J. CARR & M. D. PHILLIPS.

Wood-Pavement.

No. 162,218. Patented April 20, 1875.

Fig 1.

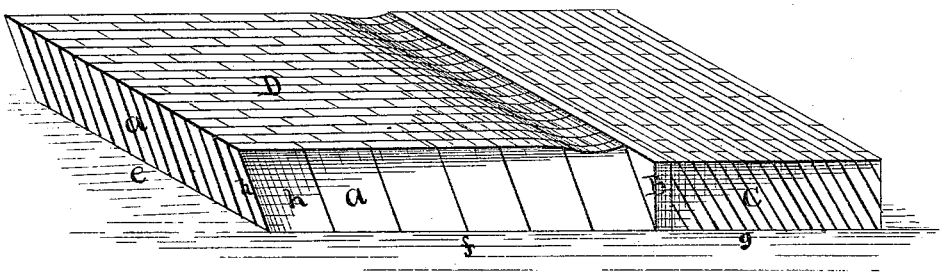
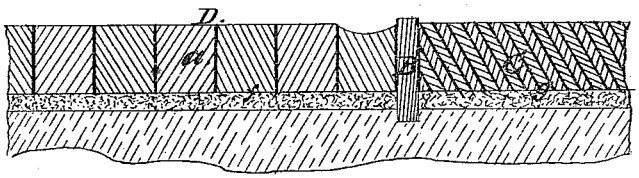


Fig 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN CARR AND MENZO D. PHILLIPS, OF GRAND RAPIDS, MICHIGAN; SAID PHILLIPS ASSIGNOR TO SAID CARR, AND SAID CARR ASSIGNOR OF ONE-HALF HIS RIGHT TO WILLIAM CARR.

IMPROVEMENT IN WOOD PAVEMENTS.

Specification forming part of Letters Patent No. **162,218**, dated April 20, 1875; application filed May 6, 1874.

To all whom it may concern:

Be it known that we, JOHN CARR and MENZO D. PHILLIPS, each a resident of the city of Grand Rapids, in the county of Kent and State of Michigan, have invented a new and useful Improvement in Wooden Pavements, of which the following is a specification:

The object of our invention is to construct a cheap and durable pavement, that will be practically fire-proof and water-proof, and that may be laid and used as road-beds, pavements of streets, sidewalks, barn-floors, cellar-floors, granary-floors, floors or hearths in boiler-rooms, or as pavements or floors wherever the so-called wooden pavements are commonly used, or may be used where brick, or stone, or grout, or concrete, or gravel pavements have heretofore been used, and for many other purposes and uses to which it is adapted. Our invention relates to prepared blocks of wood, which have been first soaked or pickled, as hereinafter stated, cut beveling, so that when set up in the pavement, as hereinafter described, they will be inclined at an acute angle, in combination with the peculiar foundation hereinafter described, and with the peculiar composition to fill up the interstices between the blocks and make them solid, and with a covering of water-lime thereon placed.

The accompanying drawing represents a section of one-half of the width of the street, with such a pavement laid thereon, together with the gutter, curb-stone, and sidewalk of one side of the street of the same mode of construction.

In said drawing, A shows the form of the blocks, and the manner in which they are laid, resting upon one of the beveled ends, upon the foundation, so that they all incline in the same direction, and are close together, and present an even upper surface. B represents the curb-stone separating the street from the sidewalk. C represents the form of the blocks of wood, and the manner of laying them in sidewalks; and D represents the surface of the pavement after the same is finished and ready for use. *e f c g* represent the surface where the blocks rest upon the concrete foundation hereinafter described; and the broad dark lines represent the seams between the blocks, which are filled with the fire-proof and water-proof cement hereinafter described. The process of preparing and laying the same is as follows: Mix together thoroughly a concrete composed of coarse sand or gravel, or fine broken stone, with water-lime, and add thereto water in about the proportions (although other proportions will secure the desired end, but not so well) of one-third of a barrel of water-lime with one cubic yard of such sand, gravel, or stone, and sufficient water to wet the lime and cause the same to become thoroughly moist. Mix the same well, and spread it evenly and smoothly upon the prepared ground where such pavement is to be laid, and place the superstructure of blocks upon the same before it has set or hardened. The above is a suitable amount for three square yards of pavement. The wooden blocks, made of the shape represented in said drawing by A—that is, cut obliquely across the grain, so as to form oblique parallelopipedons, all of the same length—are laid upon the aforesaid foundation side by side, fitting closely, and presenting an upper surface that is smooth, so that pressure upon the upper surface of any one of the blocks is sustained, in part, by its base, and in part distributed to adjoining blocks, and from those to others in a lessening degree, thereby preventing injury to the foundation under the particular block where the pressure is applied, and keeping the whole surface of the road-bed smooth and unaffected by sudden pressures, jars, or concussions. Said blocks are first soaked for at least four days in a solution of eight parts, by measure, of common salt, and one part, by measure, of quicklime, in a sufficient quantity of either warm or cold water to make a very thin solution of the same, the object being to saturate the wood with the solution or pickle, and increase greatly its durability, and also to render it practically incombustible. As the blocks are laid in the pavement a fire-proof grout, composed of water-lime, fine sand, gum-shellac, and water, is placed on the upper inclined surface of the blocks, so as to fill up all the in-

terstices between them, which said grouting is composed of the following proportions, (although other proportions will secure the desired end, but not so well:) For each square yard of pavement, namely, one and one-third barrel of fine sand, one-third of a barrel of water-lime, and one pound of powdered gum-shellac, well mixed together, with sufficient water added thereto to make the same of the consistency of mortar, and then, after the blocks have been thus laid, there is poured over the partly-finished pavement a cement composed of water-lime mixed with sufficient water to form a very thin solution or wash, which soon sets, and, in combination with the other cement or grouting, fills up all crevices or interstices which may not have been entirely filled, and makes the pavement smooth, solid, water-proof, and practically fire-proof.

We know that wooden blocks in various forms, laid either on artificial foundations, or on the earth smoothed and prepared for them, have long been used; that the materials, cements, and grouts have long been known and used in combination; that the use of a pickle for the purposes of preservation of wood has also long been known; but the combination of such concrete foundations with blocks of wood of the shape shown in said drawing, soaked in said compound or mixture of salt, lime, and water, laid in the manner shown in said drawing, with a grouting of sand, water-lime, shellac, and water in the interstices thereof to bind them together, and with said solution of water-lime poured upon the surface of such pavement, we claim is a new and useful improvement.

We claim as our invention—

The combination of the foundation, made and laid substantially as above described, with a superstructure of blocks of wood prepared by soaking, as above stated, and of the general shape above described, laid in the mode above described, with the grouting composed of water-lime, fine sand, shellac, and water, as above stated, in the interstices between said blocks, with the solution or mixture of water-lime and water poured upon the surface of said blocks after they are thus laid or placed in position, as above described.

JOHN CARR.
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Witnesses:
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