

UNITED STATES PATENT OFFICE.

ISRAEL W. MARSHALL, OF KENNETT, CHESTER COUNTY, PENNSYLVANIA.

MANUFACTURE OF WATER-PROOF BUILDING-PAPER.

SPECIFICATION forming part of Letters Patent No. 356,367, dated January 18, 1887.

Application filed August 7, 1886. Serial No. 210,296. (No specimens.)

To all whom it may concern:

Be it known that I, ISRAEL W. MARSHALL, a citizen of the United States, and a resident of Kennett township, in the county of Chester 5 and State of Pennsylvania, have invented certain new and useful Improvements in the Manufacture of Water-Proof Building-Paper; and I do hereby declare that the following is a full, clear, and exact description of the invention, 10 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, which forms a part of this specification.

My invention relates to water-proof building-paper, adapted for sheathing, roofing, and other purposes; and it consists in the manufacture of a water-proof paper which will not crack under the influence of heat, nor become brittle under the influence of frost, and which 20 can be manufactured and applied at a comparatively small cost.

The body of my improved building-paper may consist of any suitable paper fabric, either sized or unsized, and may be of any desired thickness and weight, according to the 25 specific purposes for which it is intended to be used. In order to make this body or fabric water-proof, I melt together in a suitable caldron, over a slow heat, from five to six parts 30 of the best resin and one part of tallow, lard, or its equivalent. This mixture, after melting, is heated to steam-heat, or about 300° Fahrenheit, (more or less,) and the paper, prior to its immersion in the mixture, is preferably 35 saturated with steam, or subjected to a steam bath, for the purpose of opening the pores of the fabric, and thus enabling it to receive the waterproofing-filling more readily; but I desire it to be understood that I do not confine 40 myself to any particular method of treating the paper prior to its immersion in the bath, as there are various ways of treating the paper which will have the same effect. After the

paper has been subjected to the proper treatment for a suitable period it is immersed and 45 thoroughly soaked in the mixture of resin or tallow, or resin and lard, as the case may be; and after it has been thoroughly filled and charged with this composition it is run through suitable rollers, under pressure, for 50 the purpose of removing any surplus of the filling. After this it may either be dried, or, if desired, it may be used immediately for roofing or sheathing, and left to dry after its application.

Among the advantages of my improved building-paper is this: that it is entirely free from the obnoxious odor which attaches to all building-papers or roofing-papers in which coal-tar in any of its compounds enters. If 60 properly prepared according to the above directions, this paper will be found not only absolutely water-proof, but it will be found by actual test that its tensile strength has been more than doubled.

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

The herein-described process of manufacturing water-proof building-paper, which consists in first subjecting the body of the paper to a suitable treatment, whereby the pores of the fabric may be opened, and then immersing the paper thus prepared into a bath of melted resin mixed with tallow, lard, or other 70 suitable grease, said bath being brought to a heat of about 300° Fahrenheit during the process of immersion, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature 80 in presence of two witnesses.

ISRAEL W. MARSHALL.

Witnesses:

THOMAS ELWOOD MARSHALL,
CHAS. C. WILDER.