D. B. MUCHMORE.

Casing for Hot-Air Furnaces, &c.

No. 212,106. Patented Feb. 11, 1879.

Fig. I.

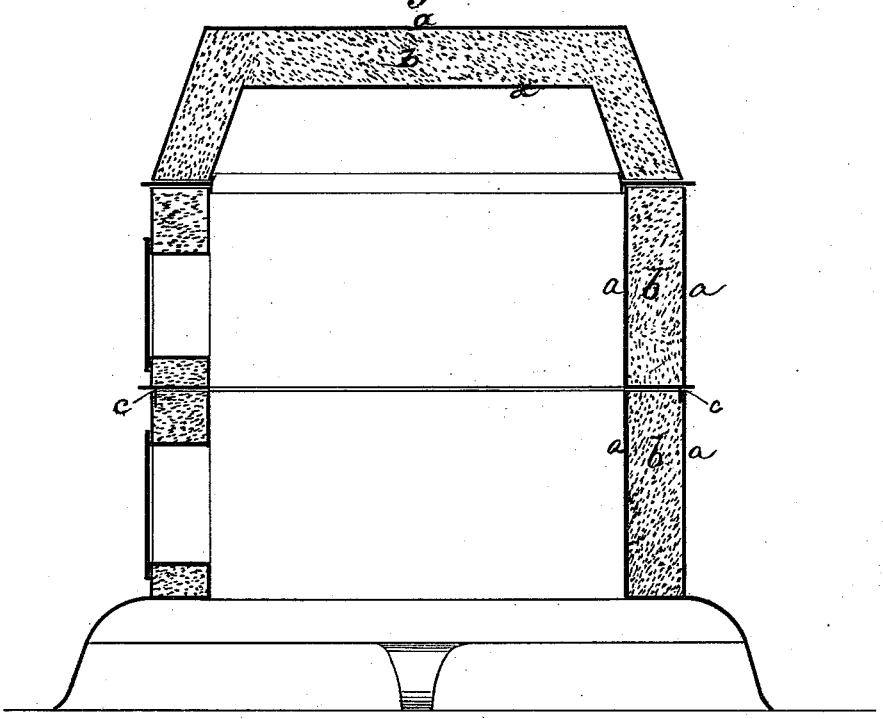


Fig. 2.

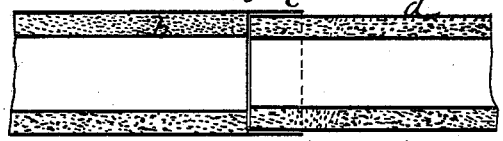
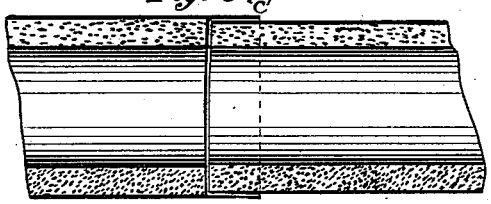


Fig. 3.



Witnesses.

Mortimer Clarke.

David B. Muchmore,
by atty,
J. C. Clayton.

UNITED STATES PATENT OFFICE.

DAVID B. MUCHMORE, OF MADISON, NEW JERSEY.

IMPROVEMENT IN CASINGS FOR HOT-AIR FURNACES, &c.

Specification forming part of Letters Patent No. **212,106**, dated February 11, 1879; application filed December 31, 1877.

To all whom it may concern:

Be it known that I, DAVID B. MUCHMORE, of Madison, in the county of Morris, in the State of New Jersey, have invented certain new and useful Improvements in Heat-Tight Cases or Shells for Furnaces, Hot-Air Flues, and other like purposes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification.

This invention has for its object to furnish a cheap, compact and durable non-conducting shell or case for furnaces, hot-air flues, and other like purpose where it is desirable to prevent loss of heat by radiation; and the invention consists in constructing such shells or cases in sections of proper length by cementing together two concentric shells of sheet metal by means of plaster-of-paris or other non-conducting cement, the sections being jointed together by means of a flange or projecting portion on the outer shell of one section coming into close contact with the outer shell of the adjacent section.

In the drawings, Figure 1 is a vertical section of a furnace provided with my invention, and Figs. 2 and 3 are longitudinal sections of pipe-casings embodying my invention.

The letter *a* represents two concentric shells, of sheet metal, located one within the other, so as to leave a space between the two, the size of which space will be in accordance with the use the article is to be applied to. The space is filled with plastic plaster-of-paris, hydraulic or other non-conducting cement, *b*, which soon hardens, and not only serves as a non-conductor of heat, but also serves as a means for uniting, without the aid of other fastenings, the two shells composing a section.

In order that the sections may be readily united, I provide a flange, *c*, near or at the outer edge of one or both ends, which flange, when two or more sections are brought together, comes into close contact with the outer shell of the adjacent section, forming a close, tight lap-joint between the two; or the outer shell of a section may be made longer at one end, as at *c'*, Figs. 2 and 3, than the inner shell, so as to receive within it the end of the adjacent section, in order to form a joint.

What I claim is—

A casing for heating apparatus, composed of two concentric shells of sheet metal, cemented together with non-conducting material, and formed into sections, which are united by lap-joints constructed of a flange or projection upon the outer edge of one section arranged to closely engage the outer shell of the adjacent section, substantially as described and shown.

In testimony whereof I have hereunto set my hand this 9th day of April, A. D. 1877.

DAVID B. MUCHMORE.

Witnesses:
A. J. DE LACY,
J. C. CLAYTON.