

United States Patent Office.

ALEXANDRE TRENAUNAY, OF NEUILLY-SUR-SEINE, NEAR PARIS, FRANCE.

Letters Patent No. 102,884, dated May 10, 1870.

IMPROVEMENT IN WOODEN-BLOCK PAVEMENTS.

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, ALEXANDRE TRENAUNAY, of Neuilly-sur-Seine, near Paris, France, have invented a new and useful Improvement in Wooden Pavement; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same.

This invention relates to the manufacture and application of mineralized wood blocks or slabs for paving purposes.

The invention comprises—

First, mineralizing the wood paving-blocks.

Second, an improved concrete.

Third, an improved water-proof coating.

Fourth, an improved adhesive mastic.

Fifth, an improved mineral glue, and

Sixth, an improved solid glue.

The paving-blocks are made of pine, beech, or other suitable wood, and of suitable size. The blocks are cut across the grain of the wood at an angle of about forty-five degrees. The blocks are then mineralized or petrified in the manner hereinafter described, and, when they have become thereby solidified, I cover the lower half of each block with a water-proof coating, which is covered with coarse sand. I am thereby enabled to fix these wood blocks as readily as those made of stone, and, in this condition, they may be transported from place to place.

I prepare the ground to be paved with the improved blocks by leveling and rolling, and then applying a layer of compressed concrete, of about two and a-half inches, for yards, stabling, or footways, and of about four inches for roads, according to the form to be given for the same. By means of this concrete, I prevent the damp rising from the soil, and form a very firm foundation for the paving. This being done, I lay down the blocks in the following manner:

The blocks are placed in rows across the part to be paved, leaving a space of about three-eighths of an inch all around each block for an adhesive mastic to be introduced for uniting the blocks, or they may be laid without mastic when used for paving court-yards and similar purposes.

For paving streets or roads, the blocks are to be placed in an inclined position, in rows, across the street, with a space of about three-eighths of an inch between each block for the introduction of the adhesive mastic or concrete before mentioned. In this manner a uniform surface may be obtained, of sufficient firmness for all purposes. In order to obtain a firm footing for horses, and prevent slipping, the blocks are beveled off on top.

For sidewalks, the blocks are cut at an angle of forty five degrees, and are united in squares by means of mineral glue, for resisting heat and moisture.

The blocks or slabs used for paving the interior of buildings are made of pine, elm, or birch, and are not mineralized. The blocks for sidewalks are placed in rows, and united by a joint of adhesive mastic or concrete, of about one quarter of an inch in width.

The mineralizing composition before mentioned is composed as follows:

Hydrocarburet of resin, parts	40
Boiled linseed oil, containing litharge, parts	15
Pure wood tar, parts	25
Naphthaline, parts	10
Pulverized plumbago, parts	10
Total parts	100

These materials are mixed together in an iron vessel, and then boiled. The blocks are then inserted in the liquid mass, and placed upon an iron grating about two inches above the bottom of the vessel, and, after being treated for a sufficient length of time, the blocks become mineralized, and are then removed and placed in a drying apparatus for the purpose of hardening.

The concrete, before mentioned, is composed of—

Coarse river sand, parts	45
Lime from gas-works, parts	20
Hydraulic lime, parts	10
Pulverized brick, parts	10
Dried and pulverized clay, parts	15
Total parts	100

These products are placed in an ordinary mortar mixing apparatus, and ground up, triturated, and mixed together, after which the resulting compound of concrete is applied on the ground in squares of about a yard at a time, and well rammed and rolled, so as to form a firm and impervious foundation.

The improved water-proof coating, before mentioned, is composed of—

Coal-tar, parts	45
Resinous pitch, parts	10
Baked clay, parts	25
Pulverized lime, parts	5
Plumbago, parts	5
Sand, parts	10
Total parts	100

These materials are placed in an iron vessel, and boiled and stirred until perfectly homogeneous.

The improved adhesive mastic, before mentioned, is composed of—

Pitch from peat, parts.....	40
Yellow galipot, parts.....	15
Whiting, parts.....	25
Pulverized pumice-stone, parts.....	10
Oxide of manganese, parts.....	10

Total parts..... 100

The compound is prepared the same as that last described.

The mineral glue, before mentioned, is composed of—

Common brown pitch, parts.....	40
Yellow wax, parts.....	5
Stearine, parts.....	10
Linseed-oil, containing litharge, parts.....	15
Red oxide of copper, parts.....	10
Common resin, parts.....	10
Sulphuric acid, parts.....	10

Total parts..... 100

The products are mixed in a copper vessel, heated by steam.

The improved hard glue, before mentioned, is composed of—

Common glue, parts.....	45
White galipot, parts.....	10

Boiled linseed-oil, parts.....	20
Lye of soda crystals, parts.....	25

Total parts..... 100

These products are prepared the same as those last described.

Having thus described my invention,
I claim as new and desire to secure by Letters Patent—

1. The herein-described mineralizing compound for hardening wood, substantially as set forth.

2. The composition for compressed concrete, prepared in the manner hereinbefore described, to be employed for forming a bed or base for the paving-blocks, as set forth.

3. The herein-described improved water-proof coating for the lower parts of the wooden blocks, prepared as set forth.

4. The herein-described compound for an adhesive mastic for making the joints of the blocks after placing them in position, as set forth.

5. The improved mineral glue for uniting the wooden blocks or slabs, as described.

6. The improved solid glue, prepared as and for the purposes described.

A. TRENAUNAY.

Witnesses:

DEMOS,
A. GUION.