

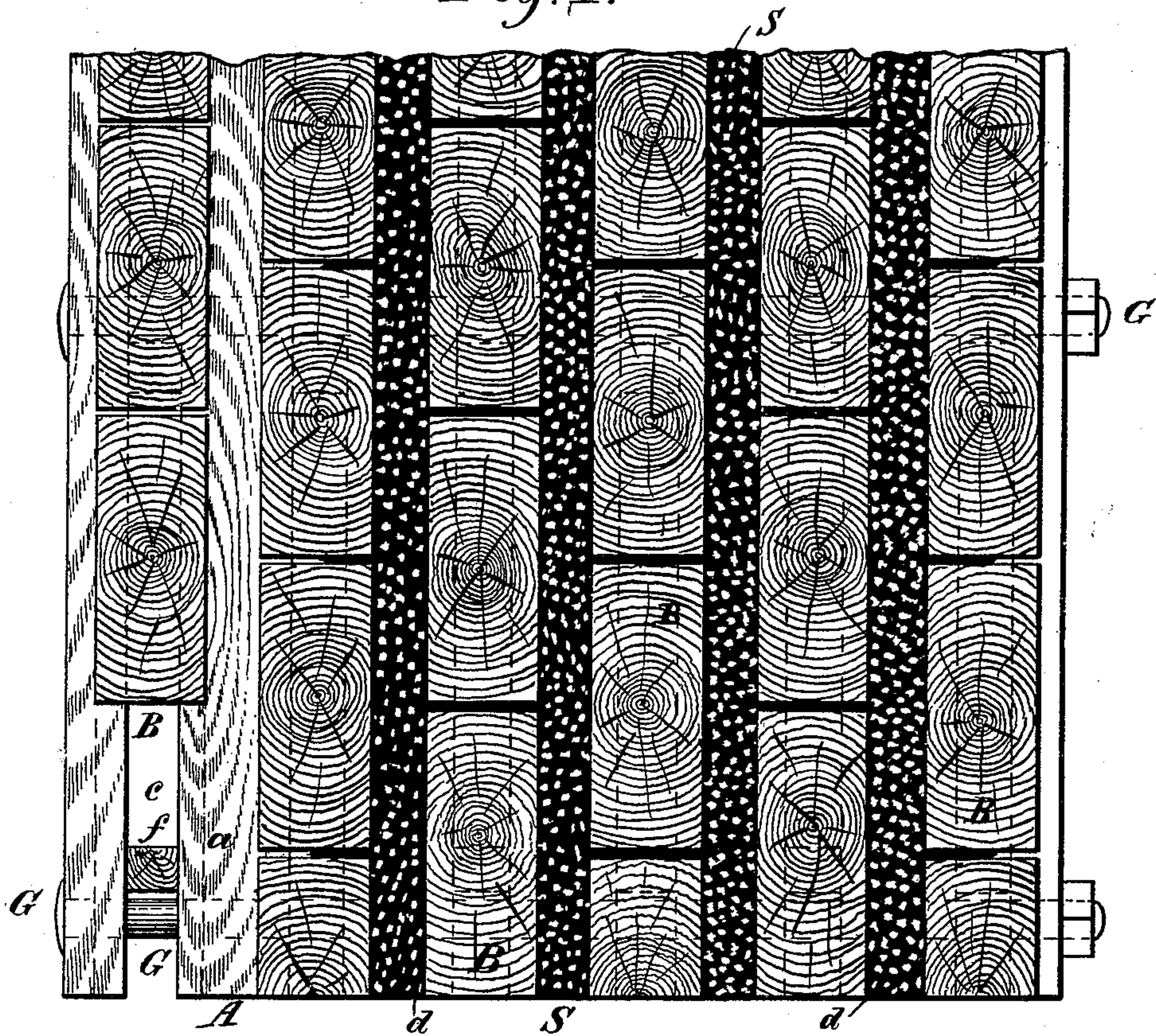
(No Model.)

R. D. DUFF.  
PAVEMENT.

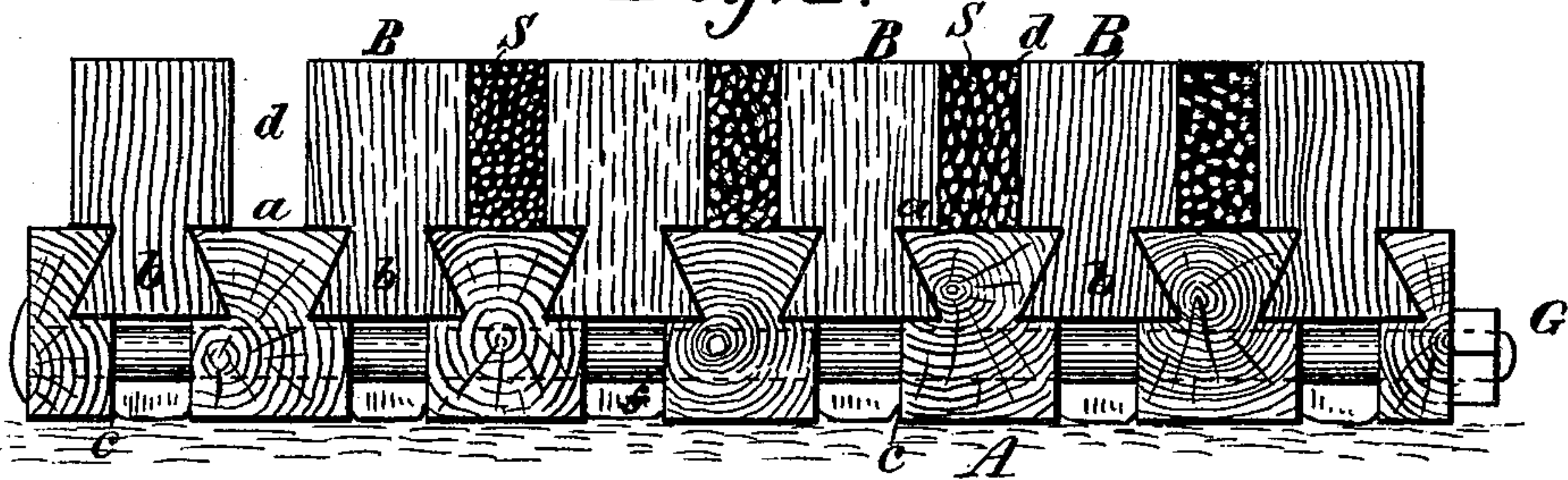
No. 480,183.

Patented Aug. 2, 1892.

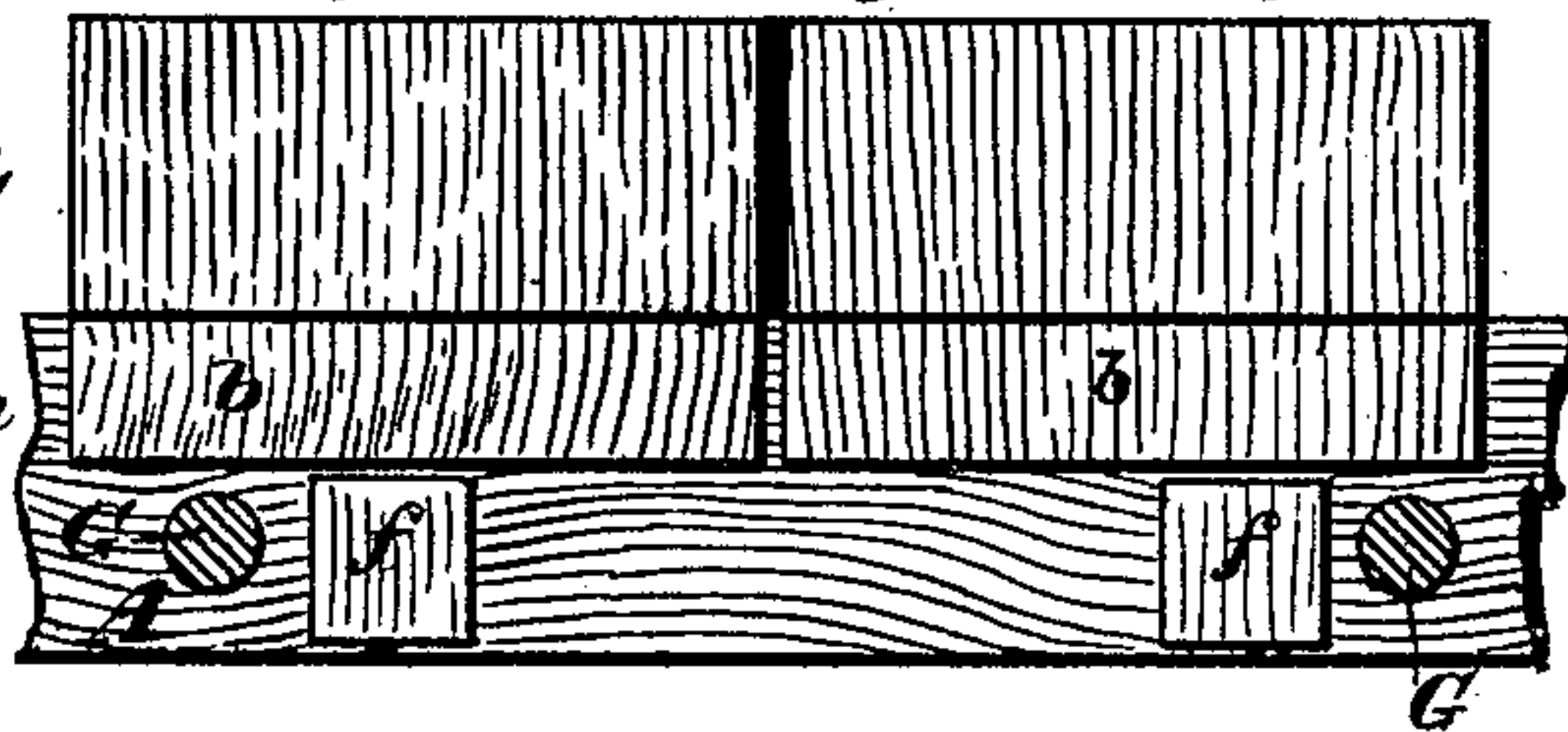
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES:

*J. H. P. Huberath.*  
*E. M. Clark*

INVENTOR:

*R. D. Duff*

BY *Munn & Co.*

ATTORNEYS



# UNITED STATES PATENT OFFICE.

ROBERT D. DUFF, OF TACOMA, WASHINGTON.

## PAVEMENT.

SPECIFICATION forming part of Letters Patent No. 480,183, dated August 2, 1892.

Application filed March 10, 1891. Renewed May 21, 1892. Serial No. 433,796. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT D. DUFF, of Tacoma, in the county of Pierce and State of Washington, have invented a new and useful  
5 Improvement in Pavements, of which the following is a full, clear, and exact description.

My invention is an improvement in the class of pavements in which the surface is composed of wooden blocks arranged parallel, but spaced apart and held in place on a  
10 suitable wooden foundation.

In my invention the paving-blocks are secured between and supported upon wooden stringers which are held parallel by trans-  
15 verse tie-rods passing through their bases, but separated by narrow spaces which permit drainage, as hereinafter more fully set forth.

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

Figure 1 represents a plan view of a section of my improved pavement, one of the  
25 blocks used in the pavement being removed. Fig. 2 is a transverse section of the same with a portion of the composition between one row of blocks removed; and Fig. 3 is a longitudinal section of the pavement-section in part, omit-  
30 ting the composition or concrete filling between the blocks longitudinally.

My improved pavement is applicable to both the roadways of streets and sidewalks thereof, or either, as well as to other thoroughfares or places. It is built up in sections of any desired size and may be made  
35 flat or concave or convex on its upper or lower surfaces to suit different requirements. Each section, which may either be square or oblong in shape, of greater length than width, or vice versa, is composed in part of longitudinal wooden stringers A, grooved along their opposite sides for a portion of their depth, so as  
40 to form upper side longitudinal locking parts *a a*, preferably of dovetail shape. The grain of these stringers runs longitudinally of them. With these laterally-grooved stringers are combined wooden blocks B, correspondingly grooved along the lower portion of their sides,

thereby forming like locking parts *b b*. These  
50 several locking parts *a a* and *b b* thus fit into or interlock with each other and hold both the stringers A apart from each other, leaving lower or ground spaces *c c* in between them, and keep the paving-blocks B down to their  
55 places and apart from each other with intervening longitudinal channels or spaces *d d* in between them above the stringers.

The blocks B may be made of varied length and have their grain running depthwise of  
60 them, so as to present an end grain-surface on top. Said blocks are preferably so arranged that the joints between them in any one line or row will be in intermediate relation with the joints between the blocks of the  
55 next adjacent row. These joints may be packed with tar or other suitable filling. The dimensions of these blocks may be varied; but making them each of three inches or thereabout in width and eight inches or there-  
70 about in depth, with preferably their greatest measurement for the most part in length, will be found very suitable for street-pavements. If desired, spacing blocks or pieces *f* may be introduced at intervals between the string-  
75 ers A.

The upper blocks B are slid to their places in between and along the stringers A, and the channels or spaces *d* between said blocks are filled with a composition or concrete S of tar  
80 and gravel or sand, and the whole is firmly bound together by cross-bolts or iron rods G.

A pavement made up of sections, as described, is durable, even, and clean and furnishes its own drainage by the spaces *c* be-  
85 tween the stringers where the latter come in contact with the ground. It, too, will be found very convenient to repair, as the sections of which it is composed may be of any convenient size, so as to admit of their being taken  
90 up and new pieces slipped in to replace defective ones. Such a pavement can be rapidly made and laid, as the sections may all be manufactured in advance and as soon as the bed in the ground is prepared be quickly  
95 laid. It is comparatively cheap, especially in timbered countries, and can be made where timber is cheap and shipped to other places.

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

5 In a wooden pavement of the character hereinbefore indicated, the combination, with the paving-blocks proper B, having a dove-tailed base portion *b b* and separated by narrow spaces, of the wooden stringers A, having upper dovetailed portions *a a*, that interlock

with the blocks B, and the tie-rods G, passing transversely through the base portions of the said stringers and beneath the paving-blocks, all as shown and described.

ROBERT D. DUFF.

Witnesses:

M. S. HILL,  
E. S. ORR.