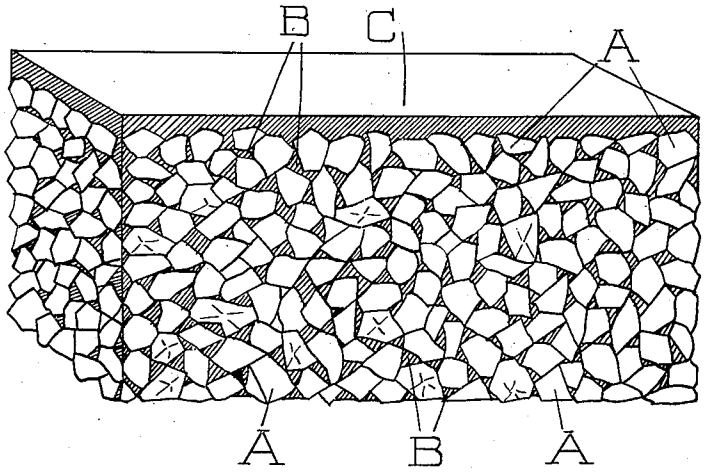
Nov. 25, 1924. 1,516,890

C. D. POCHIN

MANUFACTURE OF BLOCKS OR THE LIKE FOR PAVING AND LIKE PURPOSES

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UNITED STATES PATENT OFFICE.

CHARLES DAVIS POCHIN, OF CORWEN, WALES.

MANUFACTURE OF BLOCKS OR THE LIKE FOR PAVING AND LIKE PURPOSES.

Application filed October 23, 1922. Serial No. 596,371.

To all whom it may concern:

Be it known that I, CHARLES DAVIS POCHIN, a subject of the King of Great Britain, residing in Corwen, North Wales, have invented certain new and useful Improvements in the Manufacture of Blocks or the like for Paving and like Purposes, of which the following is a specification.

This invention relates to improvements in the manufacture of blocks, slabs, sheets or the like (hereinafter for the sake of brevity simply called blocks) for paving and floors, wall linings and other purposes and has for its object to produce a block or unit for laying down pavements, foot-paths, floors and the like that shall be durable in use, soft and noiseless to the tread, and cheap to manufacture.

According to the present invention, I make the blocks, slabs, or like units by moulding them from concrete so as to produce a porous block or the like having considerable interstices, and I then more or less fill the interstices in the concrete and make a tread surface by pouring or compressing into the concrete block, while in a mold, liquid, or plastic unvulcanized rubber. I then vulcanize the rubber either in the mould or subsequently.

The mould in which the concrete is formed is of a size corresponding to the block or sheet required and in this is placed the necessary quantity of concrete composed of cement and pieces of stone, gravel or other aggregate of irregular angular shape so as to form a block with considerable interstices between the pieces. When the unvulcanized india-rubber (liquefied or softened by any suitable rubber solvent) is placed in the mould on the concrete, it fills up the interstices therein and surrounds and embeds the pieces and entirely or partly covers the upper surface that is to form the tread.

In practice, the concrete block is made from small pieces of stone, such as granite or other suitable stone, screened to exclude any dust, and these small pieces are then mixed with Portland cement in suitable proportions, but instead of wetting the mixture in the usual way, only a small quantity of moisture is added just sufficient to damp it. This is then placed in a mould in the usual way to make the block. The fact that no dust is used and only very little moisture prevents the usual sloppiness of concrete, and the result is a porous block which absorbs, when dried and matured, anything that is poured or forced into it. The prepared concrete block is placed in a suitable mould, and upon the concrete block is placed a sheet of unvulcanized plastic rubber of the same length and breadth as the concrete block. The mould is of the same length and breadth as the concrete block and of sufficient depth to contain the concrete block and the sheet of unvulcanized plastic rubber. The mould is then placed in a hydraulic or other type of vulcanizing press and subjected to the necessary heat to vulcanize the rubber. The pressure fills up the interstices in the concrete with rubber and surrounds and embeds the pieces and entirely or partly covers the upper surface of the concrete block with vulcanized rubber that is to form the tread.

Such paving blocks will be found durable and not liable to crack like ordinary asphalt or concrete paving, and at the same time the india-rubber gives a soft surface to the tread.

A block made in accordance with my invention is illustrated in fragmentary section in the accompanying drawing.

A represents the pieces of concrete, B the interstices between the concrete which are more or less filled with the india-rubber filling, while C is the rubber tread surface of the block.

The cost of the blocks or slabs depends mainly upon the amount of rubber used in their composition. For cheaper blocks therefore all the interstices in the concrete will not be filled with the rubber filling which can be concentrated more particularly in the upper layers of the block. For such block smaller grained material can be used for all except the upper portion of the block.

If desired, the blocks might be formed with tongues or grooves or other means for interlocking the paving or flooring units when laying them down.

It has been previously proposed to apply to the upper surface of roadways or pavements having a concrete foundation bitumen dissolved in a solvent, so as to act as a binder for a top or wearing surface of asphalt. It has also been suggested to make slabs of artificial stone for paving purposes by moulding under pressure a foundation layer of damp or slightly wetted concrete

and an upper or surface layer of hot asphalt.

I declare that what I claim is:—

1. The process of manufacturing laminated blocks which comprises forming a layer of concrete; covering one face of said concrete layer with unvulcanized india-rubber; and vulcanizing the india-rubber.

2. The process of manufacturing laminated sheets comprising forming a layer of concrete with considerable interstices therein; covering one face of the concrete layer with unvulcanized india-rubber so as to form a tread surface and cause a portion of the india-rubber to fill the interstices of the concrete layer; and then vulcanizing the india-rubber.

3. A laminated sheet comprising a layer of concrete and a superposed layer of vulcanized india-rubber connected thereto.

4. A new article of manufacture comprising a base layer of concrete having considerable interstices; and a tread layer of vulcanized india-rubber, a portion of said india-rubber extending into said interstices of the concrete layer to interlock the layers and form a unitary structure.

In witness whereof, I have hereunto signed my name this 10th day of October, 1922, in the presence of two subscribing witnesses.

CHARLES DAVIS POCHIN.

Witnesses:
G. C. DYMOND,
W. ROBSON.