

(Model.)

T. A. MACDONALD.
HEAT RESISTING CASING.

No. 297,613.

Patented Apr. 29, 1884.

FIG. 1.

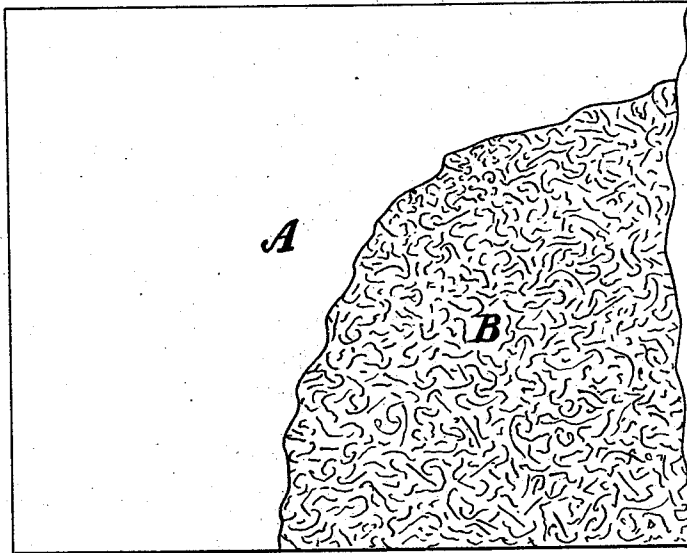


FIG. 2.



Witnesses.

E. Blanta.
Thos. E. Currier.

Inventor.

Thos. A. Macdonald
by J. H. Adams
Att'y.

UNITED STATES PATENT OFFICE.

THOMAS A. MACDONALD, OF BOSTON, MASSACHUSETTS.

HEAT-RESISTING CASING.

SPECIFICATION forming part of Letters Patent No. 297,613, dated April 29, 1884.

Application filed June 13, 1883. (Model.)

To all whom it may concern:

Be it known that I, THOMAS A. MACDONALD, a citizen of Canada, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Heat-Resisting Casings, of which the following is a specification.

The object of my invention is to produce an efficient, durable, and comparatively inexpensive material to be used as a casing for indirect radiators and hot-air conductors in connection with steam and hot-water apparatus.

The invention consists in the combination of paper-board and asbestos, to be used in the place of wood or sheet-iron as ordinarily applied to hot-air conductors.

In the accompanying drawings, Figure 1 represents a piece of the material with a portion of the paper-board removed to show the asbestos lining. Fig. 2 is a section of the material.

A represents a piece of ordinary stiff card-board of any required thickness. On one side of the card-board I attach a thin layer or sheet of asbestos by means of any suitable cement or adhesive substance not affected by heat. The paper-board and asbestos are then subjected to a powerful pressure by means of rollers, whereby the two component parts become firmly united. The article is to be used as a casing for indirect radiators in connection with steam and hot-water heating apparatus. It is also used as a hot-air conductor, it being sufficiently flexible to be formed into tubes. It can be made in large sheets, and, if the

sheets are not sufficiently large, two or more can be joined together, as required. It can also be cut with shears to adapt it to any desired position or connection. The asbestos lining, being toward the heating-surface of the apparatus of which it forms the casing, protects the paper or card board from injury, and the two form an excellent non-conducting material of heat.

Thin wood which is used as a casing is liable to warp and shrink, which objections my invention is free from.

Sheet-iron is liable to rust, which cannot be said of my invention, and is not so good a non-conductor of heat as the material above described, constituting my invention.

My invention is designed to be made and sold in sheets as a new article of manufacture.

I am aware that asbestos has been used as a covering for furnaces, &c.; but this I do not claim.

What I claim as my invention, and desire to secure by Letters Patent, is—

A non-radiating casing for indirect radiators and hot-air radiators, composed of card-board and asbestos united together by an adhesive substance and subjected to pressure, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS A. MACDONALD.

Witnesses:

J. H. ADAMS,
E. PLANTA.