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PATENTED MAY 17 1870

A VAN CAMP AND M.M.HODGMAN

PRESERVING WOOD FOR PAVEMENTS AND FOR OTHER PURPOSES.

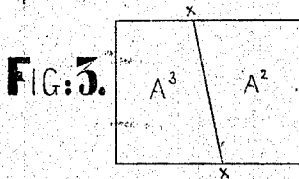
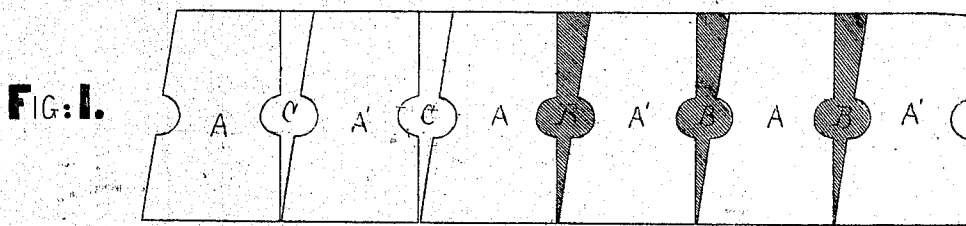
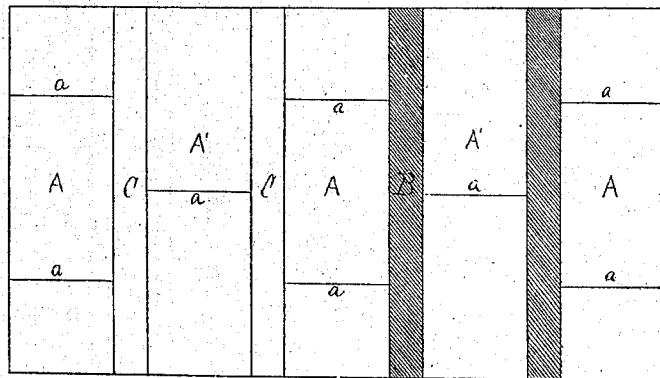


FIG: 2.



WITNESSES.

Edwin James.

Alf Holmead Jr.

INVENTORS.

A. Van Camp and M.M. Hodgman.

J. G. F. Holmead.

Attorney.

United States Patent Office.

AARON VAN CAMP, OF WASHINGTON, DISTRICT OF COLUMBIA, AND MARCUS M. HODGMAN, OF ST. LOUIS, MISSOURI.

Letters Patent No. 103,105, dated May 17, 1870.

IMPROVEMENT IN 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 we, AARON VAN CAMP, of Washington City, District of Columbia, and MARCUS M. HODGMAN, of St. Louis, in the county of St. Louis and State of Missouri, have invented certain new and useful Improvements in the Method of Preserving Wood for Pavements, and for other purposes; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon, making part of this specification, in which—

Figure 1 is a side view.

Figure 2 is a top view.

Figure 3 is a side view of the block, showing the direction of the cut.

The nature of our invention consists in so preparing the blocks for a wood pavement that when the same are laid they will resist moisture and remain entirely unaffected by atmospheric change. The solution we use for this purpose is composed of pyroligneous acid, sulphate of iron, and borax, or their clear chemical equivalents or production. This solution we infuse into the blocks, so as to completely fill the pores, by the aid of an exhaust cylinder, as is employed in the Burnettizing process, or by any like arrangement.

The nature of our invention also consists in cutting the block in such form as to preserve all the advantages incident to the wedge, retaining the groove, as shown in our patent of November 16, 1869, and so pouring the concrete or cement down as to furnish a lateral coating for the entire face of the block.

The advantages resulting from this plan of preparing and laying the blocks will readily suggest themselves to any one familiar with the difficulties incident to the rendering of wood incapable of being affected by frost and moisture. Besides the improvement in the block, resulting from its impervious nature, it is so sawed out that there will be a great saving in material, and also maintain the run of its grain in such manner as most effectively to resist the wear of the animals and vehicles.

To enable others skilled in the art to make and use our invention, we will now proceed to describe its construction and operation.

A A¹ represent the blocks which, before being laid, are to be so prepared by the composition composed of pyroligneous acid, sulphate of iron, and borax, or their chemical equivalents, as to insure the filling of

the pores of the wood, and thus render it impervious to moisture.

Of course there are many plans by which the blocks may be treated so as to accomplish the desired result.

An exhaust cylinder and pump may be used, or any other mechanical equivalent.

The direct form of the block is shown in fig. 3, and it will be observed that it is cut diagonally, in the direction of the line *x x*, which gives all the advantages of the wedge-shape, and retains the entire strength of the grain.

After the blocks of wood are thus cut, losing none of the material, the half section A² is reversed and placed alongside of the other half section A³, as clearly shown in fig. 1.

By this means the broad base of the blocks form as it were a floor, while the upper surface has left sufficient space between the blocks for the concrete to enter.

The advantage resulting from this form of block is not only that each block is firmly secured to the next by concrete B or cement C, but also that sand and other materials are prevented from being forced up between the recesses during the process of laying the blocks.

The cross-joints *a a* are dipped in hot asphaltum, which not only renders the pavement impervious to moisture at this point, but also greatly facilitates the process of laying.

Having thus fully described our invention,

What we claim therein as new, and desire to secure by Letters Patent of the United States, is—

1. So soaking the block in a composition of pyroligneous acid, sulphate of iron, and borax, or their clear chemical equivalents or deductions, as to produce the result specified.

2. Constructing a pavement, of blocks A A¹, and concrete or cement, when said blocks are grooved, as shown, and wedge-shaped, one lateral surface being straight and the other angular or inclined, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

A. VAN CAMP.
M. M. HODGMAN.

Witnesses:

EDWIN JAMES,
FRED. KOONES.