(No Model.)

C. W. CARMAN.

BRIDGE FLOORING.

No. 423,126. Patented Mar. 11, 1890.

Fig. 1.

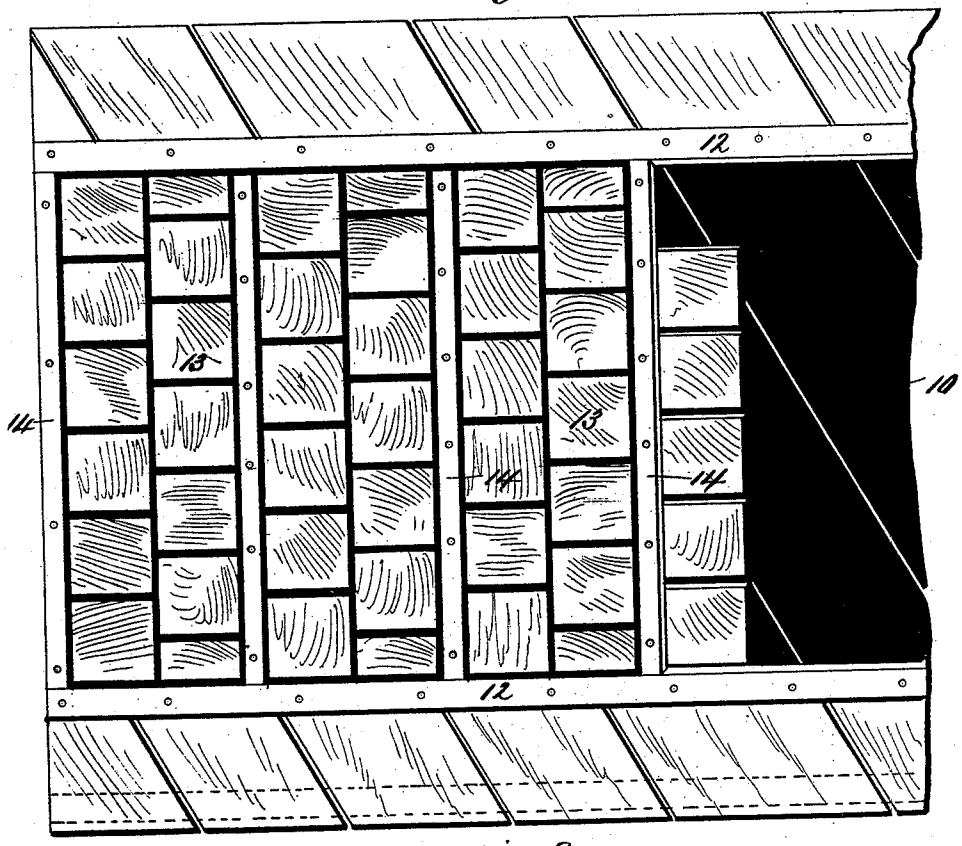


Fig. 2

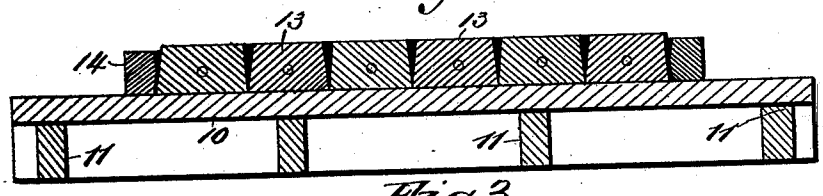


Fig. 3

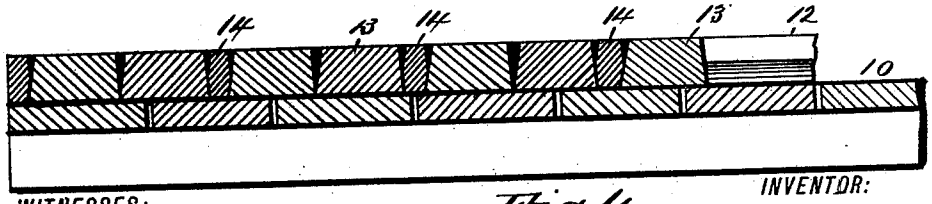
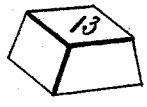


Fig. 4



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UNITED STATES PATENT OFFICE.

CHARLES W. CARMAN, OF HAMBURG, IOWA.

BRIDGE-FLOORING.

SPECIFICATION forming part of Letters Patent No. 423,126, dated March 11, 1890.

Application filed June 25, 1889. Serial No. 315,462. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. CARMAN, of Hamburg, in the county of Fremont and State of Iowa, have invented a new and useful Improvement in Bridge-Flooring, of which the following is a full, clear, and exact description.

My invention relates to an improvement in bridge-flooring, and has for its object to provide a flooring capable of being laid upon a bridge when first constructed, but especially adapted to be laid as an auxiliary flooring upon the main floor of the bridge or other equivalent structure when said flooring has become decayed or injured. A further object of the invention is to provide an auxiliary flooring which, when laid upon the main floor, will preserve the latter and be so wedged to place as to constitute an integral portion of the structure.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a partial plan view of the flooring. Fig. 2 is a transverse section through a series of blocks comprising a portion of the flooring. Fig. 3 is a longitudinal section through the said flooring, and Fig. 4 is a detail perspective view of a block employed in the construction of the flooring.

In carrying out the invention the ordinary flooring 10 is laid upon the stringers or beams 11 in the ordinary manner. Upon the main flooring 10, longitudinally of the bridge, two spaced side strips or facings 12 are securely attached to the main flooring by bolts, screws, nails, or other equivalent devices, the distance between the opposed faces of the side strips being the width of the road-bed to be laid.

The inner face of each side strip 12 is beveled upward and downward from the center line, as illustrated in Fig. 3, and the blocks 13, employed in constructing the flooring, are square upon their upper and lower faces, the square of the upper face being less than the square of the lower face, and the four sides of the block are beveled downward, as best illustrated in Fig. 4.

In connection with the blocks and side strips 12 cross beams or strips 14 are employed, having both longitudinal faces beveled upward and downward from a center line, as illustrated in Fig. 3, and the ends provided with an angled recess adapted to snugly receive the beveled surfaces of the side strips, as shown in Fig. 1, whereby when the cross beams or strips are placed in position they will be effectually wedged to place.

In constructing the flooring the main floor 10 is preferably given a coating of pitch, and likewise the inner opposed faces of the side strips 12. This coating of pitch is given to the main flooring and to the side strips to preserve the former and to effectually prevent any water passing in beneath the side strips.

Before any of the blocks are laid at the commencement of the auxiliary flooring a cross beam or strip 14 is placed in contact with the side strips and bolted, nailed, or otherwise secured to the main floor. Two or more rows of blocks 13 are then laid, preferably two rows, in such manner that the blocks will break joints, and each of the blocks is secured to the main flooring by nails or equivalent fastening devices driven through their sides into the said main flooring, and the blocks contacting with the cross beams or strips 14, are also secured by being nailed to the said cross-strips at or near the center of the latter.

When the blocks have been laid over a sufficient area in the manner above described, the cavities intervening the opposed edges of the blocks, and also the opposed edges of the blocks, the side strip and cross-beams are filled with pitch or any desirable form of cement, whereby the nails or other fastening devices employed to secure the blocks to the main flooring are effectually tied in position and an even upper surface is obtained.

It will be observed that when a floor is laid in this manner every portion of the floor is securely wedged to place, and that it is almost impossible to dislodge any of the blocks without first removing the cross strip or beam 14 in front of said blocks.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. The combination, with parallel side strips having their inner faces beveled upwardly and downwardly from a center line, of a series of blocks laid between the said side strips, having beveled side faces and a square upper face of less area than the lower face, substantially as shown and described.

2. In a bridge-flooring, the combination, with a foundation and spaced side strips secured to the foundation, having their inner or opposed faces upwardly and downwardly beveled from a center line, of a series of blocks laid upon the foundation between the side strips to break joints, the said blocks being provided with downwardly-beveled side faces and a top surface of less area than the bottom surface, and pitch or cement inserted in the spaces intervening the opposed edges of the blocks and the opposed edges of the blocks and side strips, all combined for operation substantially as shown and described.

3. In a bridge-flooring, the combination, with the foundation, spaced side strips secured to said foundation, having opposed faces upwardly and downwardly beveled from a center line, and a series of cross-strips having their ends recessed to receive the beveled surface of the side strips and their sides upwardly and downwardly beveled from a center line, of a series of rectangular blocks having downwardly-beveled side faces laid upon the foundation between the side and cross strips, substantially as shown and described.

4. In a bridge-flooring, the combination, with a support, spaced side strips secured to said support, having a beveled inner face, and cross-strips secured to the foundation, recessed at the extremities to receive the beveled face of the side strips and provided with beveled side faces, of a series of rectangular blocks having downwardly-beveled side faces and laid to break joints upon the foundation between the side and cross strips, nails or equivalent devices securing the said blocks to the foundation, and a filling of pitch, a cement, or equivalent material introduced into the spaces intervening the opposed edges of the blocks and of the blocks and strips, substantially as shown and described.

CHARLES W. CARMAN.

Witnesses:
S. D. CARMAN,
C. E. REYNOLDS.