(No Model.)

J. G. MERRILL.

FIRE PROOF PAPER OR BOARD.

No. 363,905. Patented May 31, 1887.

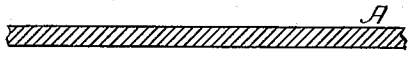


Fig. 1.

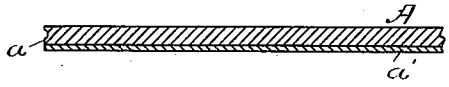


Fig. 2.

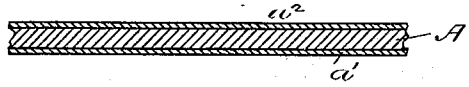


Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

JONATHAN G. MERRILL, OF QUINCY, MASSACHUSETTS.

FIRE-PROOF PAPER OR BOARD.

SPECIFICATION forming part of Letters Patent No. 363,905, dated May 31, 1887.

Application filed July 26, 1886. Serial No. 209,044. (No model.)

To all whom it may concern:

Be it known that I, JONATHAN G. MERRILL, of Quincy, in the county of Norfolk and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Fire-Proof Paper or Board, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The object of the invention is to provide a fire-proof or fire-resisting material in the shape of a paper or thin board which can be easily and cheaply made, and which shall possess high fire-resisting properties.

I prefer to use in making the paper or board a composition comprising sixty per cent. vegetable fiber, twenty per cent. asbestus, ten per cent. alum or copperas, and ten per cent. plumbago or lamp-black, or Venetian red, or the equivalent. This composition is intimately mixed in an ordinary pulp or paper machine, and is then run through an ordinary paper-mill into the form of the paper or board. It is then passed through driers, and is subsequently treated with a layer or coating of silicate of soda applied to one or both surfaces thereof.

Referring to the drawings, Figure 1 is a view of the paper or thin board which comprises the base of the article. Fig. 2 represents it as coated with one layer or coating of silicate of soda or other equivalent fire-resisting material. Fig. 3 is a view showing both surfaces coated with silicate of soda or other fire-resisting material.

In the drawings, A represents the board or paper before it has been treated with the silicate of soda, and in Fig. 2 *a* represents one side only coated with the silicate of soda, *a'* representing the silicate of soda, and in Fig. 3 I have shown the board or paper provided with an additional coating, a^2, of the silicate of soda, so that each is provided with two coatings—one upon one side and the other upon the other. This board made in this way possesses very great heat and fire resisting properties, and is easily and cheaply made, and from the fact that it possesses this high fire-resisting property I have been enabled to make it in the form of paper or very thin board possessing considerable flexibility, and I am thus enabled to apply it more easily than if it were made thicker and more unyielding. Its principal use is in covering or lining floors, walls of vaults, rooms, and apartments generally, and it is generally applied directly to the inner surface of the floor, wall, vault, room, or apartment, or to the studding. It is also useful for a great many other purposes—such as protection to shutters, roofs, &c.

Of course I do not confine myself to the exact proportions of the ingredients herein specified as forming the composition; neither do I confine myself especially to the said ingredients, but may use their equivalents.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

A fire-proof paper or board of vegetable fiber, asbestus, alum or copperas, and plumbago, or other coloring-matter, substantially in the proportions herein indicated, and coated upon one or both surfaces with silicate of soda or tungstate of soda, substantially as described.

JONATHAN G. MERRILL.

Witnesses:

F. F. RAYMOND, 2d,

FRED. B. DOLAN.