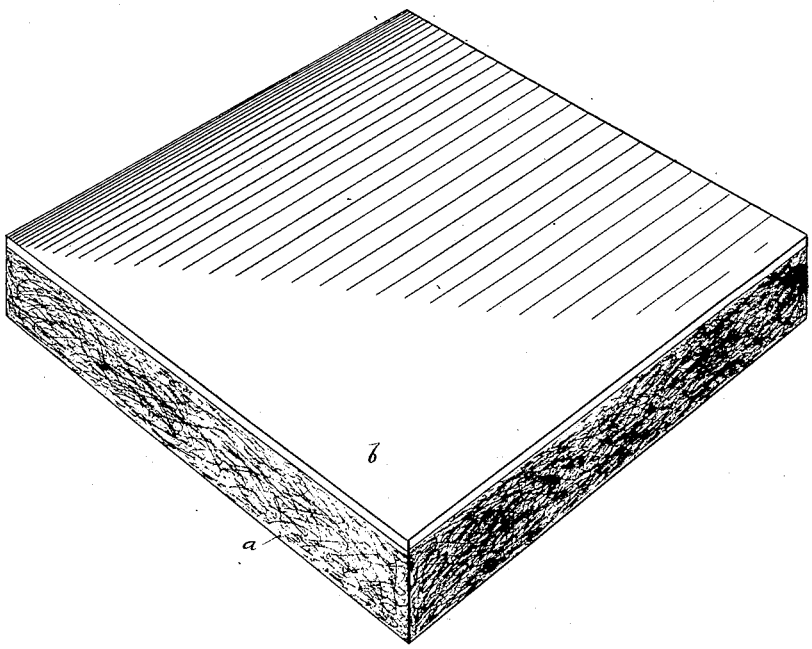
R. THOMAS.
Boiler Covering.

No. 197,000. **Patented Nov. 13, 1877.**



Witnesses

F. J. Pratt.
E. C. Perkins.

Inventor

Robert Thomas
per Crosby & Gregory Atty's.

UNITED STATES PATENT OFFICE.

ROBERT THOMAS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN BOILER-COVERINGS.

Specification forming part of Letters Patent No. **197,000**, dated November 13, 1877; application filed June 19, 1877.

To all whom it may concern:

Be it known that I, ROBERT THOMAS, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improved Covering to Prevent Radiation of Heat, of which the following is a specification:

This invention relates to a covering to prevent radiation of heat from boilers, steam-pipes, cylinders, &c.

It is well known that hair felt is a good and inexpensive non-conductor; but when placed directly in contact with hot surfaces it is liable to become charred and rendered useless.

Asbestus is commonly used as a non-conducting covering, and it has been used with hair, by first mixing asbestus fiber with silicate of soda, and placing it, while in a plastic condition, upon the surface to be covered, and then the hair has been applied upon the asbestus.

The object of this invention is to provide a combined hair and asbestus covering which may be readily applied to the surface to be covered without separately mixing and manipulating the asbestus.

To do this I take the usual hair felt, and coat or cover it with silicate of soda or its equivalent, mixed, if desired, with glue and flour, or either, and then I apply to the hair felt so coated a covering of asbestus pulp or paper, made substantially in accordance with the plan practiced under the patent to Peters, No. 34,283.

The asbestus paper adheres to the hair, and, so incorporated with and forming a permanent face for the hair, it may be readily applied as a covering.

Figure 1 represents a piece of this improved covering in perspective.

The hair felt is designated by the letter *a*, and the asbestus paper by the letter *b*. The hair felt, on the surface next the pulp or paper *b*, is coated with silicate of soda, provided or not with glue and flour, or all combined, which forms an adhesive cement, and causes the paper to adhere to the hair and form an integral portion of the covering. The paper face *b* will be placed in contact with the surface to be covered.

This asbestus paper might be caused to adhere to the surface of other usual fibrous sheets, to prevent such sheets from being injured or destroyed by fire or heat; but that is not herein claimed, because it is reserved for a separate application.

I have described silicate of soda as the principal ingredient of the cementitious matter, as it is considered superior to other substances; but I do not desire to limit my invention to its use, as any usual or suitable cement may be employed to cause the hair and asbestus paper to adhere together.

It will be observed that by using cement as the uniting means between the hair felt and asbestus paper, the latter is left unbroken or unperforated with holes for the passage of heat or fire.

I do not broadly claim the employment of hair and asbestus, as I am aware that they have been combined in different ways.

I claim—

The combination, with an independent layer or sheet of hair felt, of an independent layer or sheet of asbestus paper cemented thereto, to form a portable covering fabric, having one face of hair felt and the other of asbestus paper, all substantially as and for the purpose described.

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

ROBERT THOMAS.

Witnesses:
G. W. GREGORY,
W. J. PRATT.