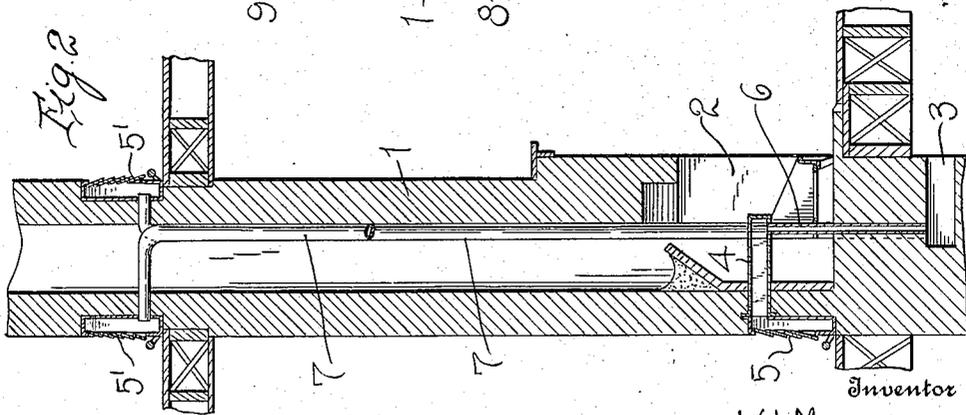
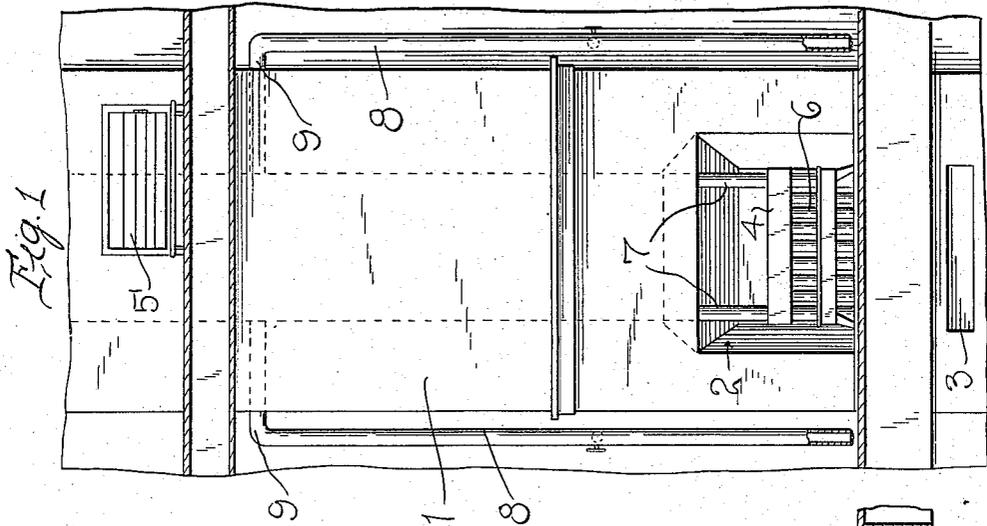
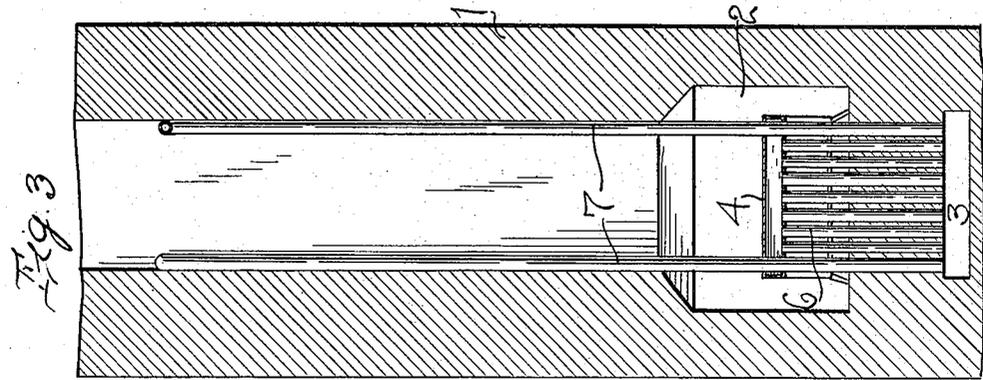


W. L. MURRAY.  
HEATING SYSTEM.  
APPLICATION FILED JAN. 16, 1915.

1,167,008.

Patented Jan. 4, 1916.



Inventor  
W. L. MURRAY

Witnesses  
Robert M. Sutphen  
A. J. Hind.

By *Watson & Coleman*  
Attorney

# UNITED STATES PATENT OFFICE.

WILLIAM L. MURRAY, OF MCKENZIE, TENNESSEE.

## HEATING SYSTEM.

1,167,008.

Specification of Letters Patent.

Patented Jan. 4, 1916.

Application filed January 16, 1915. Serial No. 2,685.

*To all whom it may concern:*

Be it known that I, WILLIAM L. MURRAY, a citizen of the United States, residing at McKenzie, in the county of Carroll and State of Tennessee, have invented certain new and useful Improvements in Heating Systems, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to new and useful improvements in heating systems and more particularly to hot air systems wherein two or more rooms can be heated from one fire-place, the main object of the present invention being the provision of a heating system wherein the cool air is conveyed into the building from the exterior thereof and is thoroughly heated as it passes through a fire-place and is conveyed to different parts of the building.

Another object of the present invention is the provision of a heating system of the above character which will possess advantages in points of efficiency and durability, is inexpensive to manufacture and, at the same time is simple in construction and operation.

With the above and other objects in view, the invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claim.

In the accompanying drawing forming a part of this application, Figure 1 is a front elevation of a fire-place illustrating a heating system constructed in accordance with my invention. Fig. 2 is a longitudinal sectional view; and Fig. 3 is a similar view taken at right angles to Fig. 2.

Referring more particularly to the drawing, 1 indicates a chimney, at the lower end of which is arranged a fire-place 2 and below the fire-place is an air-space 3. Arranged within the fire-place 2 is a heating drum 4, one end of which opens into a room opposite that in which the fire-place 2 opens, the other end of said drum being adjacent to a grate 5 through which the heat from the drum 4 escapes into the room opposite that in which the fire-place 2 is mounted. In order to supply the drum with fresh air to be heated, I provide the pipes 6 which form the communication between the drum and the air space 3 so that pure air may be readily conveyed to the heating drum 4.

From this it will be apparent that cool fresh air may be quickly and readily supplied to the drum 4 for heating.

In order to convey heated air to the upper rooms, I provide the side conveying pipes 7 which communicate at their lower ends with the air space 3 and are disposed parallel with the pipes 6 so that they extend upwardly through the heating drum 4. These pipes 7 pass upwardly within the chimney 1 and extend off at right angles so that the upper ends thereof will communicate with suitable registers 5' within these upper rooms. From this it will be apparent that as the pipes 7 pass upwardly through the drum 4 and extend beyond the drum through the upper portion of the fire-place 2 and through the chimney, they will become thoroughly heated so that the air which passes into the lower ends of the pipes will be thoroughly heated before it strikes the registers or radiators 5'. From this it will be apparent that I have provided a simple and novel means whereby two or more rooms may be thoroughly heated by the heat from one fire-place and the air which is heated is conveyed directly from the exterior of the building into the heating chambers.

In order to convey the cold air from the rooms, I provide the exit pipes 8, the lower ends of which are arranged in spaced relation with the floor of the room and the upper ends thereof communicate with the chimney, as shown at 9. From this it will be apparent that the cool air which is generally at the lower portion of the room or near the floor, is conveyed upwardly into the chimney 1.

It will be apparent from the foregoing that in order to heat the various rooms, the fire must be arranged within the fire-place 2 and the bulk of the fire be arranged next to the pipes or conveyers 6 and 7, so that the cold air which is conveyed upwardly through these pipes will be readily heated. It will also be apparent that this device can be manufactured and installed within dwellings at a comparatively low cost.

While I have shown and described the preferred form of my invention, it will be obvious that various changes in the details of construction and in the proportions may be resorted to for successfully carrying my invention into practice, without sacrificing any of the novel features or departing from

the scope of the invention, as defined by the appended claim.

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

5 A heating system comprising in combination with a fireplace, a chimney flue communicating therewith and an air receiving chamber below the fireplace; a horizontally  
10 disposed drum mounted in the chimney wall and having an open end communicating with an adjacent apartment, the other end of said drum being closed and projecting into the fireplace centrally thereof, a plurality of  
15 cold air pipes in the wall having their lower ends in communication with said air chamber and extending upwardly into the fireplace and secured to the closed end of said

drum to constitute supports therefor, and additional air conducting pipes communi- 20  
cating at their lower ends with said air chamber and extending upwardly through the closed end of the drum and through the chimney flue, said pipes above and below  
25 the drum being exposed to the flame from the fireplace and having their upper ends extended through the chimney wall and opening into separate apartments of the building.

In testimony whereof I hereunto affix my signature in the presence of two witnesses. 30

WILLIAM L. MURRAY.

Witnesses:

R. C. AUSTIN,  
O. B. HUFFMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."