UNITED STATES PATENT OFFICE.

STEPHEN M. ALLEN, OF DUXBURY, MASSACHUSETTS.

MATERIAL FOR ROOFING PURPOSES.

SPECIFICATION forming part of Letters Patent No. 278,481, dated May 29, 1883.

Application filed January 8, 1883. (No specimens.)

To all whom it may concern:

Be it known that I, STEPHEN M. ALLEN, of Duxbury, in the county of Plymouth and Commonwealth of Massachusetts, have invented a new and useful Improvement in Material for Roofing and other Purposes, which improvement is fully set forth in following specification.

This invention consists in mixing with asphalt, coal-tar, roofing-pitch, or equivalent material reduced to a liquid or semi-liquid condition, powdered or pulped fiber of vegetable or animal origin, specially wood fiber, in sufficient proportions to make a paste; also, in rolling out the said paste into a sheet; and, further, in applying the paste to a backing of paper, felt, or other fabric. It likewise includes the new products or materials thus made.

It may be observed that heretofore sheets of paper and felt, and also webs or bats formed of disintegrated wood fiber, have been saturated with asphalt; but these are differently made, and in themselves differ from the material made in accordance with the present invention.

The invention is or may be carried into effect in the following manner: Take asphalt, coal-tar, roofing-pitch, or other resinous matter, or a composition containing them, or one or more of them, alone or mixed with animal or vegetable or mineral oil, or oily products—say one hundred pounds of asphalt—and having melted the same by heat stir in the powdered or pulped fiber until a substantial paste is made—say two hundred pounds of powdered wood fiber or dry wood pulp. The paste thus made can be applied to a roof or other surface like mortar, or it can be molded into various shapes. Preferably, however, it is rolled into sheets. For this purpose the paste is fed between rollers, which are or may be heated, (like those used for rolling out rubber, for example,) and soapstone-dust, clay, or other like substance, is sprinkled over the material to prevent its adherence to the rollers, and to give it a smooth surface. The paste also is or may be applied to a backing of paper, paper or leather board, felt, cloth, or other fabric, by rollers, or by other suitable means.

To use the new roofing the sheets may be applied with or without a coating of tar and gravel.

The material is water-proof, and, owing to the admixture of the fibrous matter with the asphalt or its equivalent, prevents the latter from melting and running in hot weather and from cracking or shrinking in cold.

Pigments and earthy mineral matters may be mixed with the asphalt, if desired, in addition to the fiber.

It may be observed that others have proposed to mix wood pulp or disintegrated wood fiber with boiling asphalt, and to mold the same into blocks for paving purposes; but, so far as I am aware, the fiber was never mixed with asphalt in the proportions above indicated; neither was the mixture used for roofing purposes, nor made into a sheet, nor applied to a backing, as indicated, nor was a mixture adapted to such uses contemplated.

I claim—

1. The paste of animal or vegetable fiber mixed and combined with asphalt or like material or composition in the proportions substantially as described.

2. A sheet of the mixed asphalt, or like material or composition and fiber, substantially as described.

3. A material for roofing or other purposes, composed of fiber mixed with asphalt or its equivalent, and applied to a web or backing, substantially as described.

4. The method of making a sheet for roofing or other purposes by mixing powdered or pulped fiber with heated asphalt or like material or composition, and rolling the paste thus formed into sheets, substantially as described.

5. The manufacture of material for roofing and other purposes by mixing fiber with asphalt or like material or composition, and applying the paste thus formed to a web or backing of paper or other fabric, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

STEPHEN M. ALLEN.

Witnesses:
FLORENCE EMERY,
ANNIE FLAGG.