

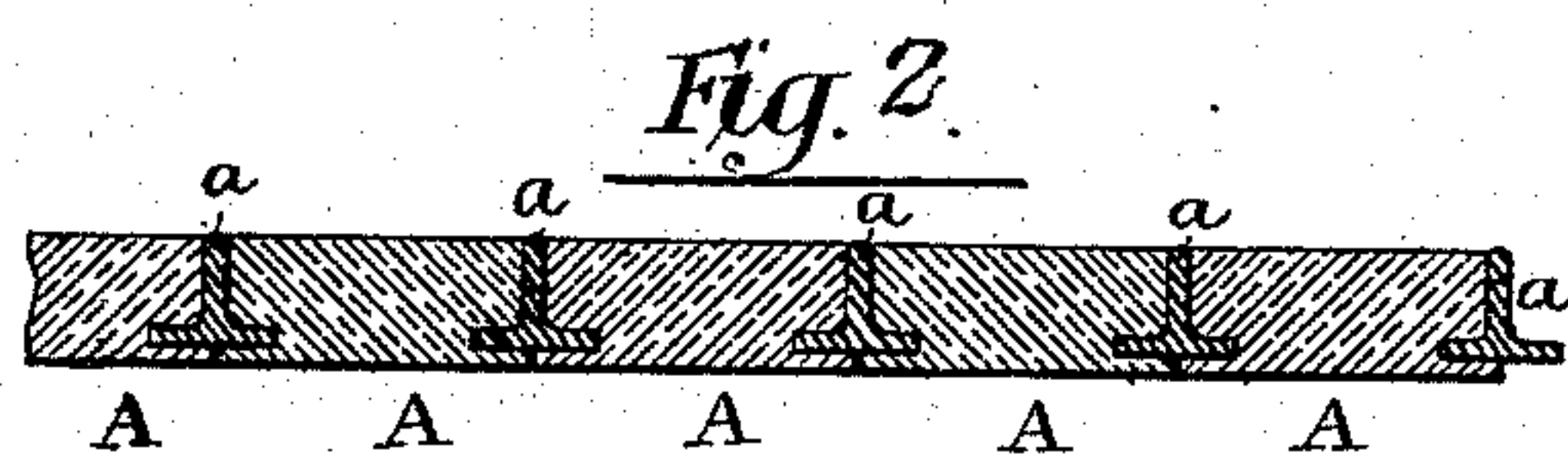
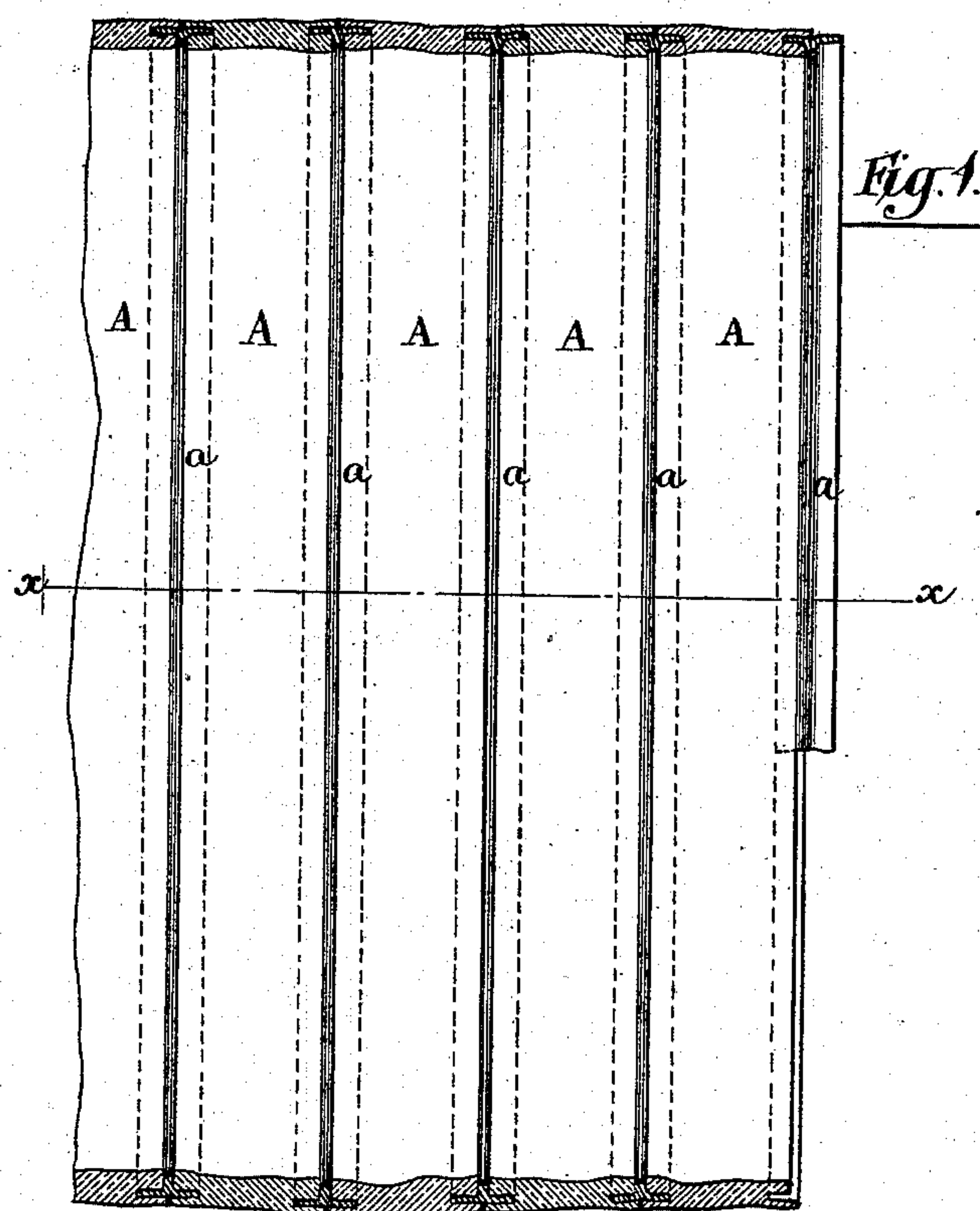
(No Model.)

S. T. WILLIAMS.
PLANKING AND PAVEMENT.

2 Sheets—Sheet 1.

No. 276,545.

Patented Apr. 24, 1883.



Witnesses:-

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Arthur C. Webb

Inventor:-

Samuel T. Williams
By his Attorney
Ernest C. Webb

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

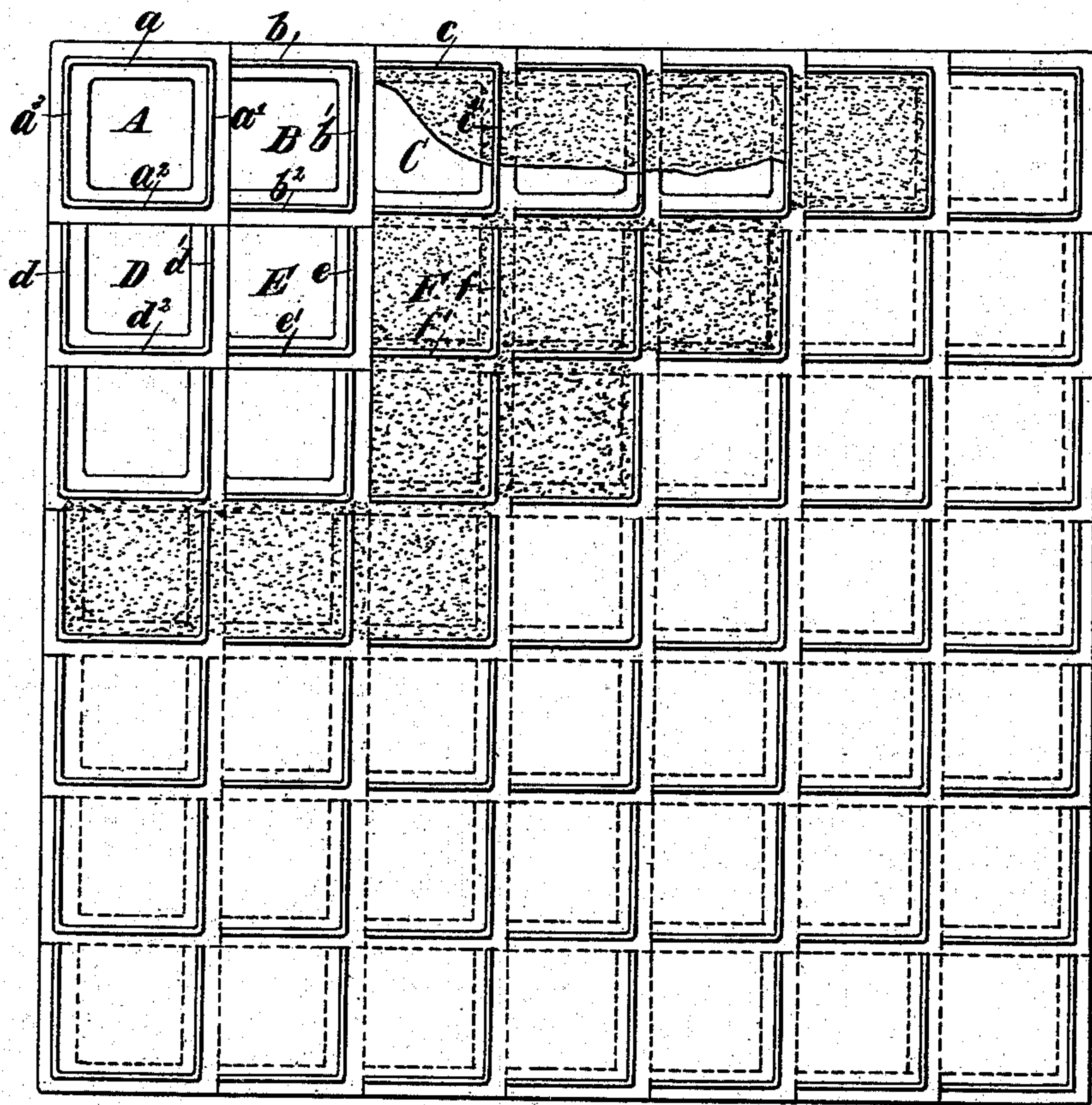
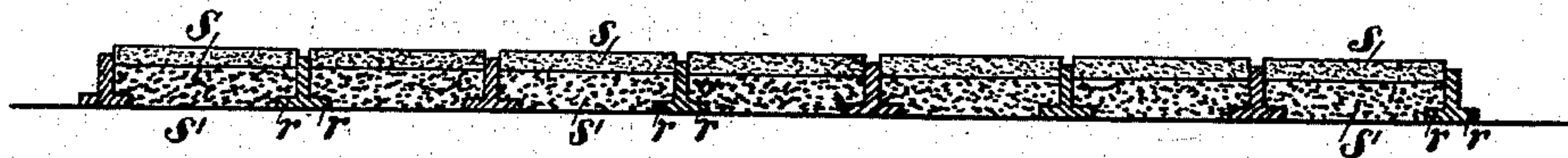


Fig. 4.



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UNITED STATES PATENT OFFICE.

SAMUEL T. WILLIAMS, OF RED BANK, ASSIGNOR OF ONE-HALF TO ANDREW ALBRIGHT, OF NEWARK, NEW JERSEY.

PLANKING AND PAVEMENT.

SPECIFICATION forming part of Letters Patent No. 276,545, dated April 24, 1883.

Application filed December 15, 1882. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL T. WILLIAMS, a citizen of the United States, residing at Red Bank, in the county of Monmouth and State of New Jersey, have invented certain new and useful Improvements in Planking and Pavements, of which the following is a full, clear, and exact description.

My invention is in the nature of an improvement in the construction of planking for walks, piers, docks, bridges, and vessels, and in the construction of cement pavements, the essential object being to strengthen the planking and give it better wearing qualities, facilitate the making of repairs, and provide a foothold for animals when the planking becomes worn by continued use. In the case of cement pavements the object is to divide the pavement into separate and independent blocks, so that each block can be repaired or taken up and a new block laid without disturbing the adjacent blocks, injuries from natural or other causes affecting the blocks separately, and not the pavement as a whole.

The invention consists in the combination of a rail or strip of iron with planking and cement, in the manner as hereinafter fully described.

In the drawings, Figure 1, Sheet 1, is a plan view of one method of combining the rail or strip of iron with planking, and Fig. 2 is a cross-section on line xx of Fig. 1. Fig. 3, Sheet 2, is a plan view of a cement pavement divided into separate and independent blocks by means of T-shaped rails, forming confining-frames. Fig. 4 is a cross-section thereof, taken on the line ww , Fig. 3.

In Figs. 1 and 2, Sheet 1, of the drawings, the letters A A designate strips of planking—such as is commonly used for walks, piers, docks, bridges, and vessels—and the letters a a designate T-shaped rails, of iron or other suitable metal, which are combined with the planking in the following manner, viz: Each side of a plank A is grooved from end to end to a depth sufficient to receive the flange of a rail a , and when the planks A are laid, and before they are nailed in place, a rail a is inserted between two adjoining planks, the flanges of the rail entering the grooves in the sides of the planks, and the straight portion

of the rail being firmly held in place between the planks, extending upwardly, so as to be nearly flush with the surface of the planks. The planks are then fastened in place in the usual manner. This combination of the rails with the planking renders the latter very strong and durable, and at the same time provides a foothold for animals as the planking wears down.

In Figs. 3 and 4, Sheet 2, of the drawings, the combination of T-shaped rails with cement and concrete to form a pavement is shown. As shown in the drawings, the rails are cast to form four-sided, three-sided, and two-sided frames, which are so combined that each side of a block of cement bears against and is separated from the surrounding blocks by a rail, the rails answering the double purpose of dividing the pavement into independent blocks, and serving as frames or joints, by means of which the cement can be laid to form each block separately.

A designates the first block, B the second, and C the third, of the first row. D designates the first block of the second row, E the second, and F the third. The block A is confined within a frame having four sides, a a' a^2 a^3 , formed of T-shaped rails cast in one piece. The block B is also confined within a frame having four sides, three sides, b , b' , and b^2 , being cast in one piece, and the rail a' forming the fourth side. The block C is also confined within a similar frame, three sides, c , c' , and c^2 , being cast in one piece, and the rail b' forming the fourth side, and the succeeding blocks of this row are confined within frames formed in the same way. The first block, D, of the second row is confined within a frame, three sides of which, d d' d^2 , are cast in one piece, the rail a^2 forming the fourth side. The block E is similarly confined in a frame, two sides of which, e e' , are cast in one piece, and the rails d' and b^2 forming the third and fourth sides. The block F is also confined in a four-sided frame, two sides of which, f f , are cast in one piece, the rails c^2 and e forming the third and fourth sides, and the succeeding blocks of this row are confined within frames formed in the same way. The frames for the blocks of the row following the second row are all formed

in the same manner as the frames of the second row, and so on until the pavement is finished.

In laying the pavement the surface to be covered is first graded to the desired depth. The frame for the first block, A, is then placed in position, and the cement to form the block, consisting of two courses—*i. e.*, a layer of coarse concrete or cement, *s'*, and then a surface layer of fine concrete or cement, *s*—is laid in the ordinary way of laying concrete or cement to form a pavement. The frames for the blocks B and C are then placed in position and filled with the cement or concrete in the same way, and so on until the pavement is completed. The material forming the surface layers of each block extends slightly above the tops of the rails forming the frames, and the flanges *r r* of the rails are covered by the material forming the first course, *s'*, as will clearly appear by reference to Fig. 4, Sheet 2, of the drawings. By this combination I produce a cement or concrete pavement which can be readily laid and easily repaired. Each block is independent of the others, and is entirely surrounded and permanently separated from the others by the strips of metal forming the frame. Hence it follows that cracks or other injuries, caused

by frost or by external means, damage the blocks independently, and not the pavement as a whole.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the T-shaped rails *a* with the planks A A, the flanges of each rail fitting in grooves in the sides of two adjoining planks, and the rail being firmly held between and extending upwardly, so as to be nearly flush with the surface of said planks, whereby the planking is strengthened and a foothold provided for animals, substantially as herein shown and described.

2. The combination and arrangement of four-sided, three-sided, and two-sided frames, each frame being composed of T-shaped rails cast in one piece, with cement or concrete to form a pavement of independent blocks laid in the manner and for the purpose as herein shown and described.

In testimony whereof I have hereunto set my hand this 2d day of November, A. D. 1882.

SAMUEL T. WILLIAMS.

Witnesses:

ERNEST C. WEBB,

LOUIS M. F. WHITEHEAD.