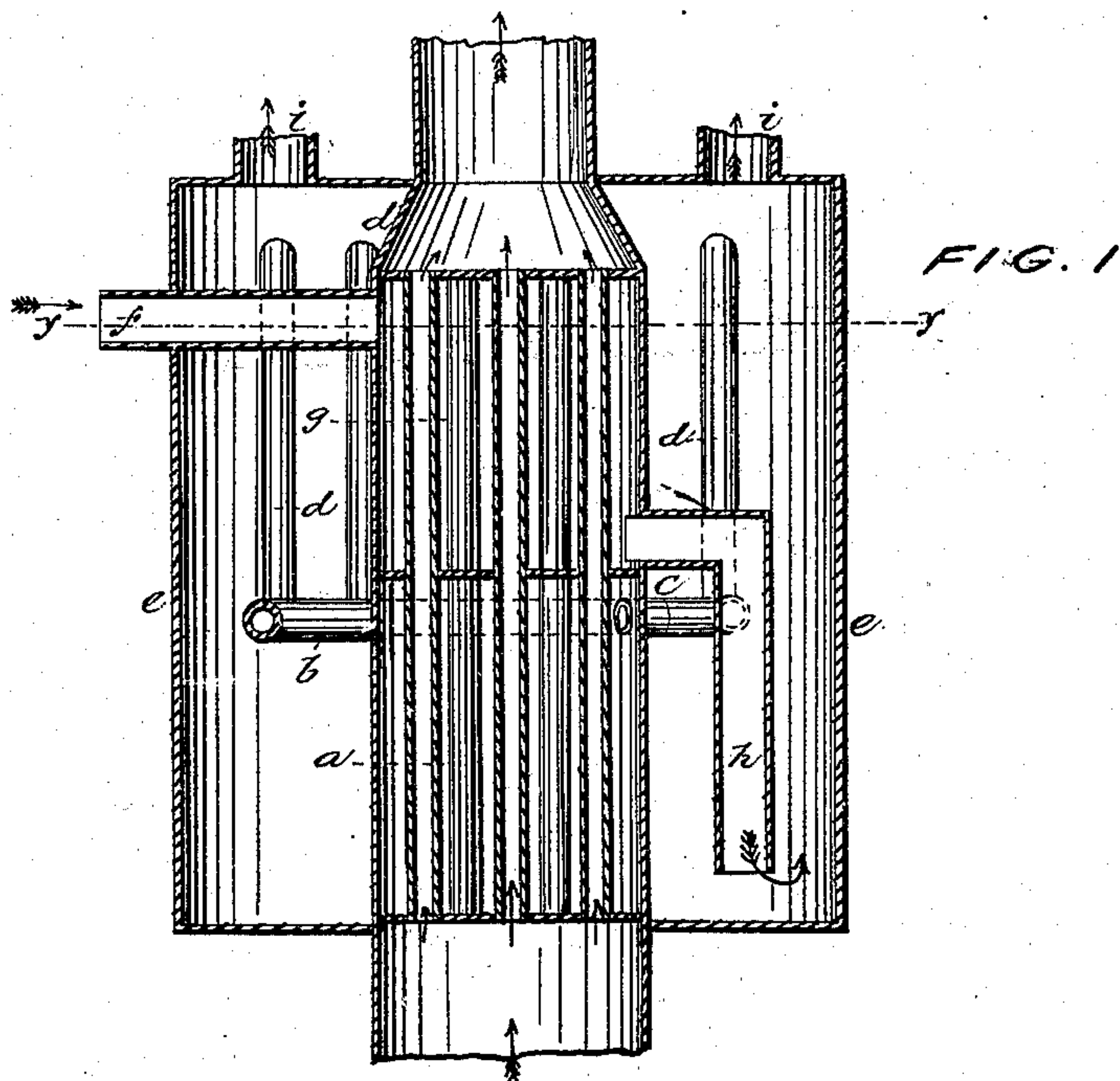


T. SHIPTON.
Steam Heater.

No. 70,276.

Patented Oct. 29, 1867.



WITNESSES:

Thos. F. Fiske
W. Sullivan

INVENTOR:

Thos Shipton
Per Munnell &
Attorneys

United States Patent Office.

THOMAS SHIPTON, OF NEWARK, NEW JERSEY.

Letters Patent No. 70,276, dated October 29, 1867.

IMPROVED HEATER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, THOMAS SHIPTON, of Newark, Essex county, New Jersey, have invented a new and improved Heater; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The object of this invention is to construct a heater which will make use of all the heat generated therein.

Figure 1 represents a sectional elevation through the line *x x*, fig. 2.

Figure 2 represents a cross-section through the line *y y*, fig. 1.

Similar letters of reference indicate corresponding parts.

This heater is placed directly over the furnace, and the boiler *a* about three-fourths filled with water. The boiler-tubes run through the boiler to the upper part of the same shell or chamber, *g*, for the purpose hereinafter described. A steam pipe, *b*, is placed around the boiler, and connected thereto by means of three or more branch pipes, *c*. On the steam pipe *b* is placed a series of upright pipes *d*, having connection with the pipe *b*, so as to admit of having steam all around the outside of the boiler, between the boiler and jacket *e*, and as the steam condenses in the pipes the water will flow back into the boiler. *f* is a pipe for the entrance of cold air, which pipe leads the air into the chamber *g*, where it gets thoroughly heated by passing the hot tubes, and then escapes heated through the pipe *h* into the jacket *e*, which may have as many pipes, *i i*, as may be deemed necessary leading from its top to any part of the house.

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

1. The arrangement of the pipes *C*, circular pipe *b*, upright pipes *d*, boiler *a*, and air pipes *f h*, as herein described, for the purpose specified.

2. I also claim the steam pipe encircling the boiler, with upright pipes, all arranged in the manner and for the purpose substantially as described.

THOMAS SHIPTON:

Witnesses:

JOHN J. TILL,

PETER S. DURYEE.