

United States Patent Office.

C. HART SMITH, OF BALTIMORE, MARYLAND.

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PROCESS OF PREPARING PAPER FOR ROOFING AND SIMILAR PURPOSES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, C. HART SMITH, of Baltimore, in the county of Baltimore and State of Maryland, have invented certain Improvements in Process of Preparing Paper for Roofing and Similar Purposes, of which the following is a specification.

My invention relates to processes of treating paper for roofing, sheathing, and similar purposes, and consists in saturating the paper in sheets, of any desired length, with a heated compound of coal-tar, wood-tar, and dead-oil of coal-tar, and then passing it through heavy metallic presser-rolls, for the purpose of thoroughly incorporating the compound with the paper, and of leaving it in a suitable condition for almost immediate rolling into rolls for storage or transportation.

In preparing paper for roofing, sheathing, and similar purposes, I have found that when it was saturated with heated coal-tar alone, its surface possessed a certain gummy or sticky quality, and that when rolled up, its surfaces would in a little time adhere so closely together as to render it impossible to unroll it without positive injury to the paper, and that, in warm weather or when exposed to any unusual heat, it would become a compact mass.

The object of my invention is to produce a paper prepared for roofing or sheathing free from these objections.

To accomplish this; I take a certain quantity of coal-tar, and add about one-sixth ($\frac{1}{6}$) of its quantity of wood-tar, such as is usually produced at the factories of dye-stuffs, and also about one-sixth ($\frac{1}{6}$) of its quantity of dead-oil obtained by the distillation of coal-tar.

This mixture I heat to the boiling point, and then pass the paper through it, allowing it to remain long enough in the mixture to become completely saturated with it, and afterward pass it through heavy metallic or other suitable pressure-rollers, for the purpose of thoroughly incorporating the mixture with the fiber of the paper.

When the paper is in long sheets it may for convenience be first rolled up, and then, as unrolled, be passed through the mixture, and then on through the pressure-rollers.

After the paper comes from the pressure-rollers it can be rolled up ready for storage or transportation almost immediately, as its surface will be found to be free from any gummy or sticky quality, owing to the effect of the wood-tar and dead-oil on the mixture, and the body of the paper, by reason of its severe pressure in the rollers or between them, will be found comparatively dry.

In this way I make an excellent and durable preparation of paper in sheets or rolls for roofing, sheathing and similar purposes.

Having thus described my invention,

What I claim, is—

The combination of coal-tar, wood-tar, and dead-oil, in the proportions herein described for preparing paper for roofing purposes, in the manner herein set forth.

C. HART SMITH.

Witnesses:

H. B. MUNN,
PHIL. T. DODGE.