

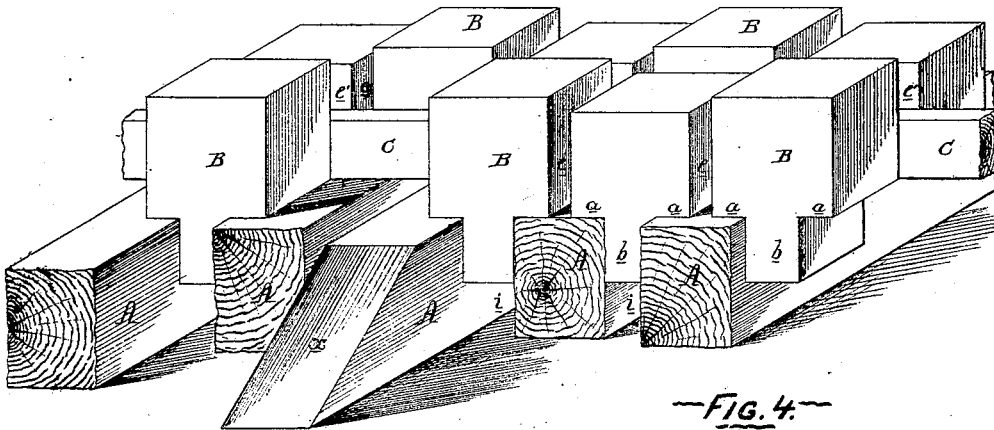
H. H. THAYER.

Improvement in Wood Pavements.

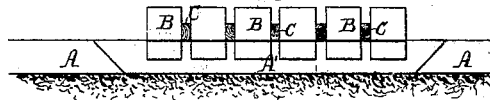
No. 114,727.

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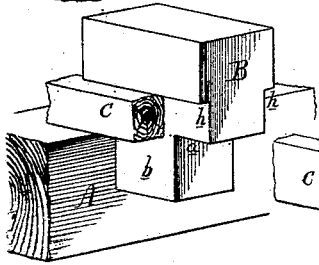
~Fig. 1.~



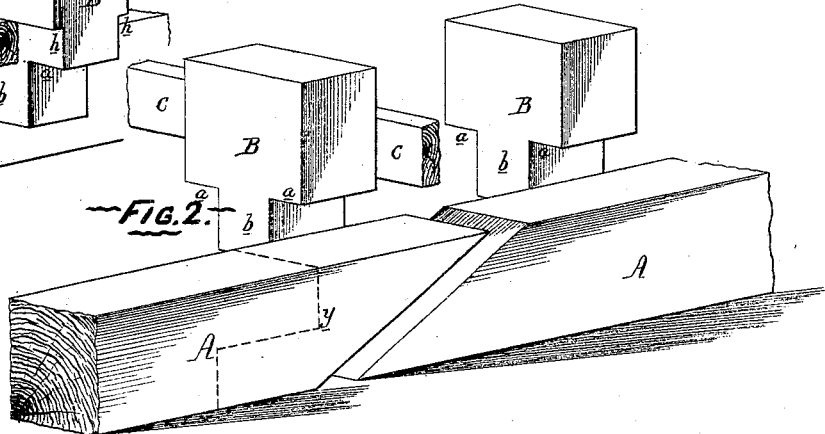
~Fig. 4.~



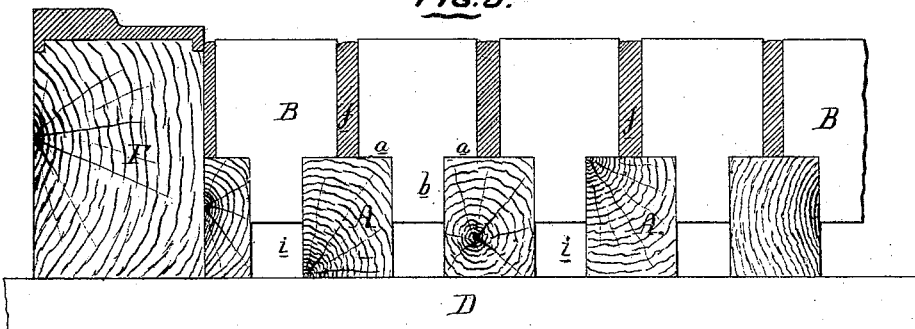
~Fig. 3.~



~Fig. 2.~



~Fig. 5.~



WITNESSES

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HIRAM HOWARD THAYER, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 114,727, dated May 9, 1871.

IMPROVEMENT IN WOOD PAVEMENTS.

The Schedule referred to in these Letters Patent and making part of the same.

I, HIRAM HOWARD THAYER, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented an Improved Wooden Pavement, of which the following is a specification.

Nature and Object of the Invention.

My invention consists of a wooden pavement, too fully explained hereafter to need preliminary description; the object of my invention being a substantial pavement, portions of which can be readily removed and replaced.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of a portion of my improved wooden pavement;

Figure 2, a perspective view of the several parts composing the same detached from each other;

Figure 3, a perspective view, showing a slight modification;

Figure 4, a side view drawn to a reduced scale, illustrating the method of taking up and replacing a portion of the pavement; and

Figure 5, a transverse sectional view of the pavement as it appears when laid between the tracks of a city passenger-railway.

General Description.

The pavement consists of longitudinal foundation-pieces A, of blocks B, resting upon the same, and of strips C, extending transversely across the tops of the foundation-pieces and between the rows of blocks, for the purpose of maintaining the latter at a short distance apart from each other.

The foundation-pieces A consist of rough strips of wood. What is known as three-by-four scantling, for instance, would be suitable for the purpose, and the transverse division-strips C may be an inch, or thereabout, in thickness, and from two to three inches deep.

The blocks B are so cut that the end grain of the wood shall be vertical, and they are of a rectangular sectional form.

Each of the said blocks is cut away at its lower end so as to form two shoulders, *a a*, for resting upon the tops of the foundation-pieces, and a central tongue, *b*, which extends downward between the said foundation-pieces, and regulates the distance between the same.

Each shoulder *a* of each block is somewhat shorter than half the width of the foundation-piece upon which it rests, so that there may be a space, *e*, between adjoining blocks, which are arranged directly opposite each other upon the same foundation-piece.

In laying my improved pavement the surface of the roadway is first leveled and otherwise suitably prepared, after which a number of the foundation-pieces are laid side by side upon the prepared ground, at a

short distance apart from each other, and longitudinally as regards the road.

Before being laid, however, the ends of the foundation-pieces are beveled or mitered, as shown in fig. 2, and at *x* in fig. 1, so that they may be overlapped by other pieces and nailed to the same, thus forming a continuous unbroken longitudinal foundation for the pavement.

A row of the foundation-pieces having been laid upon the roadway, as above described, a transverse row of blocks is placed upon the same, in the manner shown in fig. 1, the shoulders *a* of the blocks resting upon the upper edges of the foundation-pieces, and their tongues *b* extending down between them, the said tongues serving as gauges for determining the distance between the foundation-pieces, which are adjusted laterally, accordingly.

A transverse division-strip, C, is next laid across the foundation-pieces and against the row of blocks, to which it may be nailed, if desired, although this is not essential; and a second row of blocks is laid in the same manner as the first, and adjusted up to the division-strip, which, as before mentioned, serves to maintain two rows of blocks at a proper distance apart.

When a sufficient number of rows of blocks and division-strips has been laid upon the foundation-pieces, the spaces *e* between the blocks of each row, as well as the spaces *e'* between the rows and above the division-strips, are filled with tar and gravel or other suitable concrete, as shown at *f* in fig. 5.

In this way the entire pavement is laid, the longitudinal foundation-pieces overlapping each other and being secured together at the ends, as before mentioned, so as to form a continuous and unbroken pavement, thoroughly braced at all points, and capable of sustaining the heaviest loads without sinking.

Instead of merely beveling the ends of the foundation-pieces they might be cut at the ends in the manner indicated by the dotted lines *y* in fig. 2, so as to enable them to be readily connected together.

Each of the blocks, when formed as above described, rests upon and is supported by two of the foundation-pieces; but it might be still further supported, and the pavement consequently strengthened, by forming other shoulders, *h h*, upon the blocks, as shown in fig. 3, to rest upon the upper edges of the division-strips C.

The pieces A, being of thicker material, afford a stronger, more rigid, and more durable foundation than the thin boards commonly used as foundations for wooden pavements, and they are much less liable to rot, as their lower edges only are in contact with the ground, while the spaces, *i*, between the same and beneath the blocks, serve as passages for the circulation of air and the carrying off of dampness.

Besides durability and strength, however, my im-

proved pavement has another important advantage, namely, the facility with which a portion of the same can be taken up and replaced without damage to the surrounding pavement or to that which is removed. All that is necessary in such a case is to take up as many of the blocks as may be required to cut off the division-strips C, and to then saw off each foundation-piece which has to be removed on beveled lines inclining in opposite directions, as shown in fig. 4, so that the severed piece A', when replaced, may be nailed to the ends of the piece from which it was cut, and have no more tendency to yield to downward pressure than any other portion of the foundation.

It will be observed, on reference to fig. 1, that the blocks are alternately of different heights, whether the pavement be viewed transversely or longitudinally, each short block being surrounded by four taller ones, and *vice versa*. This arrangement of blocks affords a good foothold for horses at the crossings of streets and on steep grades, &c., and may be used in connection with other wooden pavements as well as with my improved pavement.

When my improved pavement is to be laid between the tracks of a city passenger-railway the pavement

may be still further strengthened by resting the foundation-pieces upon the cross-ties, D, which connect the longitudinal sleepers F together.

Claims.

1. A wooden pavement in which isolated blocks B, resting on foundation-pieces A, and having tongues extending between said pieces, are separated by transverse strips, also resting on said foundation-pieces, as set forth.

2. The tongued blocks B, adapted to the foundation-pieces, as described, and having shoulders, *h h*, for bearing on the division-strips C, as specified.

3. In a wooden pavement, the alternate arrangement of isolated blocks of different heights, in combination with a mass of concrete covering the lower blocks, and filling the interstices between all the blocks, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

Witnesses:

WM. A. STEEL,
J. RUPERTUS.

H. H. THAYER.