(No Model.)

S. P. WHITMARSH.

APPARATUS FOR HEATING BUILDINGS.

No. 346,794. Patented Aug. 3, 1886.

Fig. 1.

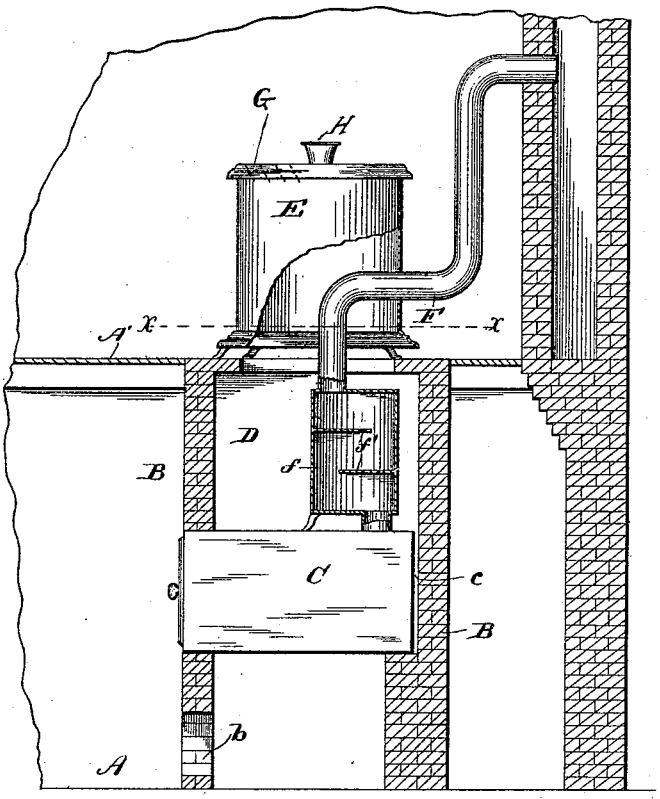
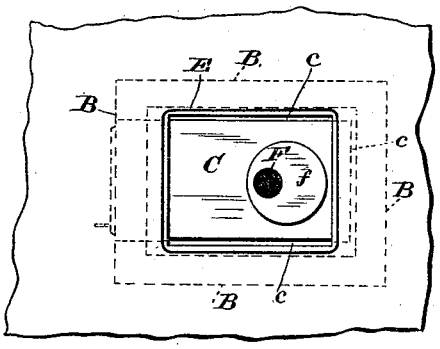


Fig. 2.



Witnesses.
Chas. R. Burr
Melville Church

Inventor.
Samuel P. Whitmarsh
by Franck D. Johns
his Attorney.

UNITED STATES PATENT OFFICE.

SAMUEL P. WHITMARSH, OF PALMYRA, MICHIGAN.

APPARATUS FOR HEATING BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 346,794, dated August 3, 1886.

Application filed October 29, 1885. Serial No. 181,249. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL P. WHITMARSH, a citizen of the United States, residing at Palmyra, in the county of Lenawee and State of Michigan, have invented certain new and useful Improvements in Apparatus for Heating Buildings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in apparatus for heating buildings; and it consists, essentially, in providing on one floor, preferably the cellar, a fire-box supported upon suitable walls, a hot-air chamber located above the fire-box and having its heat-exit opening into the room above at or near the floor, and over which heat-exit is placed a drum, open at its bottom and entirely covering said exit, but raised sufficiently above the same to permit the heated air to escape into the room at or near the floor, while at the same time the drum is full of heated air.

The particular construction, arrangement, and location of the various parts of my invention I will now proceed to point out and describe, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section of a building provided with my invention, part of the apparatus being broken away and part in section. Fig. 2 is a horizontal section taken on line *x x*, Fig. 1.

Referring to said drawings, A is the floor of a cellar; A′, the floor of the room above.

B are four walls, made of brick or other suitable material and of any desired thickness, and extending from the bottom of the cellar-floor to the top of the floor above, the top of said walls being flush with the surface of the floor A′.

C is a fire-box, having its front built in and supported by one of the walls B, its rear end being held by a brick support extending out from the rear wall, B, an open space being left between the sides and rear end of the fire-box and the walls B, thus permitting cold air to pass up to the hot-air chamber. Said fire-box is provided with a suitable grate, door, &c.

D is a hot-air chamber above the fire-box, its sides being formed by the upper portion of the walls B. The top of said chamber or its heat-exit opens directly into the room above at the floor.

E is a sheet-metal drum, having its bottom open and entirely covering the heat-exit of the hot-air chamber. Said drum is supported on suitable legs, and is raised sufficiently above the floor to permit the hot air to escape near the floor of the room, and thus heat the lower stratum of air first. The top of said drum is also provided with a register, G, which can be opened when desired. It also has a receptacle, H, for water.

F is the flue of the fire-box, having the radiator portion *f*, provided with deflecting-plates *f′*. Said radiator is located in the hot-air chamber. The flue extending up through the drum is connected in any suitable manner with the chimney.

The great advantages of a heating apparatus constructed and arranged as above described are, that it occupies less space in a building than an ordinary furnace, is very simple, all of the parts are easily accessible, and can be easily inspected and cleaned. It can also be constructed very cheaply, economizes fuel, and distributes heat uniformly, and at the same time is perfectly safe.

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

1. In an apparatus for heating buildings, a fire-box surrounded by a suitable casing, and a hot-air chamber above the fire-box, having its exit opening into the room above through the floor, in combination with a drum having its bottom open and entirely covering the exit of the hot-air chamber, and raised slightly above the floor of the room to form an opening between said drum and floor, substantially as and for the purpose shown and described.

2. In an apparatus for heating buildings, a fire-box, C, surrounded by a suitable casing, B, a hot-air chamber, D, above the fire-

box opening into the room above through the floor, and a smoke-flue, F, connecting with the chimney, and having the radiator *f* located in the hot-air chamber, in combination with the drum E, having its bottom open, entirely covering the exit of the hot-air chamber, and raised slightly above the floor of the room to form an opening between said drum and floor, substantially as and for the purpose shown and described.

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

SAMUEL P. WHITMARSH.

Witnesses:

J. G. O'CONNELL,

W. W. LUCK.