

No. 674,287.

Patented May 14, 1901.

G. K. TINKER.
FRAME FOR PAVEMENTS.

(Application filed Aug. 25, 1900.)

(No Model.)

Fig: 1.

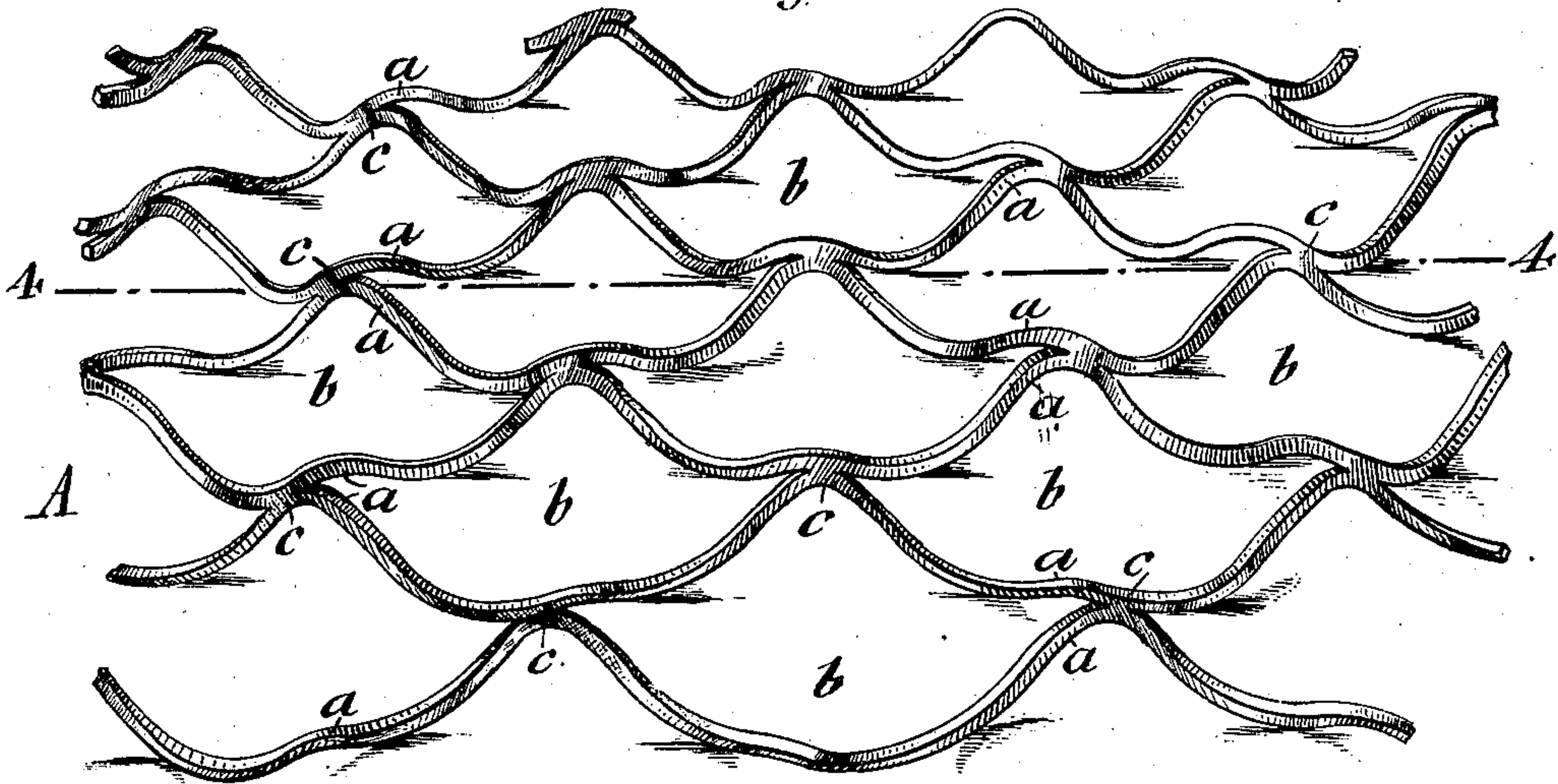


Fig: 2.

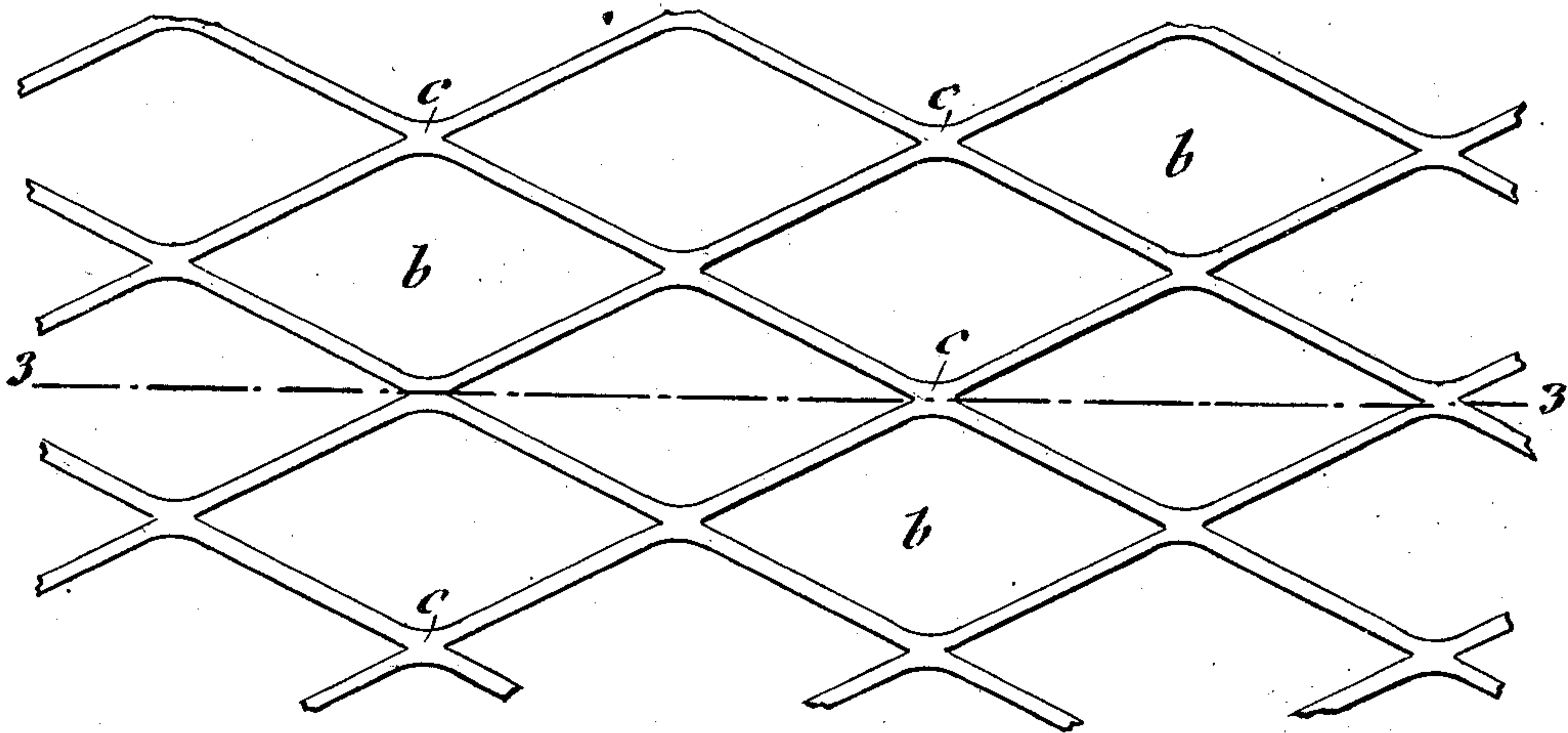
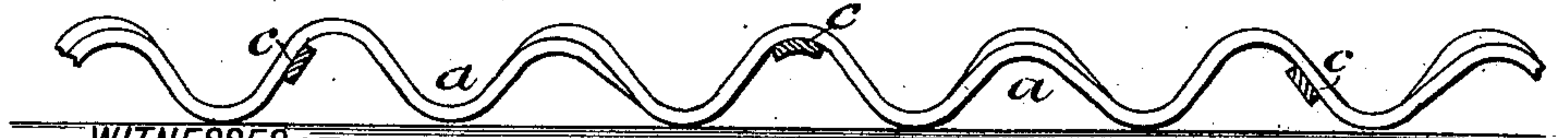


Fig: 3.



Fig: 4.



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FRAME FOR PAVEMENTS.

SPECIFICATION forming part of Letters Patent No. 674,287, dated May 14, 1901.

Application filed August 25, 1900. Serial No. 27,992. (No model.)

To all whom it may concern:

Be it known that I, GEORGE K. TINKER, a citizen of the United States, residing in the city of New York, borough of Manhattan, in the State of New York, have invented certain new and useful Improvements in Frames for Pavements, of which the following is a specification.

The object of my invention is to furnish metal frames for asphalt and other composition pavements which are made from corrugated expanded metal in such a manner that a rigid surface for the paving material is formed, so as to prevent the asphalt from creeping and to protect the pavements against ruts and depressions formed in the same. When the frame is used for cement pavements, it forms a reinforcing-frame that imparts a certain tensile strength to the pavement-blocks formed thereby, so as to compensate for the rigidity of the cement body. For this purpose the invention consists of a frame of expanded metal corrugated transversely to the longitudinal axis of the meshes, the connecting portions of the metal being located in line with each other in the corrugations and the corrugations being of a length unequally proportioned to the meshes, whereby the connecting portions are brought at different heights in the successive corrugations.

In the accompanying drawings, Figure 1 is a perspective view of a portion of one of my improved frames for pavements. Fig. 2 is a plan view of the expanded metal before corrugating. Fig. 3 is a section on line 3 3, Fig. 2, and Fig. 4 is a section on line 4 4, Fig. 1.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents a portion of a frame of expanded corrugated metal. This frame is made from a blank frame of expanded metal, made, for example, according to the process described in the patent granted to John F. Golding, No. 527,242, dated October 9, 1894. This expanded-metal blank or frame is passed through a set of corrugated rolls of sufficient size and power to produce transverse corrugations on the blank of expanded metal. The corrugations *a* run transversely to the longitudinal axis of the open spaces *b*, the connecting portions *c* be-

ing located in line with each other in the corrugations. The corrugations are of a length unequally proportioned to the meshes, which results in bringing the connecting portions *c c* of the meshes at different heights in the successive corrugations. This feature of my improved frame or grate is clearly shown in Figs. 1 and 4. The practical advantage of this construction lies in the greater firmness of the hold which the grate thereby has upon the asphalt pavement in which it is embedded. The connecting portions are located in different strata of the asphalt or cement. In case the asphalt becomes worn away, exposing the uppermost portions of the grate, comparatively few of the connecting portions *c* are exposed, the remainder being located at different heights and in differing strata of the asphalt from the top to the bottom, so that the utility of the grate or frame as a support for the pavement is not impaired. Various attempts have been made to produce the corrugation of blanks or frames of expanded metal, but without success, for the reason that the rolls used were not of sufficient size, power, and hardness to properly corrugate the expanded-metal frames. While corrugated rolls were well known heretofore for producing corrugated sheet metal, the so-called "open" or expanded metal was never successfully corrugated, as it was found by practical tests that the rolls were injured and the surface quickly destroyed by the sharp edges of the expanded metal. This difficulty has been overcome by the use of very hard and powerful corrugated rolls, so that a corrugated frame of expanded metal is obtained which serves as a useful foundation or base for asphalt, cement, or other composition pavements.

The corrugated expanded-metal frame produced by the improved rolls has many advantages over the ordinary flat expanded-metal frames, namely: first, that a very strong and yet resilient foundation-frame for pavements is obtained by which the creeping of the asphalt or cement is prevented and the same reinforced; second, that the corrugated expanded-metal frames are cheaper than the cast-iron frames heretofore in use; third, that the frames are light and can be easily handled in laying the pavement and

can be easily removed when the pavement is to be repaired; fourth, that a reliable connection between the paving material and frame is obtained, for the reason that the open
5 portion of the same produces an intimate interlocking of the frame with the paving material, and, fifth, the convex surface of the corrugations of the frame form a reliable foothold for horseshoe-calks if allowed to project slightly above the surface of the pavement, and thereby assists horses in drawing
10 loads over the pavement, the corrugated expanded-metal frame forming thereby a very valuable reinforcement for the asphalt, concrete, or other pavement.
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Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A frame for pavements, consisting of a blank of expanded metal corrugated transversely to the longitudinal axis of its meshes, the connecting portions of the frame being located in line with each other in the corrugations, and the corrugations being of a length
20 unequally proportioned to the meshes, whereby said connecting portions between the meshes are brought at different heights in the successive corrugations, substantially as set forth.
25

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

GEORGE K. TINKER.

Witnesses:

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