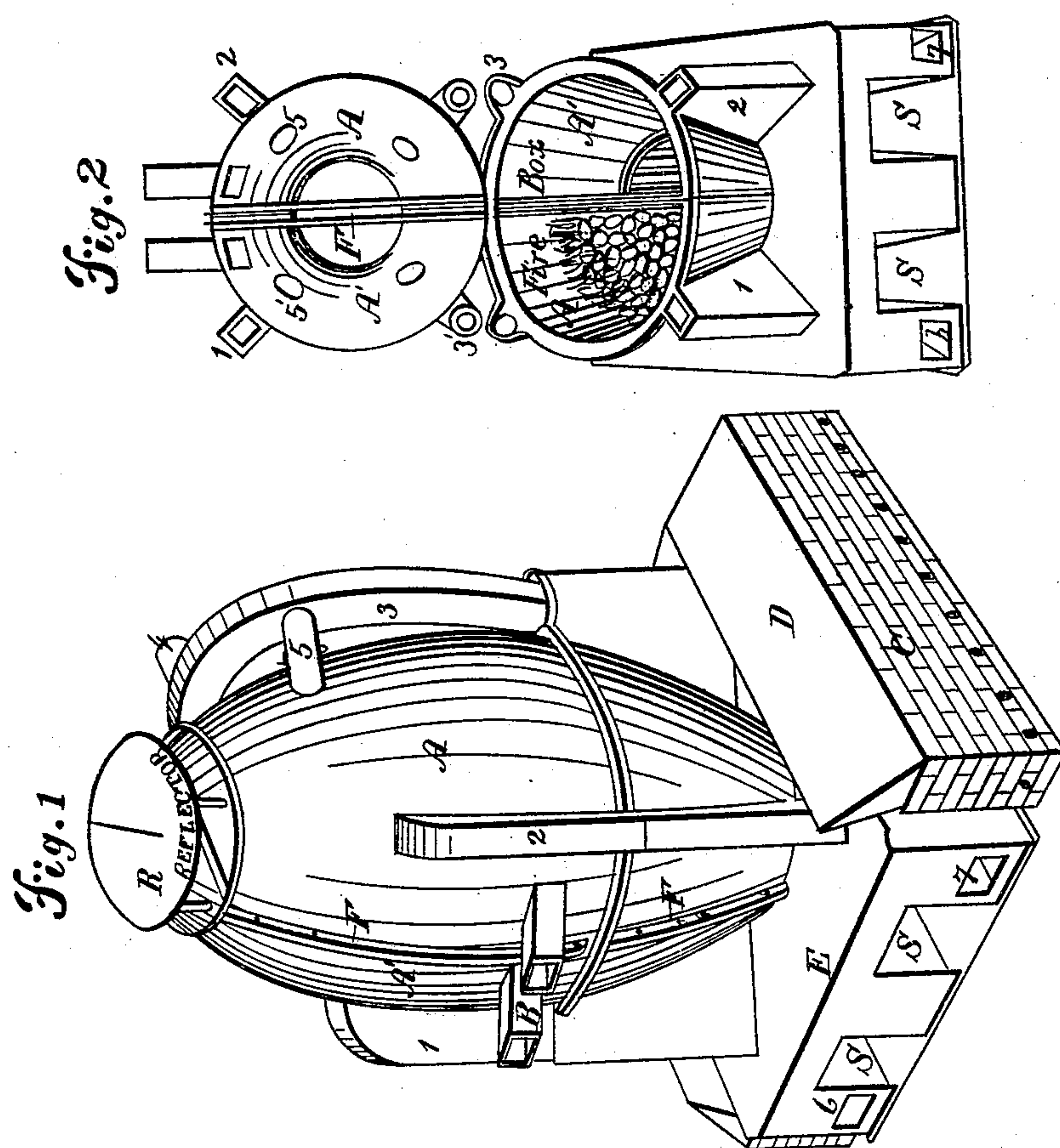


W. D. TITUS.  
Hot-Air Furnace.

No. 89,610.

Patented May 4, 1869.



Witnesses;  
Attest  
H. S. Church

Inventor;  
W. D. Titus

# UNITED STATES PATENT OFFICE.

WILLIAM D. TITUS, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN HOT-AIR FURNACES.

Specification forming part of Letters Patent No. 89,610, dated May 4, 1869.

*To all whom it may concern:*

Be it known that I, WILLIAM D. TITUS, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in the Construction of Hot-Air Furnaces for Heating Buildings; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which are lettered to correspond with and form a part of the specification.

To enable the public to understand the nature of my invention, and those skilled in the mechanic arts to construct the same, I will describe it as follows, to wit:

Figure 1 is a perspective drawing of my heating apparatus.

A A' are the furnaces, the bottom part of which constitutes the fire-chambers. 1 2 3 4 5 are hot-air flues.

Figures 4 5 5' are also escape-flues for the smoke and other products of combustion to pass off from the furnaces to the chimney, as well as for radiating purposes.

B is the coal-chute. C is a brick wall, having an inclined metallic cap or reflecting-hood, D, which causes the cold air that is admitted through the masonry C to pass up around the hot furnaces A A', thus producing a greater amount of heated air than other furnaces that are in common use. E is the metallic base of the furnaces, which are divided into four compartments, namely, the ash-pits s s, cold-air flues 6 and 7, which communicate with the upper flues 1 2 3 3', that support and form a part of the fire-body of the hot-air furnaces, which are constructed in four parts or sections thereof—first, the fire-boxes N N; secondly, two upper hot-air chambers, o o, as shown in Fig. 2.

I separate my furnaces or sections thereof by a vertical air-flue, F, which produces a rapid upward current of heated air to strike

upon the top of the furnaces A A', which throws it (the heated air) in all directions into the room.

By the above-described arrangement of two or more hot-air furnaces in one jacket I am enabled to regulate the amount of heat distributed through the building by means of the dampers or cut-offs in short flues 5 from both furnaces, or from one fire only, if thought proper to use but one furnace, at the same time thereby economizing the fuel, heat, and expense.

I do not pretend to have invented two fire-pots in one and the same furnace or heating apparatus, as that is in common use; but my invention consists in constructing two or more distinct furnaces or heating-compartments in one jacket, or separately made and secured together by flanges and bolts, or otherwise, and provided with the vertical flue F, inverted cone-shaped reflector R, and hood D, surrounding the furnaces A A', in combination with other parts of the heating apparatus, when arranged as set forth and shown in the accompanying drawings; therefore,

What I claim as novel and useful, and what I wish to secure by Letters Patent of the United States, is—

Two or more heating apparatus in one jacket, separated their entire width and height by a vertical air-flue, F, in combination with the inverted cone-shaped reflector R, reflecting-hood D, and air-flues 1 2 3 3' 4 5 6 7, and dampers in flues 5, to regulate the flow of hot air from either furnace A A', all arranged and operating in the manner and for the purpose set forth.

In testimony whereof I hereunto subscribe my name in the presence of two witnesses.

WM. D. TITUS.

Witnesses:

JAMES P. McLEAN,  
W. P. COOK.