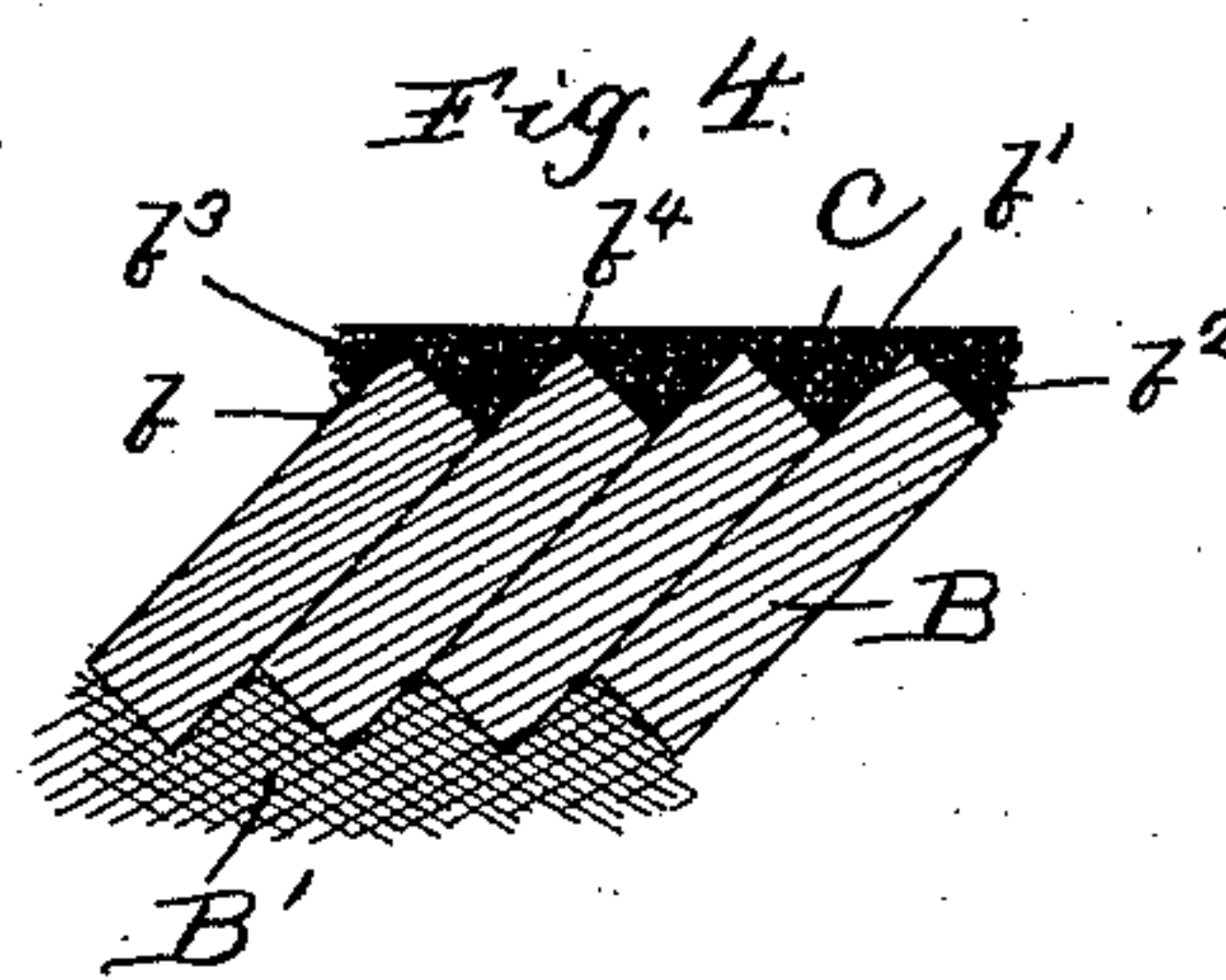
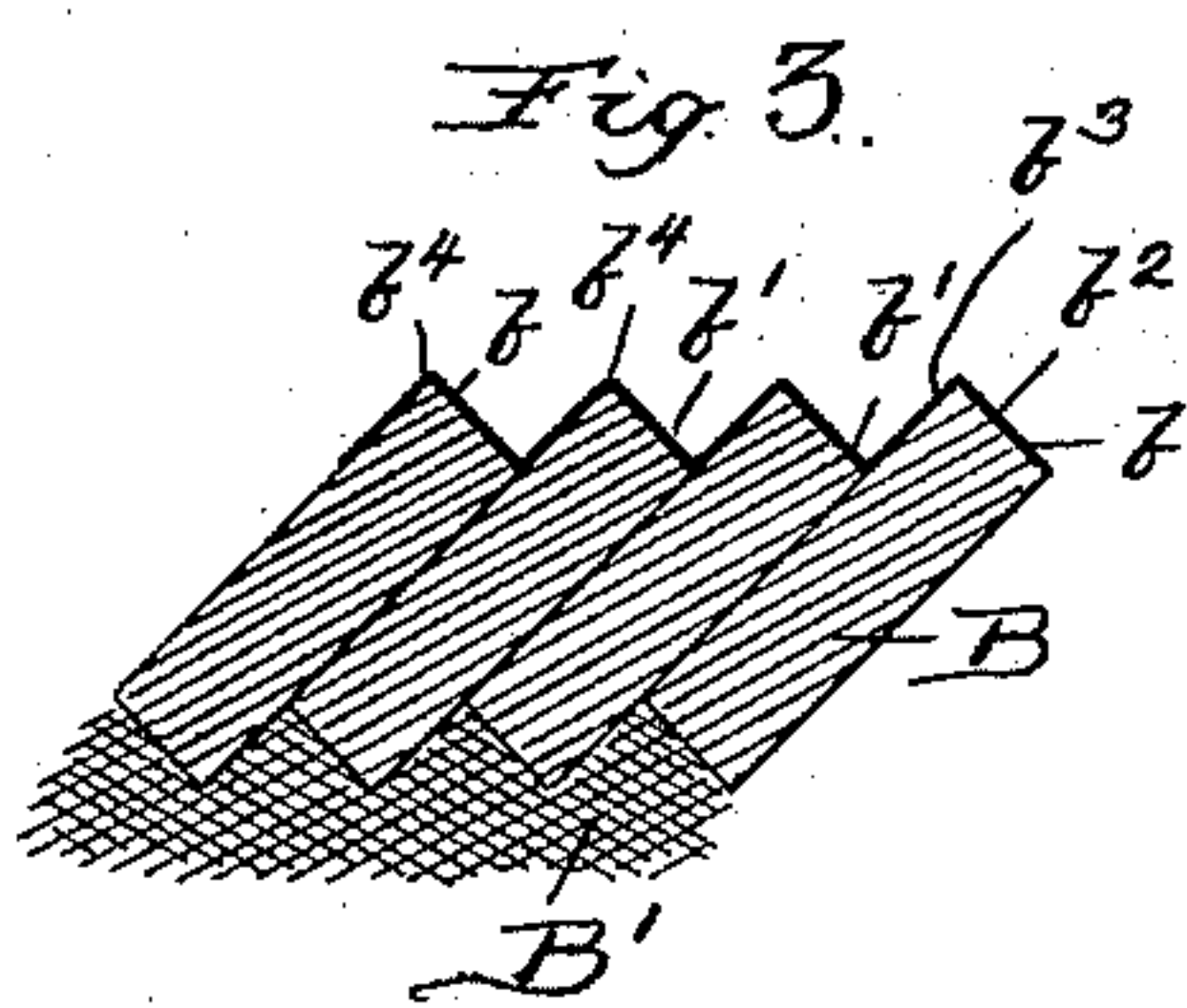
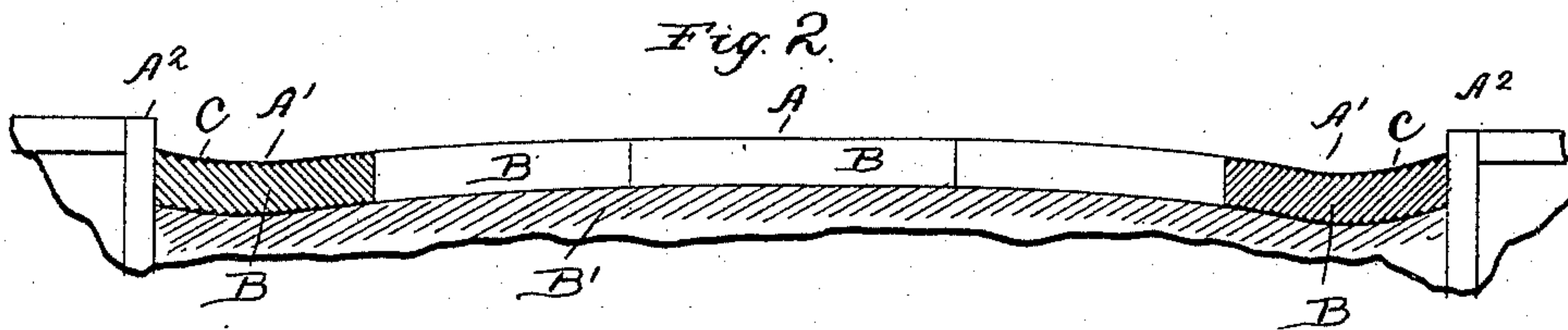
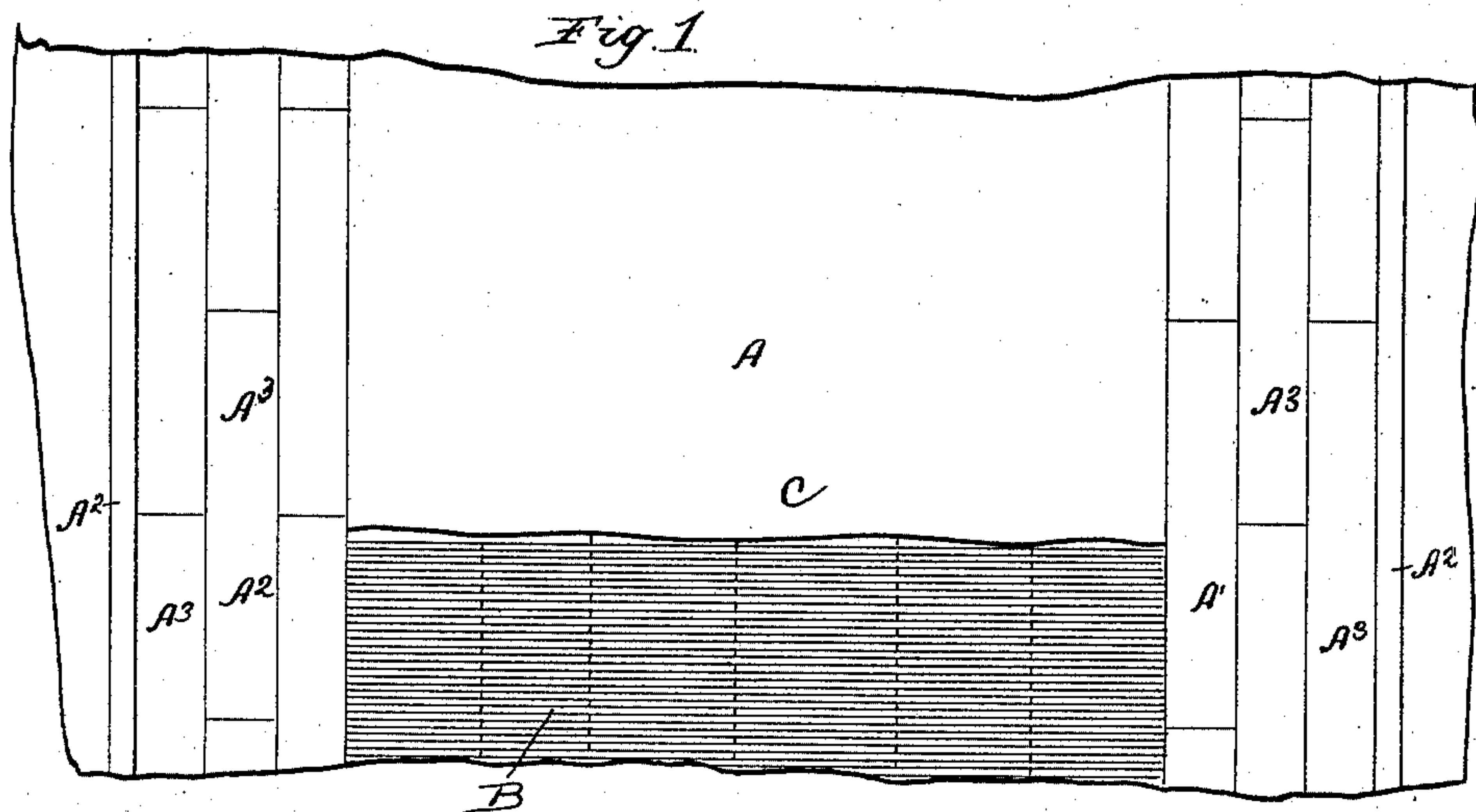


(No Model.)

G. S. CURTIS.
STREET PAVEMENT.

No. 475,724.

Patented May 24, 1892.



Witnesses:

Geo. C. Curtis
H. W. Munday

Inventor:

George S. Curtis.

By Munday, Curtis & Adeock,
his Attorneys.

UNITED STATES PATENT OFFICE.

GEORGE S. CURTIS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE CHICAGO FOUNDATION PAVEMENT COMPANY, OF SAME PLACE.

STREET-PAVEMENT.

SPECIFICATION forming part of Letters Patent No. 475,724, dated May 24, 1892.

Application filed July 20, 1891. Serial No. 400,042. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. CURTIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Foundation Structures for Street-Pavements, of which the following is a specification.

This invention relates more especially to foundation structures for street-pavements.

The object of the invention is to provide a foundation for paved surfaces that will be unyielding, self-supporting, durable, and practically homogeneous throughout its surface, so that when a heavy load or weight is placed upon it at any point the strain will be equally distributed over a large area of the foundation, and thereby avoid any tendency of the paved surface to become broken or settled at different places, as is the case with the pavements now commonly used.

The pavements now in use after a very short time become very uneven and rough, owing to the fact that the loaded vehicles passing over them are supported at widely-separated points where the wheels rest and such points have only a small supporting area to resist the strain placed upon them. This is particularly true of all block-pavements, as in such pavements the blocks are independent of each other and transmit the blows received by them direct to the foundation, which in some cases is composed of planks and in others of rolled stone upon a layer of sand. In this class of pavements, also, the blocks, being separate, allow the water to pass between them, and as they often become loose and are pressed downwardly by the passing teams they cause the water to wash the sand out from under them and thus to gradually form an open space into which they may sink and remain, and in which sunken position the wagons drawn over them operate like hammers and destroy the pavement with increased rapidity. To overcome these objections the present invention has been devised, and it is constructed in the following manner: The sand support is first graded, as usual, and upon it the paving-foundation, which forms the principal feature of my invention, is laid. This foundation consists of edgewise-

inclined and parallel strips or planks overlapping and resting upon one another, substantially as hereinafter set forth, and extending, preferably, transversely of the street. The degree of inclination given the strips is desirably about forty-five degrees, and they may be laid in rows and so the joints between the strips of one row will break joints with the strips of its neighbor rows. The strips should be cut square at their upper edges, so that when thus laid there will be formed between the upper edge of each plank and a portion of the upper side of its companion plank a V-shaped groove well adapted to receive and retain the paving material. Before applying the latter, however, the exposed portions of the strips may be and preferably are coated with pitch for the purpose of closing the joints between the rows of strips and to give a surface to which the paving material will adhere.

The material which I prefer to employ for the pavement-surface is composed of fine gravel, pitch, and asphaltum, which I find to be very durable and cheap, as well as easily spread and laid upon the foundation while hot or in a plastic condition. When the paving material is laid, it adheres to the pitch already upon the strips and acts as a stop or lock against one plank lowering or becoming displaced without carrying the other or neighboring ones with it.

The invention consists in the edgewise-inclined parallel strips overlapping and resting upon one another, substantially as set forth.

It further consists in the combination, with the edgewise-inclined parallel strips overlapping and resting upon one another, of a covering of paving or other material adapted to the use intended and filling the grooves in the upper surface of the united strips, substantially as set forth.

It further consists in a pavement consisting of a layer of sand, a foundation made of edgewise-inclined parallel strips overlapping and resting upon one another, and a covering suitable for the wearing-surface applied to the foundation and filling the grooves thereof.

The invention will be more fully understood by reference to the accompanying drawings,

in which similar letters of reference indicate like parts, and in which—

Figure 1 is a plan view of the pavement. Fig. 2 is a cross-section of the same, and Figs. 3 and 4 are enlarged detail sectional views of a portion of the pavement.

In the drawings, A may represent the center portion or roadway of a street; A', the gutter or drain; A², the usual curbing.

10 B B are the strips or planks forming the foundation, which are placed upon edge at an angle of about forty-five degrees, with their sides resting upon one another, so that any strain placed upon one will be transmitted to
15 the next, and their lower edges resting upon the sand layer B', as shown in Fig. 2. After the planks are thus laid they are given a coat of pitch b, so as to give a surface to which the paving material will firmly adhere. When the
20 coating has been laid on the plank, the foundation is ready for the paving material C, which should preferably be of some substance capable of adhering to the pitch. The paving material C should be evenly spread upon the
25 foundation, so as to fill the grooves b', formed by the edge b² of one strip and the upper side b³ of another strip, and preferably so as to project but slightly above the edges b⁴ of the grooves b', thus avoiding all displacement or
30 tendency of the paving material to shift, as would be the case if it had any great thickness above the edges b⁴ of the grooves. The sides b² b³ of the groove serve to hold the material C in proper position at all times, and
35 as the paving material adheres to the pitch it will be seen that it forms a lock against one strip moving with relation to its companion. It will also be seen that as the strips rest one upon another they form a continuous
40 and self-supporting foundation, and therefore any strain placed upon one of the strips will be evenly distributed over a large sur-

face and borne by a large number of them, and that each strip will be incapable of sinking and forming hollows in the road-bed, as 45 would be the case if the foundation were made of independent parts depending entirely upon the material beneath them for support. The portion A' of the pavement I prefer to make up of sections A³, which may be removed, so 50 that workmen may get at the water, gas, or other pipes which may be beneath the pavement without disturbing the main portion of the roadway. These sections A³, I prefer to lay lengthwise of the street and to make them 55 of considerable area, so as to have sufficient bearing to sustain any load which might be placed upon them without causing them to sink and form an uneven surface. The paving material of course may be of any suitable 60 substance.

I claim—

1. A pavement composed of long, edgewise-inclined, and parallel planks lapping over and resting on one another, substantially as specified. 65

2. A pavement composed of long, edgewise-inclined, and parallel planks lapping over and resting on one another, in combination with a surfacing material filling the grooves along 70 the upper edges of the planks, substantially as specified.

3. In a pavement, the combination of the roadway composed of edgewise-parallel strips lapping over and resting upon one another, 75 with the drain or gutter consisting of removable sections, each composed of edgewise-parallel strips lapping over and resting upon one another, substantially as set forth.

GEORGE S. CURTIS.

Witnesses:

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