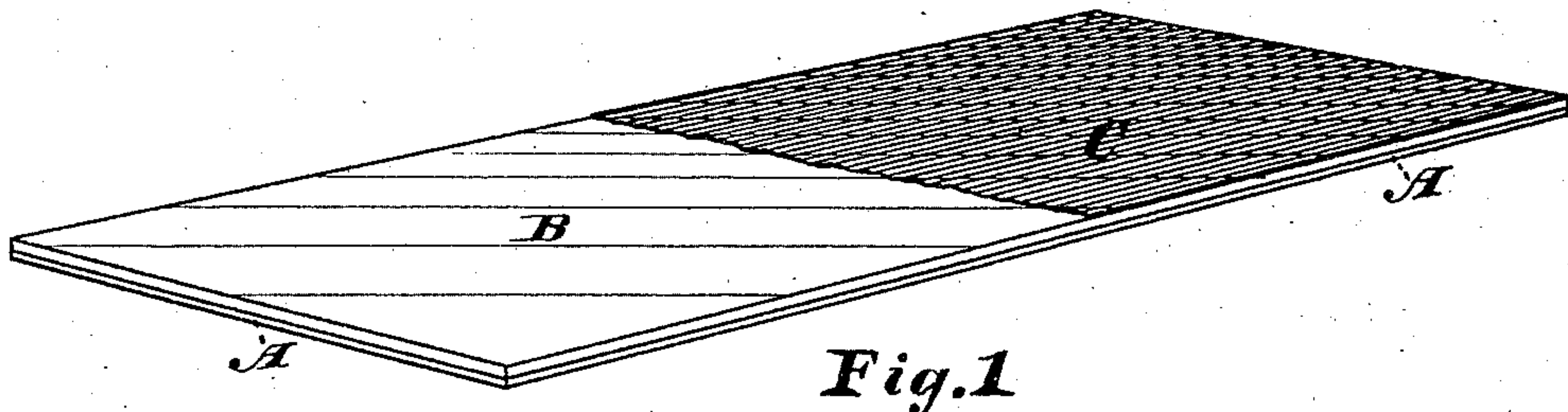


J. M. AYER.

LINING FOR REFRIGERATOR CARS.

No. 184,028.

Patented Nov. 7, 1876.



Attest

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UNITED STATES PATENT OFFICE.

JOHN M. AYER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN LININGS FOR REFRIGERATOR-CARS.

Specification forming part of Letters Patent No. **184,028**, dated November 7, 1876; application filed September 28, 1876.

To all whom it may concern:

Be it known that I, JOHN M. AYER, of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Linings for Refrigerator-Cars and Stationary Refrigerators, applicable also to roofs in general; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to provide a lining for refrigerator-cars and stationary refrigerators, and also for roofs in general, which lining shall be at once light, durable, impervious to moisture, a non-conductor of heat, and convenient for transportation and application; and it consists in joining together, surface to surface, by means of cement, rivets, or otherwise, a layer of india-rubber, (which may be pure rubber sheathing or any one of the materials termed "rubber packing,") and a layer of thick paper or of pasteboard, paper-board, straw-board, or any like paper product, all as hereinafter more fully set forth.

The accompanying drawing represents a perspective view of a piece of my improved lining.

A is a layer of india-rubber, and B the layer of pasteboard, straw-board, or the like.

In preparing the lining, I preferably coat the surfaces to be joined with cement, (having previously roughened that of the pasteboard, or whichever other of the above-mentioned materials that may be employed, in any suitable way, say by scratching or chafing,) lay the materials one upon the other in suitable manner, and then pass them between rollers, or subject them to other pressure, whereby all parts of their respective surfaces are brought into intimate contact and caused closely to cohere.

I do not limit myself to this mode of preparation, however, since it is obvious that the layers may be fastened together by means of rivets, or simply laid one upon the other and nailed in position.

When it is desirable that the paper or straw material aforesaid shall be rendered waterproof, I cover the exposed surface with a thick coating of asbestos paint, as shown at C in the drawing; and in fact I deem a coating of mineral paint an advantageous addition in nearly all cases. Asbestos paint also renders it fire-proof to a considerable degree.

Among the advantages possessed by my lining are the following: First, it is composed of two of the best non-conductors of heat known to science; secondly, while india-rubber is the better non-conductor of the two, and vastly the less pervious to moisture, pasteboard, paper-board, straw-board, and the like, on the other hand, possess some highly-desirable properties which are absent in rubber, chief among which are their superior rigidity and hardness, by virtue of which they are the better adapted to form an innermost surface, especially when painted as above described; thirdly, of the two, the paper or straw material is far the cheaper, for which reason it is more economical to employ it in combination with india-rubber than to increase the thickness of the latter.

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

The lining herein described, consisting of a layer of pasteboard, paper-board, straw-board, or other paper product, and a layer of india-rubber sheathing, or the material termed "rubber packing," joined together, substantially as and for the purposes specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN M. AYER.

Witnesses:

S. M. TURNER,
E. T. PRINDLE.