

F. W. MATHIAS.

PAVEMENT.

No. 172,574.

Patented Jan. 25, 1876.

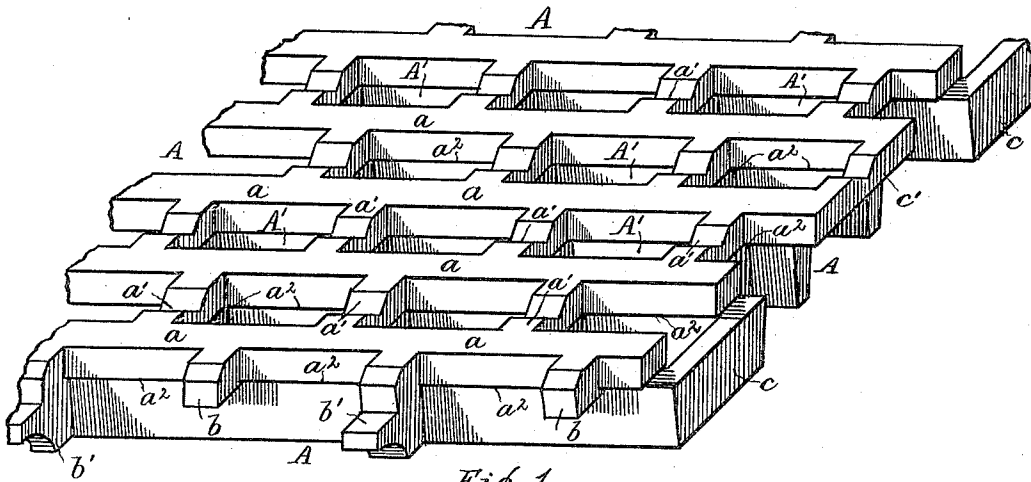


Fig. 1.

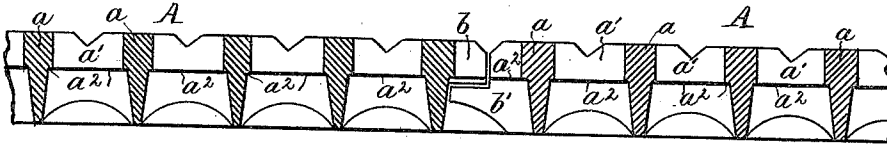


Fig. 2.

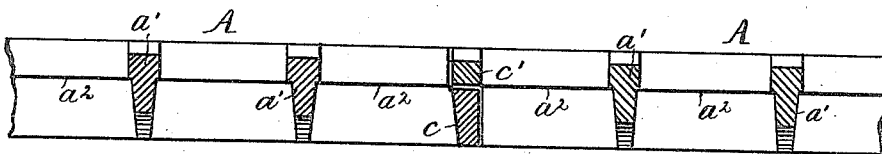


Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

FREDERICK W. MATHIAS, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN PAVEMENTS.

Specification forming part of Letters Patent No. 172,574, dated January 25, 1876; application filed September 27, 1875.

To all whom it may concern:

Be it known that I, FREDERICK W. MATHIAS, of St. Louis, Missouri, have invented an Improved Street-Pavement, of which the following is a specification:

This invention relates to that class of pavements having cast-iron grates to constitute the permanency of a street-pavement.

The nature of my invention consists in the novel constructive features provided in iron sectional gratings, and the manner of combining the sections so that they shall interlock each other, and as will now more fully appear.

Of the drawing, Figure 1 is a perspective of one section of the improved grate. Fig. 2 is a sectional elevation, showing the manner of joining the sections transversely or crosswise of a street; Fig. 3 being a section, showing the manner of joining the sections lengthwise of a street.

As shown in Fig. 1, A represents a completed section of the grate. The section I cast to have the chambers or cells A' formed by the longitudinal walls a and the transverse side walls a^1 . These cells are to contain the filling of gravel, &c., and to more securely embed said material. I further form the cells to have the interior shoulders at a^2 surrounding all the walls of said cells, as shown in the figures. Further, at bottom the side walls are arched, (see Fig. 2,) leaving an open space, through which the filling in the cells can be rammed under the grating. The cells, when thus filled, afford a secure footing; besides, the shoulders prevent the upheaving of the filled material, and this, by travel, is more and more firmly embedded under the sections, and made a solid or compact mass in said cells. The further construction of the sections with relation to each other, and their arrangement to be jointed, are as follows: The side walls of each section, at the point where they are to unite, are made to present a lug, as at b , and a right-angle-shaped lug, b' , as clearly shown in Figs. 1 and 2. The lugs b b' are oppositely positioned with relation to each section, and so that when brought into engagement they shall join each other, as indicated in Fig. 2. In this wise a right-angled lug, b' , will always engage from the under side a plain lug, b , and as this manner of joining is alternate for each

joint, the several sections thus united sidewise will be firmly interlocked and form an unbroken arch, crossing the street transversely. The jointed sections form the same dimension of cells, and present a surface of regularity and evenness. The sections are further formed to interlock when laid in a longitudinal direction or lengthwise of the street. Hence the side walls a^2 (at the point where the sections unite) are divided in halves by right-angled division, forming a lower joint at c , and a top joint at c' . (See Fig. 1.) The opposite section to join Fig. 1 will have the similar joints c c' , but so positioned that its top joint shall engage the opposite lower joint, and as shown in Fig. 3. Thus, also, the joints of the sections lengthwise interlock each other and complete a grate-pavement, the surface of which will remain unchanged under the heaviest travel. The sections can be placed together as well as taken apart, as emergency may require, in a very ready manner. The V-grooves running lengthwise of the sections permit the free passage of offal, rain, &c.

A street-pavement so constructed is easily repaired, also is cheap, as it confines repairing chiefly to the top-dressing, and because of its durable construction. It forms a most agreeable surface for travel, avoids the inconveniences of dirt, dust, &c., prevents miasmatic evaporations, and otherwise possesses advantages readily apparent.

What I claim is—

1. The joints c c' , made to form part of sectional grates A, in the manner herein shown and set forth, and by means whereof said sections can be interlocked, as and for the purpose set forth.

2. An improved street-pavement, consisting of sectional iron grates A, the cells A' of which have interior shoulders a^2 , and the opposite sides of which present the lugs b b' and joints c c' , all said parts being constructed in the manner herein shown and set forth.

In testimony of said invention I have hereunto set my hand.

FREDERICK W. MATHIAS.

Witnesses:

WILLIAM W. HERTHEL,
CHAS. F. MEISNER.