

F. H. SMITH.

Wood-Pavements.

No. 134,492.

Patented Dec. 31, 1872.

FIG. 1.

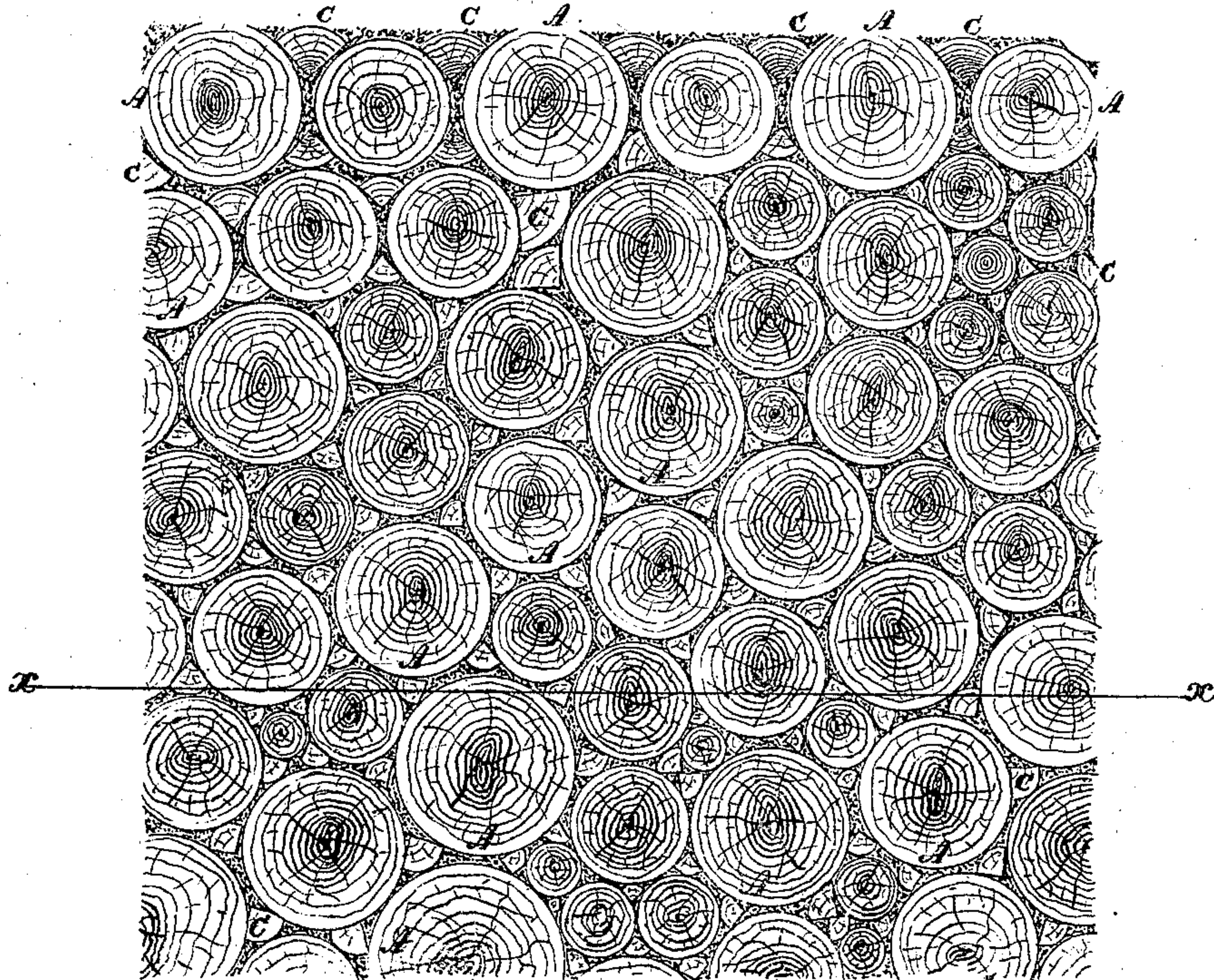
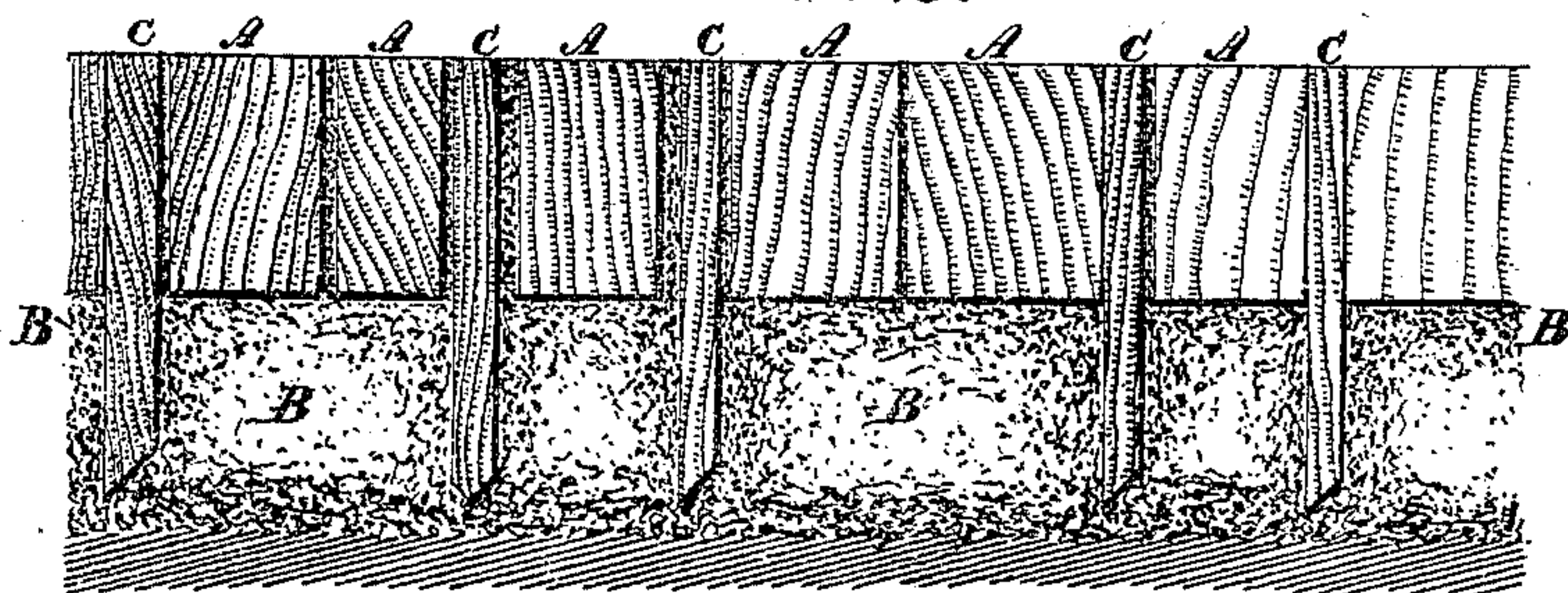


FIG. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

FRANCIS H. SMITH, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN WOOD PAVEMENTS.

Specification forming part of Letters Patent No. 134,492, dated December 31, 1872.

To all whom it may concern:

Be it known that I, FRANCIS H. SMITH, of Washington, in the District of Columbia, have invented an Improved Pavement, of which the following is a specification:

Nature and Objects of the Invention.

My invention relates to what are known as round-block pavements, being made chiefly of blocks produced by sawing poles or timber of proper diameter into requisite lengths.

I lay the blocks on a bed of sand and gravel or other porous and insoluble material, which will afford a permanent foundation and efficient drainage. In some or all of the angular spaces between the blocks I introduce stakes of greater length, so that when driven until their upper ends are flush with the surface of the pavement they will penetrate and pack the foundation-bed and anchor the blocks more firmly in position. The interstices are filled with gravel and asphaltum, or some similar material is spread over the whole to form an impervious coating on the upper surface and cement the blocks and filling together.

General Description.

In the accompanying drawing, Figure 1 is a plan of a pavement illustrating my invention; and Fig. 2 is a vertical section of the same on the line *x x*, Fig. 1.

A A are cylindrical blocks of wood set on end upon a foundation or bed, B, of sand and gravel. C C are stakes of greater length, adapted to partially fill the spaces between the main blocks A and to penetrate the foundation B, on which the latter rest, the offices of these long interposed stakes being to occupy the main spaces between the round blocks and, by their length and their tapered ends, to pack the foundation-bed when driven home, and to anchor and secure the pavement and keep the main blocks in position.

The main blocks may be produced by sawing into proper length poles or small timber with the bark removed. The stakes which are to occupy the angular spaces may also be round, or they may be produced by splitting longer pole sections into four and tapering one end of each.

My object is to produce a pavement which will combine economy, efficiency, and durability in an eminent degree. To this end I prefer to proceed substantially as follows: I

prepare a bed, B, of sand or gravel or any suitable insoluble material which may be used in its natural condition, as dug from the bank, without screening. On this I set blocks A, and in some or all of the main spaces between them I then insert stakes C, with tapering or wedge-shaped points, and spread over the whole a coating of sand and gravel, filling the interstices to the top of the main blocks. A stroke with a single rammer on each of the projecting blocks then drives them down flush with the main blocks, and at the same time jars the filling into the interstices. The penetration of the sand and gravel into the crevices between the blocks is further facilitated by flooding with water. The whole pavement is then thoroughly rammed with the double rammer, after which the interstices are again filled up flush with screened gravel. A coating of hot tar, bitumen, asphalt, or other adhesive and impervious material is then applied, and a covering of fine gravel or sand spread over the whole.

It will be apparent that the jar of driving the stakes and their motion relatively to the blocks A causes the sand to penetrate the interstices more effectively.

The bed of sand or gravel affords efficient drainage, so as to prevent any accumulation of water around the blocks. The upper coating of asphalt or analogous material cements together the blocks and the filling of screened gravel, and protects the surface of the pavement from the weather and from atmospheric exposure. This mode of draining the bottom and protecting the top is believed to constitute the most efficient system for rendering a wood pavement durable.

Claim.

The following is claimed as new:

A pavement made with round blocks A, formed of sections of the natural wood, interposed stakes C of greater length driven flush with the surface of the pavement, a bed, B, of sand, gravel, or other porous material, a filling of gravel, sand, or its equivalent, and an upper coating of asphalt or other impervious material, all substantially as herein described.

FRANCIS H. SMITH.

Witnesses:

OCTAVIUS KNIGHT,
WALTER ALLEN.