

UNITED STATES PATENT OFFICE.

AMZI L. BARBER, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO
THE BARBER ASPHALT PAVING COMPANY, OF SAME PLACE.

ASPHALTIC MASTIC.

SPECIFICATION forming part of Letters Patent No. 330,196, dated November 10, 1885.

Application filed December 28, 1883. Renewed October 3, 1885. Serial No. 178,948. (No specimens.)

To all whom it may concern:

Be it known that I, AMZI L. BARBER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Asphaltic Mastic, of which the following is a specification.

My invention relates to the manufacture of asphaltic mastic, the object of which is to produce an article easily transported and specially adapted for the laying of side or foot walks, cellar-bottoms, lining of basements, coverings for areas, roofs, and other places, being a substitute for asphaltic mastics made from the bituminous limestones of Neuchâtel, Val de Travers, Seyssel, Brunswick, Sicily, and other natural asphaltic rocks; and to this end my invention consists in combining unburned limestone in a finely-divided or pulverized condition with an asphaltic cement, said cement being composed of refined Trinidad asphaltum and the residuum of petroleum or heavy petroleum-oil, as will more fully appear.

In carrying out my invention I reduce the natural unburned limestone to a finely-powdered and disintegrated condition, then heat it and free it from moisture in any well-known manner. I take of the powdered limestone, as above treated, about seventy to eighty parts, and thoroughly mix therewith about thirty to twenty parts of asphaltic cement. The asphaltic cement is composed of Trinidad asphaltum, which has been refined and freed as much as possible from earthy or objectionable matter, about eighty parts, and the residuum of petroleum or heavy petroleum-oil about twenty parts. These ingredients, in about the proportions named, are thoroughly incorporated or mixed together and constitute what I term "asphaltum cement."

By refining the Trinidad asphaltum and extracting therefrom the earthy and extraneous matter which detracts from the bituminous and binding qualities of the asphaltum and putting in its place powdered limestone, I increase the wearing qualities of the pavement or roof made therefrom, and furthermore it is not so liable to disintegrate and be affected by thermal changes.

The crushed and powdered limestone and

asphaltic cement in substantially the proportions named are heated separately and placed in any suitable mixing device and agitated until they are thoroughly incorporated, and the crushed and powdered limestone is completely coated, saturated, and impregnated with the asphaltic cement. The mass when thus mixed and reduced to a proper consistency is placed in suitable molds and pressed into blocks of any convenient or desirable form best adapted for being easily handled or transported to the place where they are to be used. I prefer to make these blocks of a size weighing about fifty pounds, so they can be readily handled. The blocks thus formed of the materials just named constitute a new article of manufacture, and will be sold and recognized as such in the market, and will form a substitute for the asphaltic mastics made from the natural rocks before named.

When the blocks are to be used, they are broken by a sledge-hammer or other means into pieces and placed into a tank, caldron, or other suitable receptacle, in which has been previously placed a small quantity of asphaltic cement, heat being applied so as to reduce the mass to a plastic or semi-plastic condition. When the mass has been reduced to the proper condition of fluidity, from twenty-five to sixty per cent. of small gravel or grit is added and thoroughly incorporated therewith by stirring. The composition or mastic thus formed is now laid on a suitable foundation in the usual manner of laying such pavements, and the surface is finished in the manner customary in the laying of Neuchâtel or other asphalt mastics made from natural rock.

By Trinidad asphalt I mean the asphaltum from the well-known lake at Point La Brea in the Island of Trinidad, British West Indies, as this deposit has exactly the qualities required to produce the desired result.

I do not wish to confine myself to limestone powder, as fine sand of suitable quality may be successfully substituted for a part or all of the limestone powder.

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

1. As a new article of manufacture, a block composed of pulverized limestone, refined

Trinidad asphaltum, and residuum of petroleum or its described equivalent, as set forth.

2. An asphaltum mastic composed of refined Trinidad asphaltum, residuum of petroleum or heavy petroleum-oil, and pulverized and ground limestone, combined in the manner and in the proportions set forth.

3. A paving composition consisting of an asphaltic cement, such as described, pulver-

ized and ground limestone, and small gravel or grit, combined in the manner and in substantially the proportions set forth.

In testimony whereof I affix my signature in presence of two witnesses.

AMZI L. BARBER.

Witnesses:

R. M. RICHARDS,
JAMES R. STANLEY.