

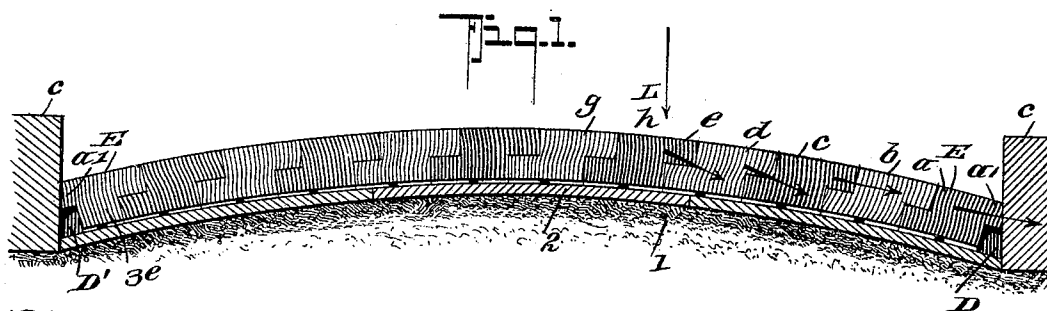
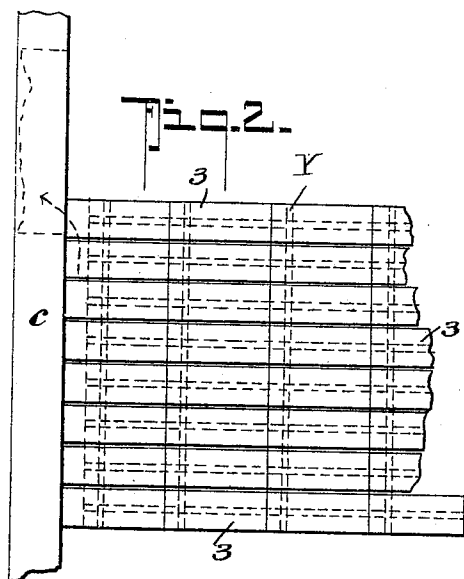
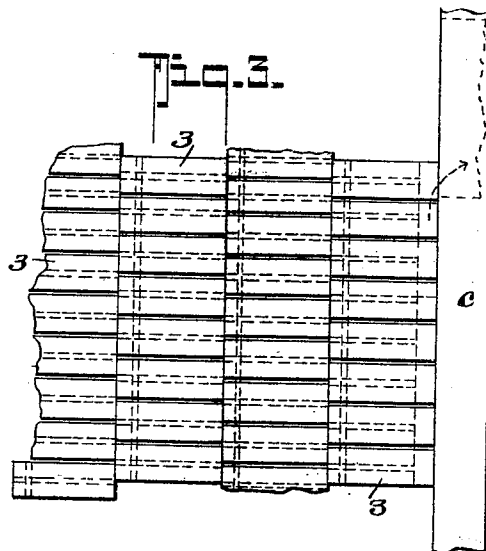
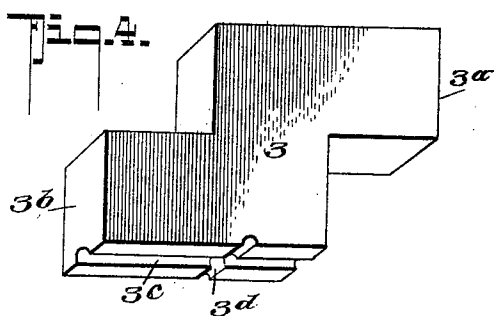
No. 619,934.

Patented Feb. 21, 1899.

J. BUCHEL.
WOODEN BLOCK PAVEMENT.

(Application filed Oct. 19, 1898.)

(No Model.)



WITNESSES:

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WOODEN-BLOCK PAVEMENT.

SPECIFICATION forming part of Letters Patent No. 619,934, dated February 21, 1899.

Application filed October 19, 1898. Serial No. 693,991. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH BUCHEL, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and Improved Wooden-Block Pavement, of which the following is a specification.

This invention relates to improvements in that form of wooden pavements consisting generally of wooden blocks set on end with the grain of the wooden block perpendicular and said block resting on a concrete or wooden foundation.

It is well known that the wearing-surface of wood when set up in the manner stated is great, and it has been found that the greatest trouble with pavements of this kind is caused by the blocks rotting or decaying at the foundation, while the upper surface remains comparatively sound, and that the foundation is so injured and broken on account of the same area of end pressure of each block, particularly so when wood is used as a base, that the constant soaking of water from rain or otherwise causes the bottom ends of the blocks and the base not exposed to air to quickly wear out or give way first, and usually in such a manner that when the base begins to rot the individual blocks act as wedges in driving holes through the base. Not having a chance to dry, the ends of the blocks and the base or foundation soon become filled with noxious gases, which discharge as a disagreeable odor and render the street unhealthy.

My invention seeks to provide a block pavement having as its characteristic features, first, a block so cut and arranged that the pressure on the foundation will not be on the individual block, but on a series of blocks laterally on each side of the direct load pressure, whereby the load weight is transmitted over a greater area of the foundation or base than is possible where the blocks each have an individual bearing-surface; second, a construction of block of such shape and capable of being so interlocked as to permit in the assembling of the blocks the formation of the complete arch having its end thrusts on the curbs, the several blocks forming an arch so keyed that the weight of the load will be supported in a great measure by the curbs; third, a construction of the block having interlocking portions whereby a number of blocks can

be assembled in series to provide for an increased bearing-surface on the foundation to the more thoroughly disseminate the weight of the load and whereby the lower edges of such blocks can be provided with transverse and longitudinal grooves so arranged that the grooves of all of the blocks can be brought into register and form air-ducts or channels for draining the base of the blocks and the foundation to dry and purify the street; fourth, a construction of blocks providing by reason of their interlocking arrangement for a lighter foundation than is usually required as a base in pavements of this character, and, fifth, a novel construction and arrangement of interlocking blocks for crossing longitudinal grooves, whereby continuous end curb drainage-outlets can be provided for leading off the water by sewer or through take-offs.

The invention in its subordinate features consists in such details of construction and peculiar combination of parts as will be first described in detail and then pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a transverse section of a street-roadway constructed in accordance with my invention. Fig. 2 is a plan view of a portion thereof, showing the blocks all arranged in the same transverse alignment. Fig. 3 is a similar view illustrating the manner of arranging the blocks to form a more complete interlocking thereof and an increased foundation-bearing or load-disseminating surface. Fig. 4 is a detail view of one of the blocks.

In the practical construction my improved street-roadway consists of a foundation 1, which may be the earth graded to form a convex surface, a concrete bedding, or a base formed of wooden blocks 2, laid transversely on the roadway on the convex surface, as shown in Fig. 1.

The road-bed consists of a series of wooden blocks 3, the peculiar construction of which and the method of interlocking them forms the essential feature of this invention. All of the blocks 3, except the end block E, consist of a rectangular body formed at one end, on the top, with a stepped portion 3^a and at the other end, on the bottom, with a stepped portion 3^b of a shape and size precisely that of the stepped part 3^a. The lower edge of each

block has a centrally-disposed longitudinal groove or channel 3^c, and midway thereof a transverse channel or groove 3^d.

In forming the road-bed the simplest method is to set the blocks end to end in the same transverse alinement, beginning with the end block *a* at the right, which is set with its edge *a'* against the curb *c*, so its stepped portion 3^b, together with the curb-wall and the bottom board, will form a duct or opening which, together with the ducts formed between the similarly-set other end blocks *a*, produce a gutter *D*, which can be at intervals deflected to a take-off through the curb or to a sewer-trap, as indicated in Figs. 2 and 3. The blocks *b c d e f g h* are then set end to end, with their stepped portions lapping each other, after which the last or end block *E* is set in place. This block differs from all the others in that its stepped portions are both on the under side, so that its portion 3^c, together with the curb and the bottom plank, forms the gutter-opening *D'* for the other side of the street.

The longitudinal and transverse grooves in the bottom of the blocks when the said blocks are properly set to register produce transverse and longitudinal gutters or ducts *x y*, respectively, which communicate with each other and empty into the end gutters *D D'*.

So far as described it will be readily apparent that by interlocking the several blocks and forming a complete transverse tier they will be keyed together and produce a substantial arch with the curbs as the end tiers or thrusts. Furthermore, by providing the several blocks with the stepped portions, as shown, they bear on each other in such a manner that any load thereon will be transmitted to the series of blocks and a part of the load strain laterally against the curb. Thus should the load be at point *L* it is manifest a part thereof would be transmitted from the block *e* laterally to block *d*, to *c*, to *b*, to *a*, to curb, the down pressure being disseminated over

the entire bottom of all the blocks *d* to *a*, inclusive, thereby relieving the foundation of all the weight directly under the block on which the load rests.

For very heavy traffic the blocks may be interlocked both transversely of the roadway and longitudinally thereof, as illustrated in Fig. 3. In this form the blocks are staggeredly arranged, so as to interlock sidewise as well as endwise. In this arrangement of blocks the continuity of the transverse draining-channels is broken, but the effectiveness of the longitudinal grooves in the bottom of the blocks is not entirely lost, as such grooves can be arranged to come at the meeting edges of the rows of the blocks, as indicated.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A wooden-block pavement, consisting of an arched base; the opposite curbs; a series of blocks formed in continuous series, each block having an end step portion in its lower base, and a similar step portion in the opposite end of its upper face, said blocks lapping each other at the ends, each of said blocks having longitudinal and transverse grooves in the bottom, as shown and for the purposes described.

2. An improved wooden-block pavement, comprising an arched base, the end curbs and a series of interlocked blocks arranged in transverse tiers, said blocks having step portions, the several blocks having a staggered interlocking relation, the extreme end blocks having gutters in their lower edges, adjacent the curb and all of the blocks having longitudinal and transverse drain-grooves in their bottom edge, substantially as shown and for the purposes described.

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Witnesses:

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A. T. LEWIS.