

G. H. CHINNOCK.
Improvement in Pavements.

No. 132,801.

Patented Nov. 5, 1872.

Fig. 1.

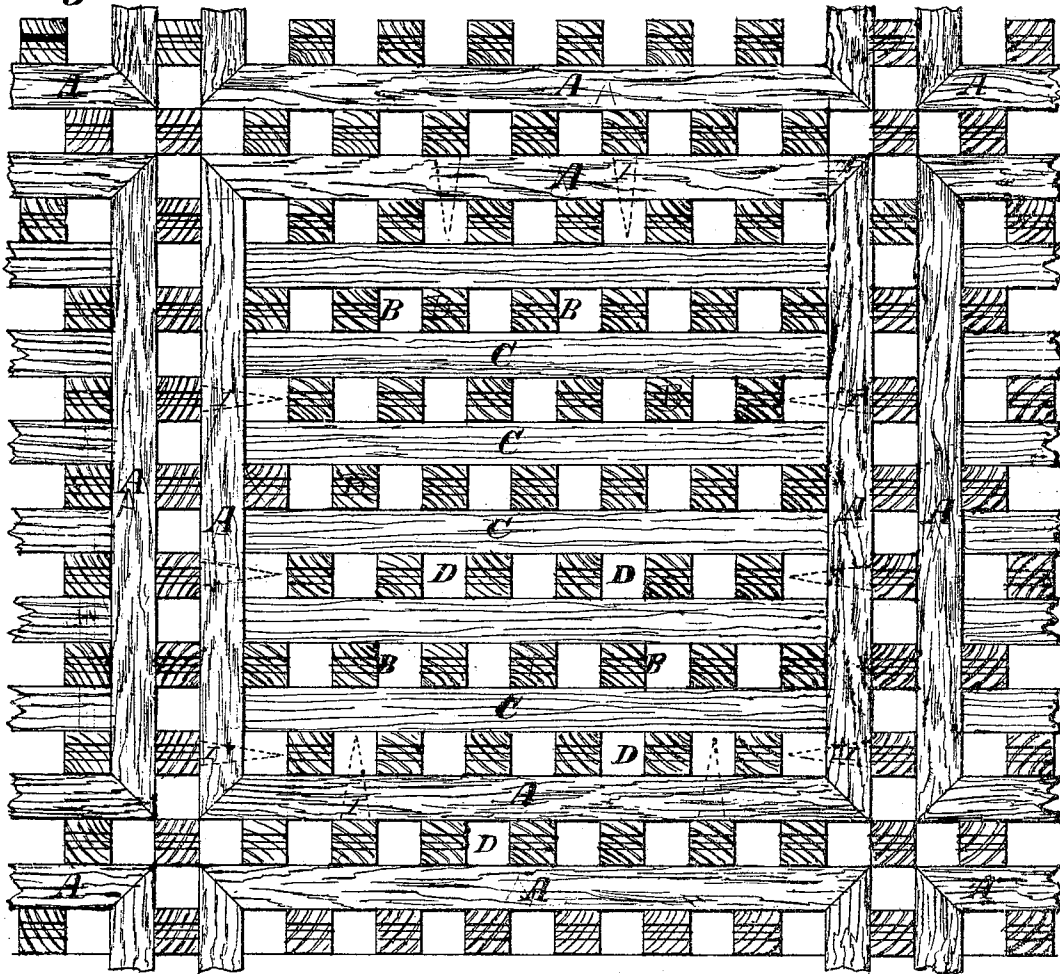


Fig. 2.

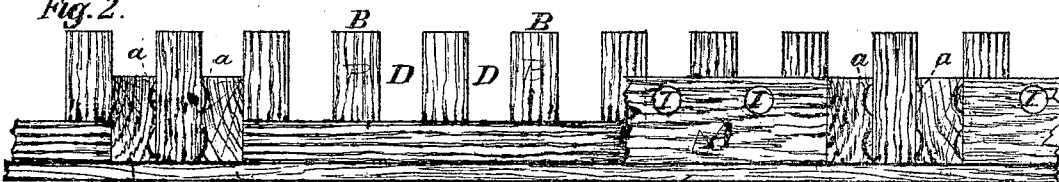
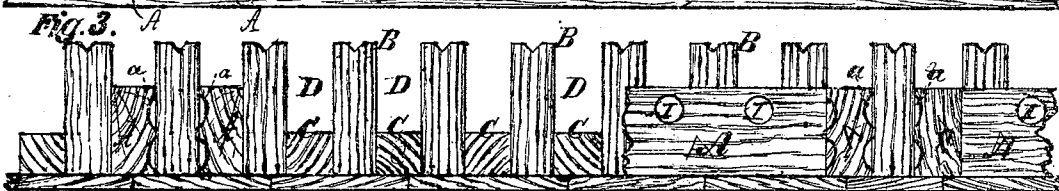


Fig. 3.



Witnesses:

Frederick A. Smith
James L. Norris

Inventor:

George H. Chinnock
by his atty
James L. Norris

UNITED STATES PATENT OFFICE.

GEORGE H. CHINNOCK, OF NEW YORK, ASSIGNOR TO CHARLES E. EVANS,
OF BROOKLYN, N. Y.

IMPROVEMENT IN PAVEMENTS.

Specification forming part of Letters Patent No. 132,801, dated November 5, 1872.

To all whom it may concern:

Be it known that I, GEORGE H. CHINNOCK, of the city, county, and State of New York, have invented certain new and useful Improvements in Combined Concrete and Wooden Pavements, of which the following is a specification:

The nature of my invention consists: First, in combining a series of wooden blocks, constructed in squares or sections and surrounded with a non-removable frame, with a filling of concrete interposed between every two blocks so as to form alternate concrete and wooden foot surfaces, as described hereafter. Second, in the use of wedges, which are driven into the concrete while soft or in a plastic state, so as to prevent it from rising or being forced upward from its seat by expansion, &c. Third, in the use of grooves, formed in the sides of the blocks and frames, into which the plastic concrete runs, and which, when it hardens or sets, serves to hold the different parts more firmly and securely together and to prevent them from rising upward. Fourth, in the use of strengthening rods or braces placed between each row of blocks, so as to hold them more firmly and securely in place, and at the same time afford seats and divisions for the concrete, said strengthening pieces being of a height much less than the side frames, so as to admit of being covered with concrete, as hereinafter set forth.

Figure 1 is a plan view of a section of my pavement. Figs. 2 and 3 are side elevations of the same.

In laying my pavement, the ground is first leveled off, and the foundation of boards prepared in the usual manner. A are square wooden frames, of any desired size—but preferably made in sections, of such size that they can be handled readily and easily for transportation—into which the wooden blocks B are placed and secured firmly by means of the strengthening bands or bars C, which are placed between each row of blocks. In order to make these parts still more secure these bands C may have a groove cut in their sides for each block, and the blocks provided with a suitable flange or projection for filling the said grooves, so that a lateral displacement of the blocks will be impossible. Similar grooves

may also be formed in the frames A, so as to receive a tongue from each end of the bands C. Each block B extends a suitable distance above the frame A, as shown in Fig. 2, and between every two blocks there is a square space, D, left, which is intended to be filled with concrete while in a plastic state, so that each square A will be filled with alternate blocks of wood and concrete. The concrete may be in danger of expanding or swelling from heat or other cause, and as it cannot move sidewise, being held in position by the surrounding frame and blocks, it is liable to move upward so as to extend above the blocks of wood, and thus make the pavement rough and uneven. In order to prevent this, holes are made through the sides of the frame A, and while the concrete is in a plastic condition I drive wedges I of suitable length and size into it, and when the concrete has set this effectually prevents any upward movement. Together with the wedges, if they are not sufficient, or in place of them, I make grooves *a* in the sides of the frames, blocks, or bands, as shown in Fig. 2, into which the soft or plastic concrete runs, and as it hardens and sets it not only binds the two parts together more firmly, but checks any upward movement of either part. The wooden blocks and the framing forming the mold are all treated in any of the well-known methods for depriving them of moisture, and rendering them impervious to the action of water, and preventing them from decay.

After a section is put together, before it is laid on the board foundation, the lower sides or edges are dipped in or coated with plastic concrete, so that the wood will be thoroughly protected from decay at every point. As soon as this section is finished and in place another section is arranged in position, when one or more rows of blocks are placed or driven between them, the blocks being equidistant apart so as to receive concrete—a feature shown and claimed in a separate application for Letters Patent filed on the same date with this. By this means when one of the sections becomes injured from any cause the intervening row of blocks is removed and the injured or defaced section taken up all at once without interfering with those surrounding it in the slightest

degree. The blocks are formed with grooves on their faces so as to secure foothold for pedestrians and beasts, and at the same time are designed to afford means for conducting water to the gutters. The spaces formed for the concrete between the wooden blocks are so arranged that wheels of vehicles in passing along the street will have their bearing alternately upon the wooden and concrete blocks. By means of the strengthening-bands, arranged as shown, in combination with the wooden blocks, a much greater concrete wearing-surface is obtained, hence the difference in wear between the wood and concrete is counterbalanced.

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

1. The series of alternate wooden and concrete blocks formed and arranged in respect to each other as herein shown, and confined in place by the non-removable frame or mold A, as and for the purpose set forth.

2. The wedges I driven through the side of the frame A of a combined concrete and wooden pavement into the plastic concrete, for the purpose substantially as shown and described.

3. The grooves *a*, formed either upon the inside or outside, or upon both mold-frames, substantially as and for the purpose described.

4. The strengthening-bands C placed between the rows of alternate wooden and concrete blocks, when said wooden and concrete blocks are surrounded with a non-removable frame, substantially as specified.

5. Parallel rows of concrete formed upon the strengthening-bands, arranged within the frame or mold between the alternating wooden and concrete blocks, forming a section of a combined wooden and concrete pavement.

To the above I have signed my name this 16th day of January, A. D. 1872.

GEORGE H. CHINNOCK.

Witnesses:

GEO. H. WEBB,
J. D. BILLINGS.