

T. R. Cook

Heating Drum.

N^o 53,789.

Patented Apr. 10, 1866.

Fig 1

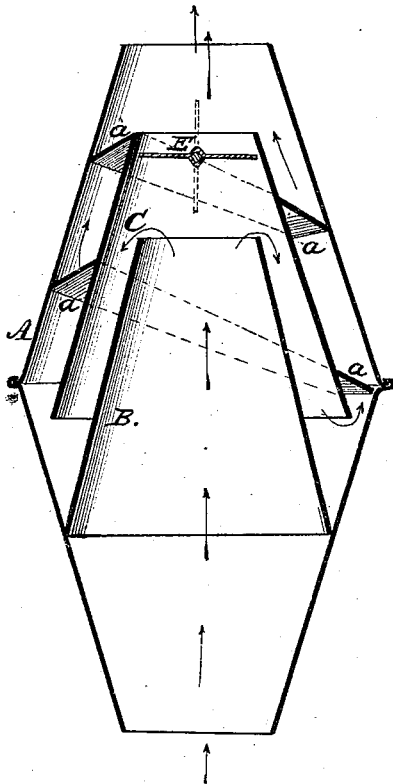
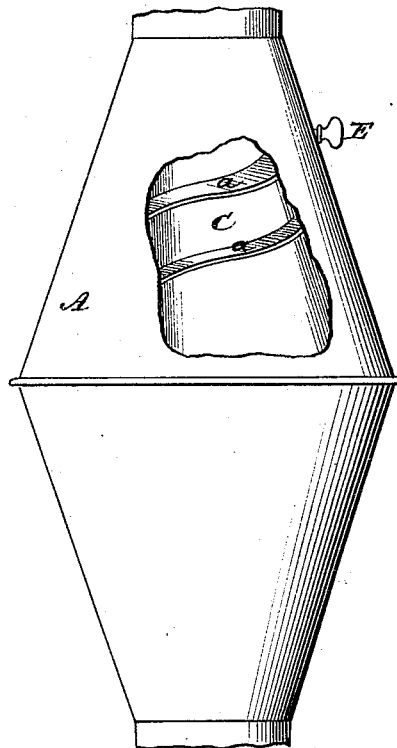


Fig. 2.



Witness
J. M. Armour.

Inventor.
T. R. Cook
By his Atty.
W. Dodge

UNITED STATES PATENT OFFICE.

THEODORE R. COOK, OF SARATOGA SPRINGS, NEW YORK.

STOVE-PIPE DRUM.

Specification forming part of Letters Patent No. 53,789, dated April 10, 1866.

To all whom it may concern:

Be it known that I, T. R. COOK, of Saratoga Springs, in the county of Saratoga and State of New York, have invented certain new and useful Improvements in Radiators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use the invention, I will proceed to describe it.

Figure 1 is a vertical section, and Fig. 2 is a side elevation with a portion of the casing broken away.

My invention consists in a novel arrangement of flues for the passage of the smoke and heat, for the purpose of retarding the same until the heat which usually passes off with the smoke in ordinary stove-pipes shall be radiated and thus utilized in heating the apartment.

In the drawings, A represents the outer casing, which in this case is represented in the form of two cones united at their base. With in this case I secure a conical tube, B, which has its lower end attached to the lower portion of the outer case, A, as shown in Fig. 1. Another conical tube, C, is placed over the tube B, in such a position as to surround the tube B and occupy a position midway between B and the outer casing, A, as shown in Fig. 1. This tube C is secured to the interior of case A by means of a spiral flange, *a*, which winds around C from top to bottom, and thereby forming a spiral passage or flue between the case A and tube C, the latter being elevated somewhat above the inner tube, B, so as to leave an open space or passage between them, as shown clearly in the drawings. At the up-

per end of the tube C is located a valve or damper, E, as shown in Fig. 1.

The apparatus thus constructed is attached to the top of the stove or to the pipe at any desired point, so that the smoke and heat which pass from the stove will enter at its lower end and emerge at its upper end. When it is desired to have a strong draft for kindling the fire or when it is not desired to retain the heat in the room the damper will be turned so as to permit the draft to pass directly through, as indicated by the red arrows; but when it is desired to retain the heat the damper will be so turned as to close the top of tube C, in which case the current of smoke and heat will pass up through tube B, thence down the passage between B and tube C, and afterward passing under the lower end of tube C, and from thence will ascend the spiral flue formed by the spiral diaphragm *a* between the tube C and the outer casing, A, it thus being made to travel a long distance in passing through the radiator, whereby a large amount of the heat will be radiated in the room instead of passing off out of the chimney, as it usually does where no radiator is used.

It is obvious that, instead of making it round, as shown in the drawings, the radiator may be made square or octagonal, or, indeed, of any desired form to suit the fancy or to adapt it to the particular position it is intended to occupy.

Having thus fully described my invention, what I claim is—

The radiator A, having the internal tubes, B and C, spiral diaphragm *a*, and damper E, all arranged and operating substantially as herein shown and described.

THEODORE R. COOK.

Witnesses:

E. H. PETERS,
FITCH LOTTRIDGE.