

(No Model.)

C. HENSE.

Method of Laying Concrete Pavement.

No. 227,898.

Patented May 25, 1880.

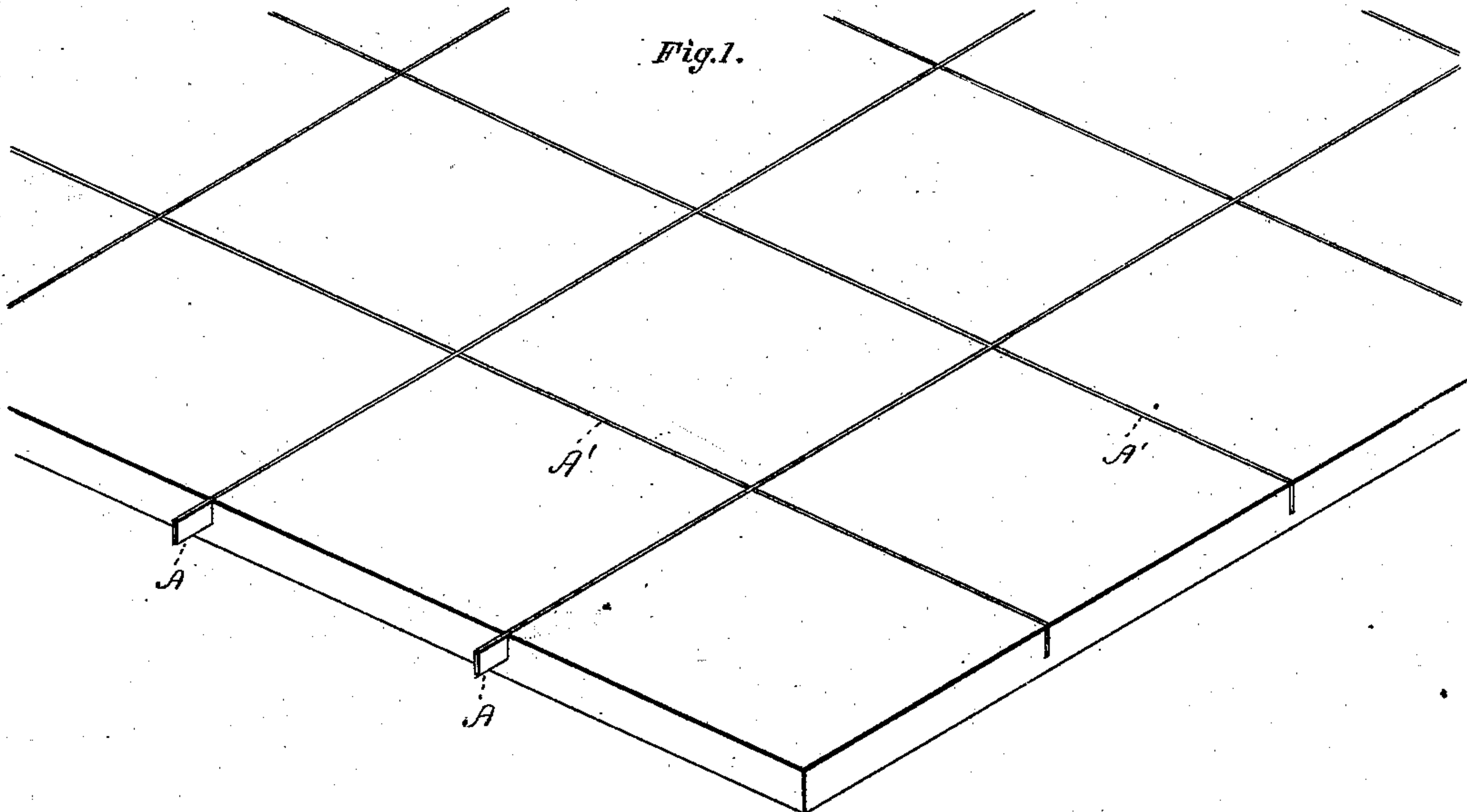


Fig. 2.

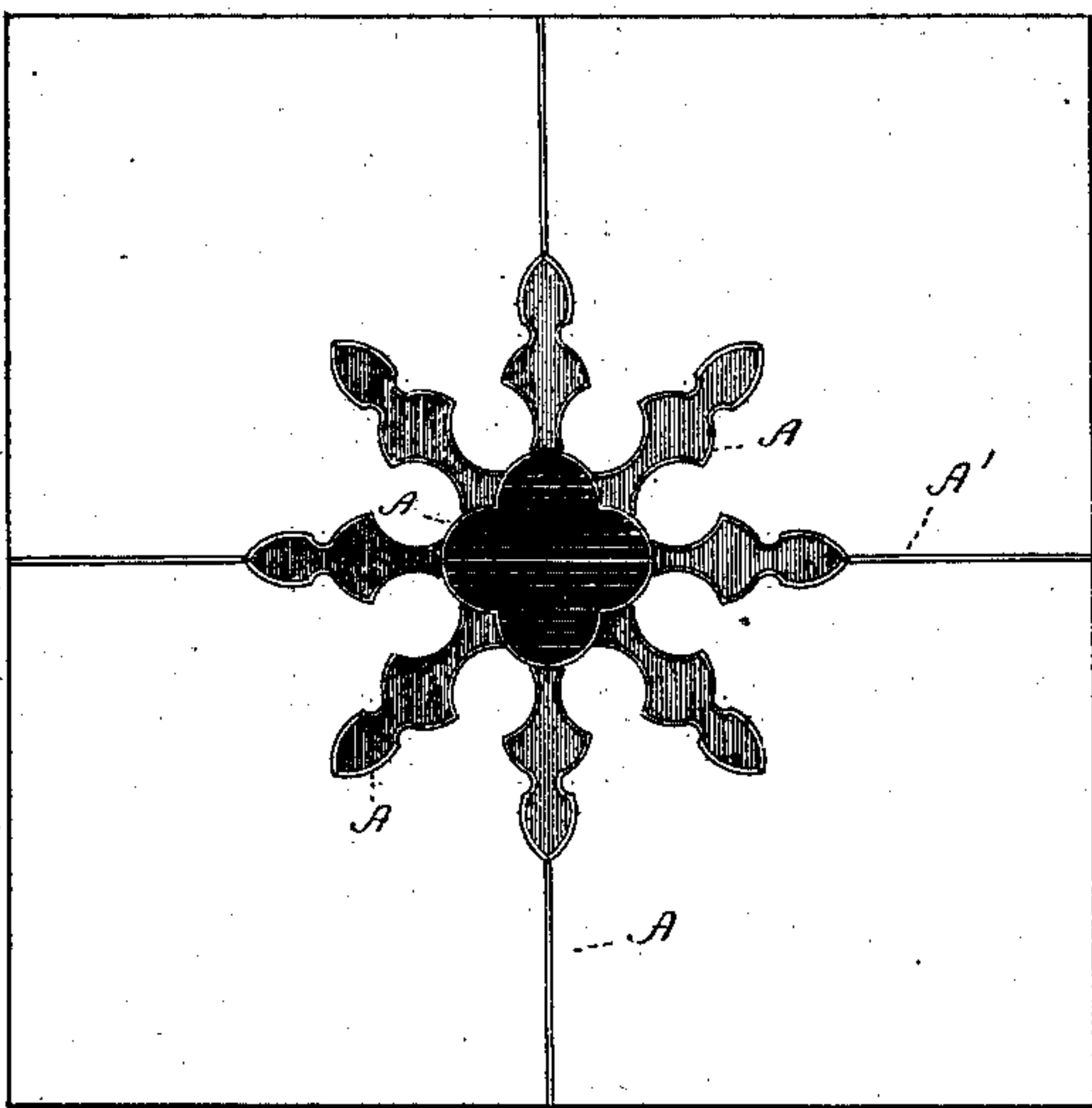


Fig. 3.

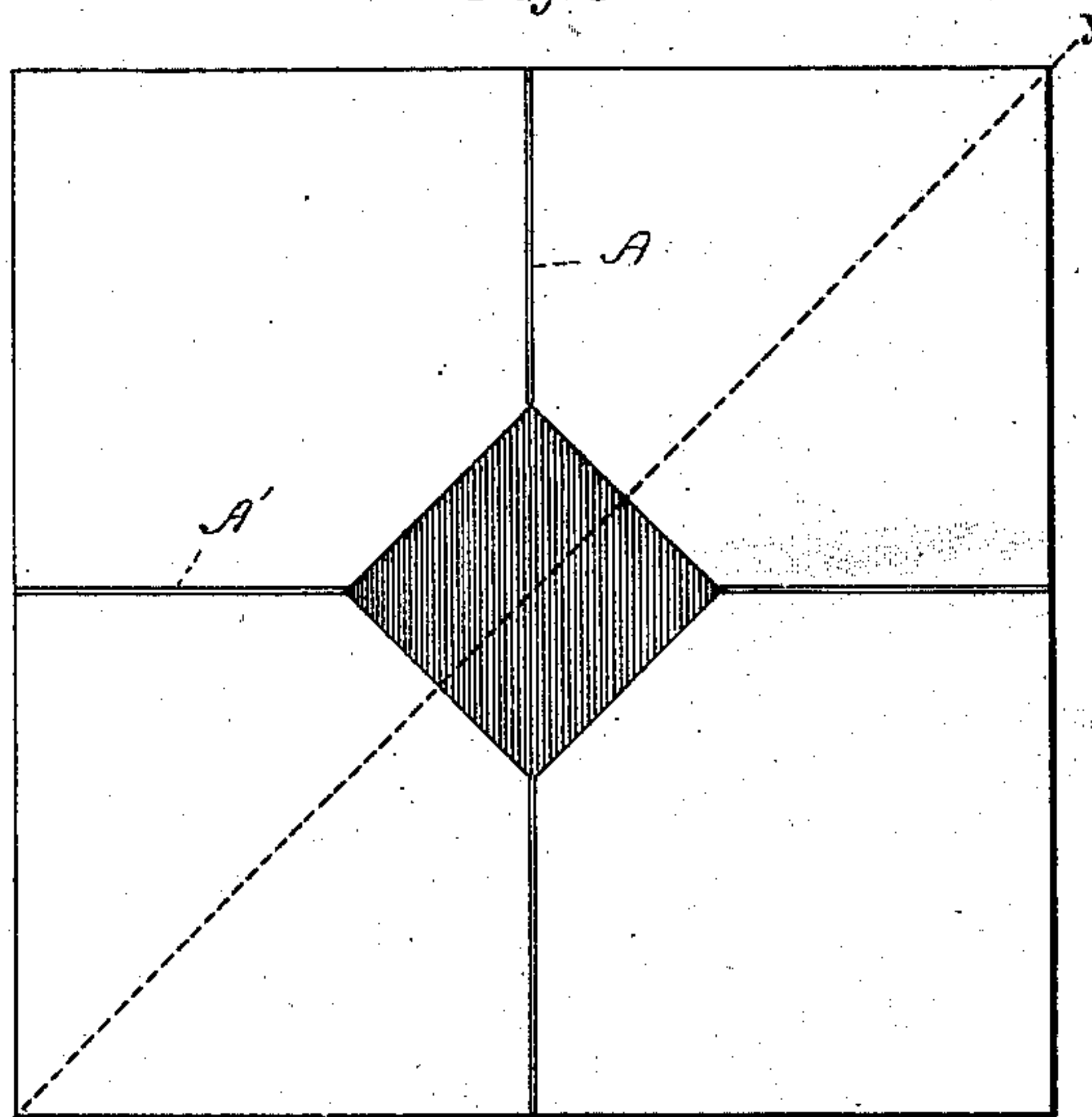


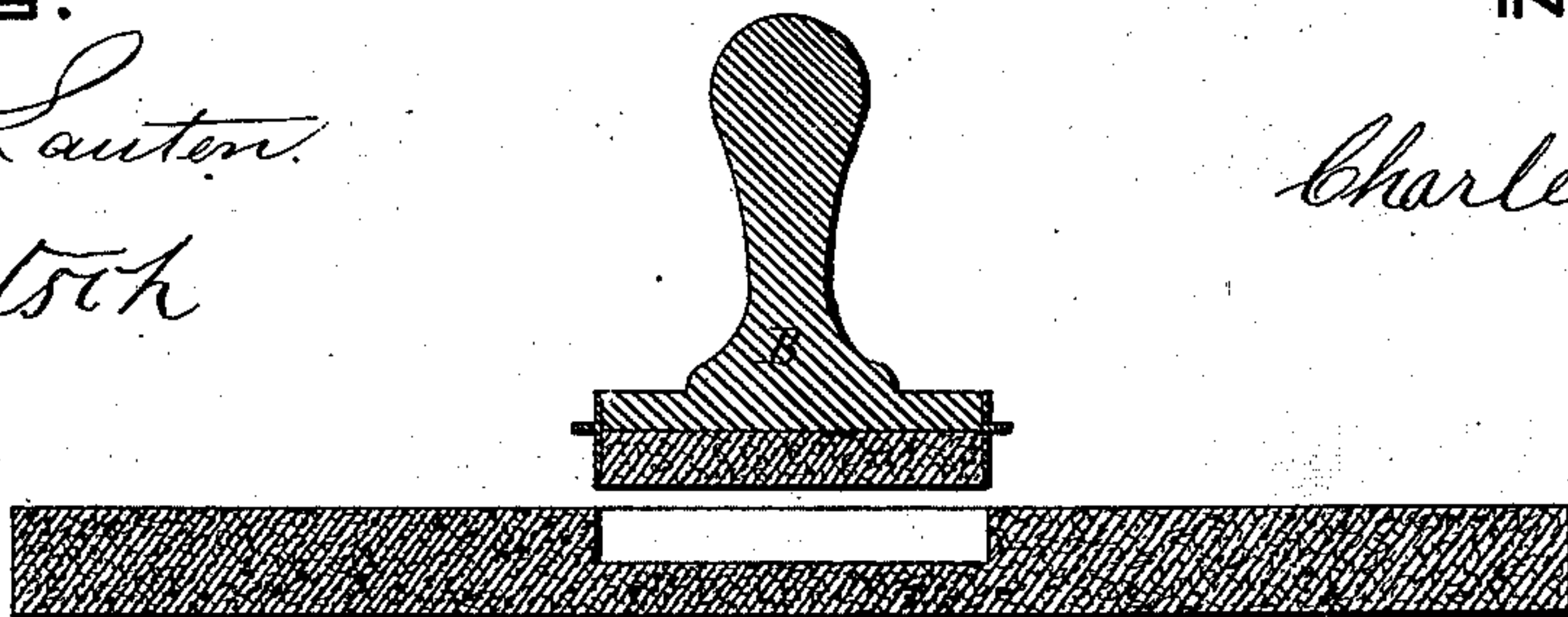
Fig. 4.

WITNESSES:

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UNITED STATES PATENT OFFICE.

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METHOD OF LAYING CONCRETE PAVEMENTS.

SPECIFICATION forming part of Letters Patent No. 227,898, dated May 25, 1880.

Application filed April 1, 1880. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HENSE, a citizen of the United States, residing at Washington, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Methods of Laying Cement Pavements; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to an improved method of laying pavements of cement and similar material, and also to an improved method of inlaying the same, so as to present the effect of mosaic and other work of that class.

In the drawings, Figure 1 is a perspective view of a piece of pavement laid according to my invention; Figs. 2 and 3, plans illustrating my methods of inlaying; and Fig. 4, a section on the line *yy*, Fig. 3.

The essential feature of my invention consists in forming a pavement of cement or similar material, divided by metallic partitions into blocks or squares, which are readily separable, the metallic partitions forming the boundaries of the blocks, or of ornamental patterns inlaid therein, and preventing undue wear to the edges and outlines of the same.

In carrying out my invention I use any kind of cement or homogeneous concrete suitable for the purpose, and having laid a foundation of the same equal in thickness to about one-third the proposed depth of the pavement, I place thereupon a series of thin metallic bars laid edgewise and crossing each other usually at right angles. Any metal may be employed; but preferably a non-corrosible one is used.

The bars *A A'* are slotted at definite distances apart, so as to fit into each other when laid, as illustrated in Fig. 1, and the slots being all equal in depth the surfaces of the bars are flush with each other and with the surface of the pavement. The bars having been laid on the foundation in the manner described, I proceed to fill in between them in the usual way with cement or homogeneous concrete, and level this off even with the upper surfaces of

the bars. The depth of the bars being about two-thirds that of the material, it follows that when breakage ensues, by reason of upheaval by frost or other cause, it will occur at the thinnest parts—that is, along the lines of direction of the bars—and the pavement will become divided up into blocks, the edges of which, being protected by the bars, will be effectually protected from wearing more than other portions of the surface. These metallic strips also serve as guides in resurfacing or repairing the upper portion of the pavement when the same has become abraded by wear or injured in any way. They furthermore prevent local injuries or cracks from extending beyond the compartment in which they originated.

I am aware that concrete pavements have been divided into blocks by means of strips of tar-paper or similar material extending throughout their thickness, and I therefore expressly disclaim dividing such a pavement into blocks extending throughout its thickness, and also the use of a soft and perishable material for dividing the upper surface of such a pavement into compartments.

My system is equally adapted for street-pavements and for tessellated or ornamental floors in buildings. In carrying out this part of my invention I employ a metallic frame, which may be cast of the desired pattern. This is laid down as previously described, and the paving material filled in around it. The interior is then filled up with cement of a different color or colors, and the whole leveled off as before. This arrangement is shown in Fig. 2.

I am also aware that ornaments have been formed in a concrete or cement pavement by excavating a portion of the material while yet soft, by means of a die of the required pattern, and inserting in the cavity thus formed an ornament of similar soft material or of hard material previously prepared and shaped; but the essential feature of my invention consists in the metallic frame above described, which at the same time serves as a mold to form the ornament, and, being permanently inserted in the pavement, protects the edges of the ornament from abrasion.

Having thus fully described my invention, what I claim as new is—

1. A pavement formed of one continuous

mass of cement or equivalent material, the upper surface being divided into compartments by metallic bars or strips, arranged substantially as specified.

5 2. In a continuous pavement formed of cement or equivalent material, the arrangement and combination of the metallic bars crossing each other and level with the upper surface of the pavement, substantially as shown and described.
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3. The arrangement, in a pavement of ce-

ment or similar soft material, of ornamental metallic frames forming an integral part of said pavement and filled in with a cement of the same or different color, substantially as 15 specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES HENSE.

Witnesses:

HERM. LAUTEN,
A. GRETSCH.