

(No Model.)

S. H. HAMILTON.
PAPER BUILDING MATERIAL.

No. 449,737.

Patented Apr. 7, 1891.

Fig. 1.

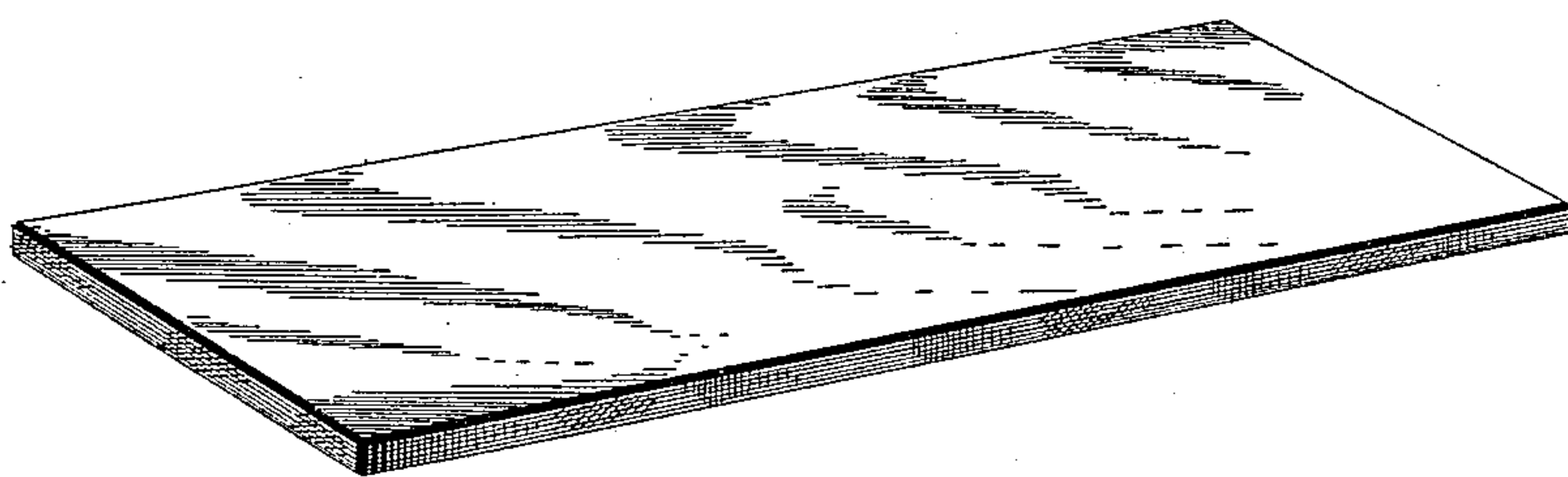
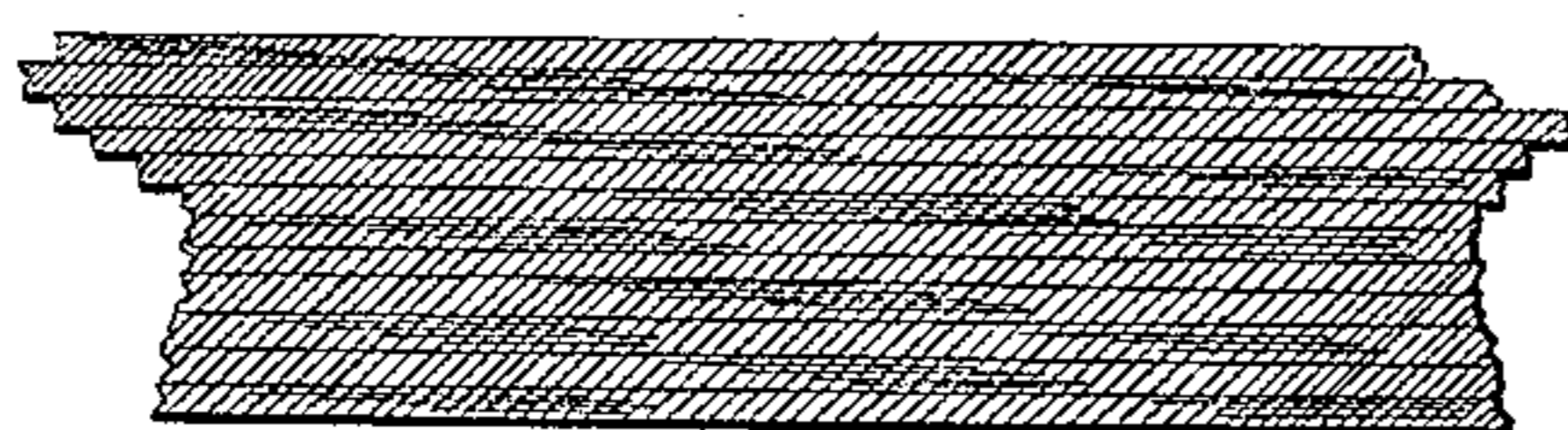


Fig. 2.



Witnesses:

Jas. C. Hutchinson.
Henry C. Hazard.

Inventor.

S. H. Hamilton, by
Amos A. Russell, his atty.

UNITED STATES PATENT OFFICE.

SILAS H. HAMILTON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY
MESNE ASSIGNMENTS, TO BENJAMIN F. RANDELL, OF HILLSDALE,
MICHIGAN.

PAPER BUILDING MATERIAL.

SPECIFICATION forming part of Letters Patent No. 449,737, dated April 7, 1891.

Application filed May 2, 1888. Renewed August 20, 1890. Serial No. 362,799. (No model.)

To all whom it may concern:

Be it known that I, SILAS H. HAMILTON, of Philadelphia, in the county of Philadelphia, and in the State of Pennsylvania, have invented certain new and useful Improvements in Paper Building Material; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a board of my material, and Fig. 2 is an enlarged cross-section of the same.

Letters of like name and kind refer to like parts in each of the figures.

The object of my invention is to produce a building material which shall possess all of the best qualities of a hard fine-grain wood without being subject to the objectionable changes of form and dimensions in consequence of variations in the temperature and humidity of the atmosphere; and to this end my said invention consists, as a new article of manufacture, in a building material which is composed of ingredients in the manner substantially as and for the purpose hereinafter specified.

In the carrying of my invention into practice I employ an ordinary paper—preferably manila—which is made in rolls in the usual way, except that there is added to the pulp a solution composed of one part of starch, one part of gum-arabic, one part of bichromate of potassium, and three parts of benzine dissolved in water, such solution, aside from the water, bearing the relation of about six parts of chemicals to forty-four parts of pulp. The sheets of paper thus made are afterward coated with a cement composed of glue and oil, preferably linseed, in the proportions of one gallon of the former to one-half pint of

the latter, and are then combined under heat and pressure into a compact board, the dimensions and thickness of which may be varied at will. After the material has been thus formed it should be kept under pressure for a period of from one week upward, dependent upon the paper used, in order that the boards may become thoroughly cured or seasoned, after which they are capable of being worked in the same manner as are any of the hard woods of commerce and of being applied to all of the purposes for which the same are used.

While the proportions of the chemicals as stated are preferably used, they may be varied both with relation to each other and to the pulp without departure from the spirit of my invention.

Having thus described my invention, what I claim is—

1. As an improved article of manufacture, a building material composed of paper-pulp, starch, gum-arabic, benzine, and bichromate of potassium, in substantially the proportions specified, made into sheets, and the same combined by means of a cement, substantially as and for the purpose shown.

2. As an improved article of manufacture, a building material composed of paper-pulp, starch, gum-arabic, benzine, and bichromate of potassium, made into sheets, and the same cemented together under pressure, substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of January, 1888.

SILAS H. HAMILTON.

Witnesses:

M. A. ANDREWS,
JOS. J. CAMP.