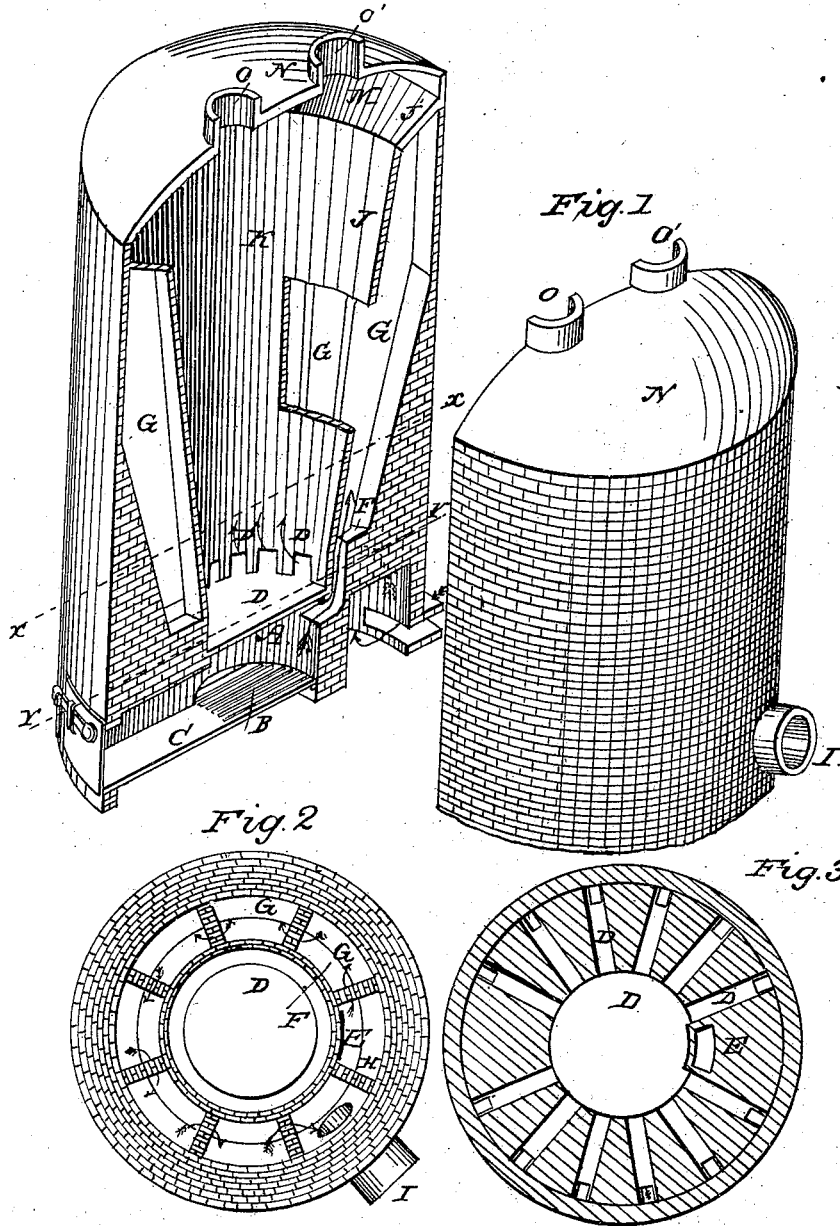


J. H. SCHWEIN.

Hot Air Furnace.

No. 52,648.

Patented Feb. 13, 1866.



Witnesses  
James H. Gayman  
H. H. H. H. H.

Inventor  
J. H. Schwein  
By Augustus B. B. B.

# UNITED STATES PATENT OFFICE.

JACOB H. SCHWEIN, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF AND CHRISTIAN RUMMEL, OF SAME PLACE.

## HOT-AIR FURNACE.

Specification forming part of Letters Patent No. 52,648, dated February 13, 1866.

*To all whom it may concern:*

Be it known that I, JACOB H. SCHWEIN, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Air Warming and Ventilating Furnace; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My invention relates to a stove or furnace so constructed as to impart the entire heat of the fire without destroying its vitalizing properties, as is now too frequently done in the various forms of furnaces which heat by the intervention of metallic plates or pipes.

Figure 1 is a sectional perspective view of a stove or furnace embodying my improvements. Fig. 2 is a horizontal section at the line *x x*. Fig. 3 is a horizontal section at the line *y y*.

A is a suitable fire-pot, having a grated bottom, B, and a feeding-throat, C.

The fire-pot A is covered by a slab, D, of soapstone or tile.

From the upper part of the pot A the smoke and flame are conducted, by a passage, E, into an annular flue, F, which communicates with a series of ascending flues, G, the smoke being compelled to pass entirely around the series by the intervention of a partition, H.

The smoke escapes from one of the flues G most distant from the entrance by means of a pipe, I, which may pass into the chimney.

The flues above described are formed of brick, and are closed on their inner sides and at top by tiles J J', so as to form a capacious air-warming chamber, K, entirely surrounded by the flues aforesaid, and which, receiving fresh air by a series of radial passages, L, expands into a chamber, M, which is closed at top by a brick crown or arch, N, from which pipes O O' carry warm air to any apartment desired.

All of the above-described parts being of brick and tile, no part of the air-warming surface is other than of a non-metallic material, and consequently I avoid entirely the deleterious action upon the air incident to heated plates of metal.

It will be seen that the fire passes over the top of the passages L, so as to heat the entering air in its way to the central chamber, M.

I claim herein as new and of my invention—

The fire-pot A B C, slab D, smoke-passages E F G, and caliducts or ventilating-passages K L M, the whole being arranged and operating substantially as described.

In testimony of which invention I hereunto set my hand.

JACOB H. SCHWEIN.

Witnesses:

GEO. H. KNIGHT,  
JAMES H. LAYMAN