W. B. Coates.

Wood Pavement.

No. 100,727. Patented Mar. 15, 1870.

Fig: 1

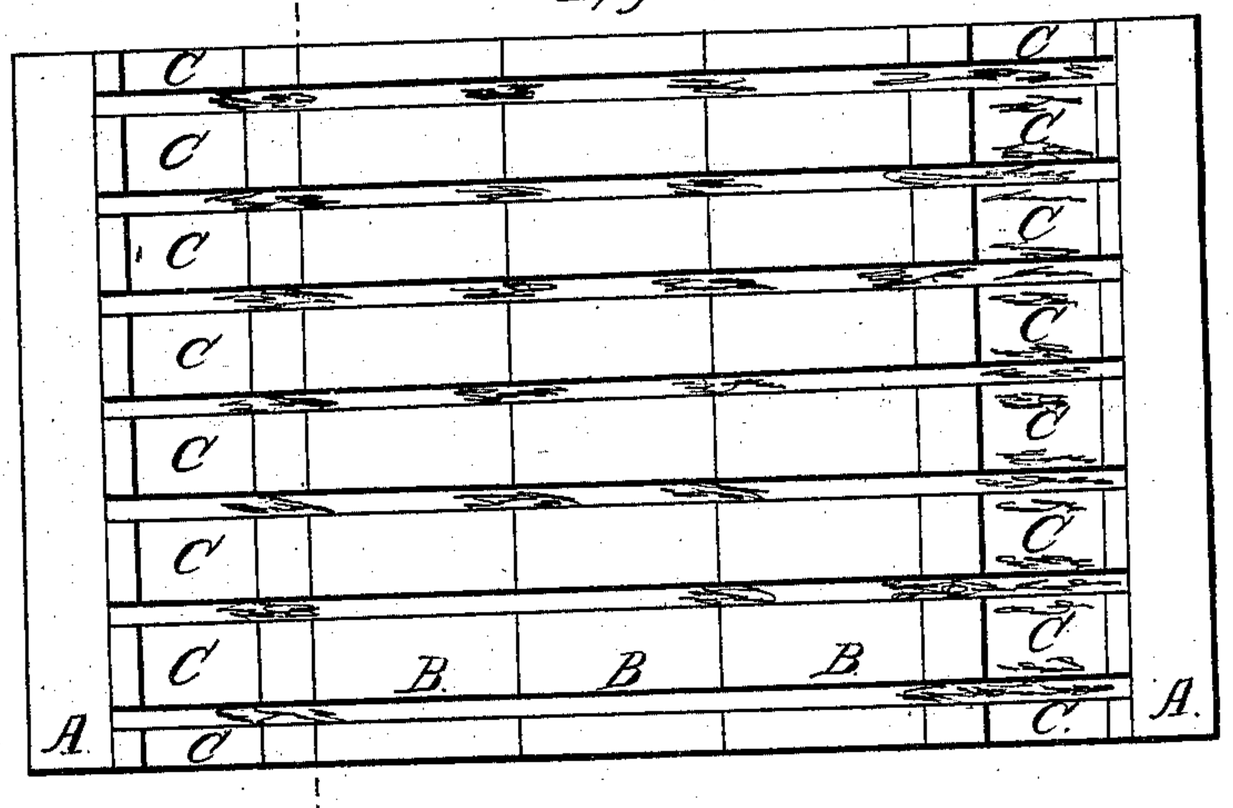


Fig: 2

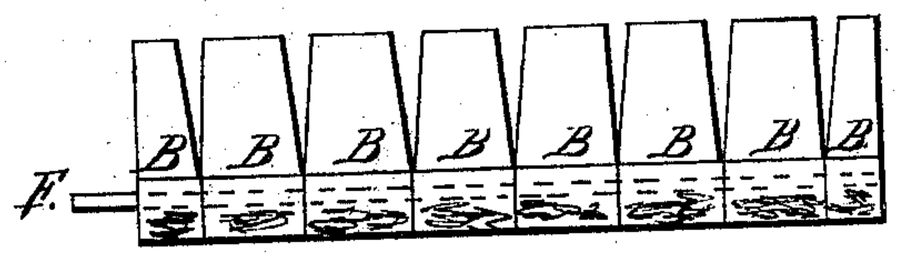


Fig: 3

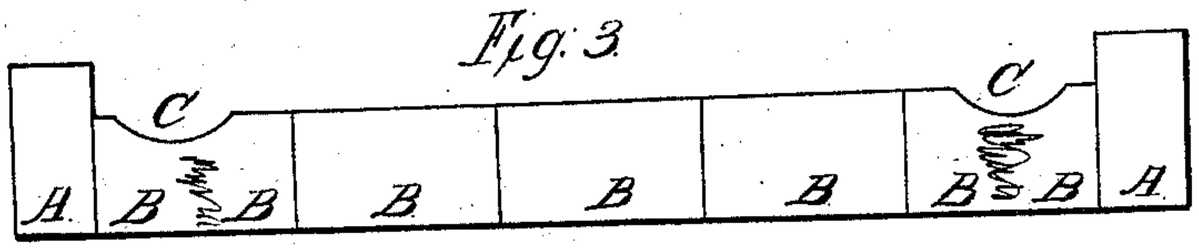
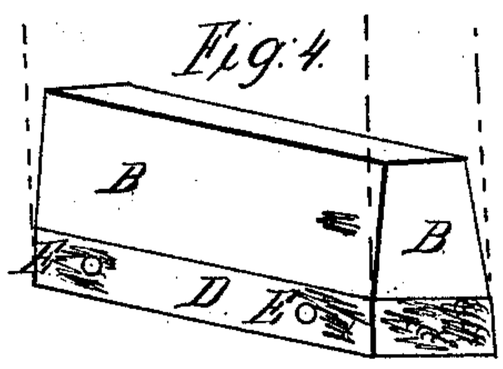


Fig: 4



Witnesses;

Joseph Leeds.

John. T. Houghton.

Inventor;

William B Coates

United States Patent Office.

WILLIAM BAILY COATES, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR FOR ONE-HALF OF HIS RIGHT TO JOSEPH LEEDS, OF SAME PLACE.

Letters Patent No. 100,727, *dated March* 15, 1870.

IMPROVEMENT IN CONCRETE AND WOODEN 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, WILLIAM BAILY COATES, of the city of Philadelphia, in the State of Pennylvania, have invented a new and improved Wooden Pavement; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in the preparation of the wooden blocks, and in the peculiar foundation upon which the blocks are laid.

In the improvements now presented for the action of the office, I have two distinctive features; one, the preparation of the blocks with a view to prevent rotting; the other, the peculiar construction of the foundation with a view to dispense with boards.

The preparation of the blocks is an important consideration. I first dry the blocks until all the moisture is expelled, then boil them, soak them in, or saturate with common whale-oil. Afterwards boil the blocks in either virgin coal-tar or pitch for thirty minutes, more or less, and allow them to become perfectly dry, when they are ready to be laid down, without again dipping in tar, on the street.

The preserving properties of whale-oil are very great, and when wood is suffered to imbibe even a small quantity, the rapid decomposition of the timber is entirely prevented. For this reason I have applied it to the preservation of wooden blocks for street paving. After the pores are divested of the moisture contained within them, the whale-oil is very easily imbibed by them, and excludes all moisture afterwards, so that after the wood is boiled in the virgin coal-tar or pitch, I have a block capable of resisting change of temperature, or change from wet to dry, without suffering the injury common to the usually-laid pavements.

In the peculiar foundation, I have great advantages over any in use, enably me to dispense with the expensive board foundation now generally used.

I construct my foundation as follows:

I take one bushel, more or less, of slaked lime, and to this add six bushels of unsifted coal ashes, and moisten, so as to allow the lime to become completely incorporated with the ashes; this soon takes place by mixing, and the mixture can be kept under shed till carted on the street, when it is spread over the properly-arched street to the depth of three inches, more or less, and well rolled with a heavy roller, to make it smooth and solid. Again on top of this I place a layer of small stones, coarse gravel stones will answer, to the depth of two inches, more or less, and these are rolled down into the first layer, leaving a smooth, hard surface for the blocks.

This mode of making a foundation will excel all others in many respects. It will effectually prevent the frost from getting into the ground, and freezing water-pipes. The coal ashes will render the foundation more or less elastic, although the ashes may be pressed down, owing to its porous nature.

The foundation can be cheaply made, and will make a good mixture for garden and sidewalks, under some circumstances. It will become very hard if left undisturbed, and last a long time. Again, when it is required to be removed for repair of pipes, &c., it can be taken up and put back without too serious inconvenience.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The preparation of the blocks, by first expelling all moisture, then boiling or soaking in common whale-oil, and afterwards boiling in virgin coal-oil or pitch for thirty minutes, more or less, and then drying the blocks.

2. The construction of the foundation, with due proportions of slaked lime and unsifted coal ashes, to the proper consistence, laid down and rolled smooth, then a layer of small stones rolled into the first layer until the surface is smooth and hard, the whole being as set forth and described in this specification.

WILLIAM B. COATES.

Witnesses:

JOHN T. HOUGHTON,

JOSEPH LEEDS.