

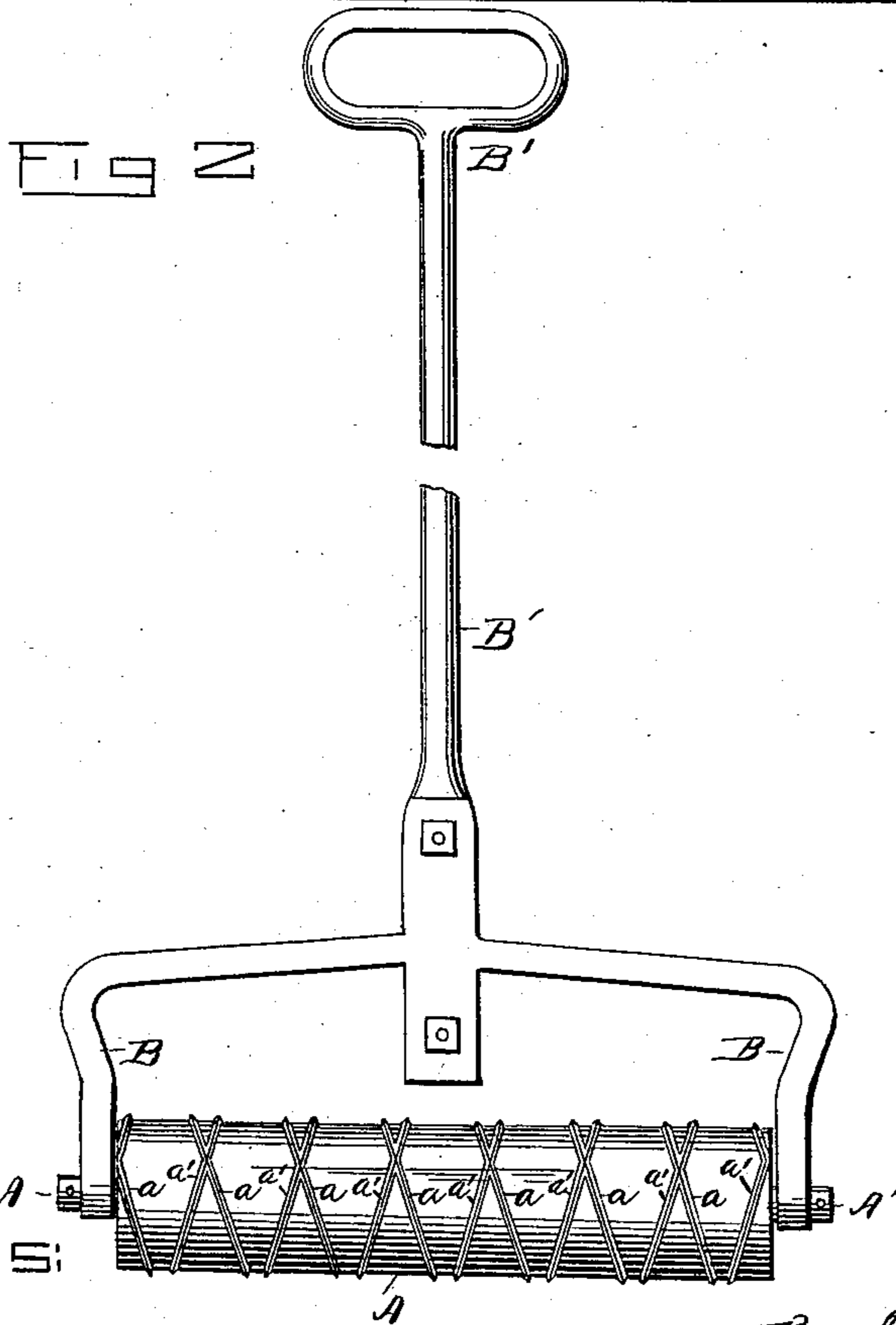
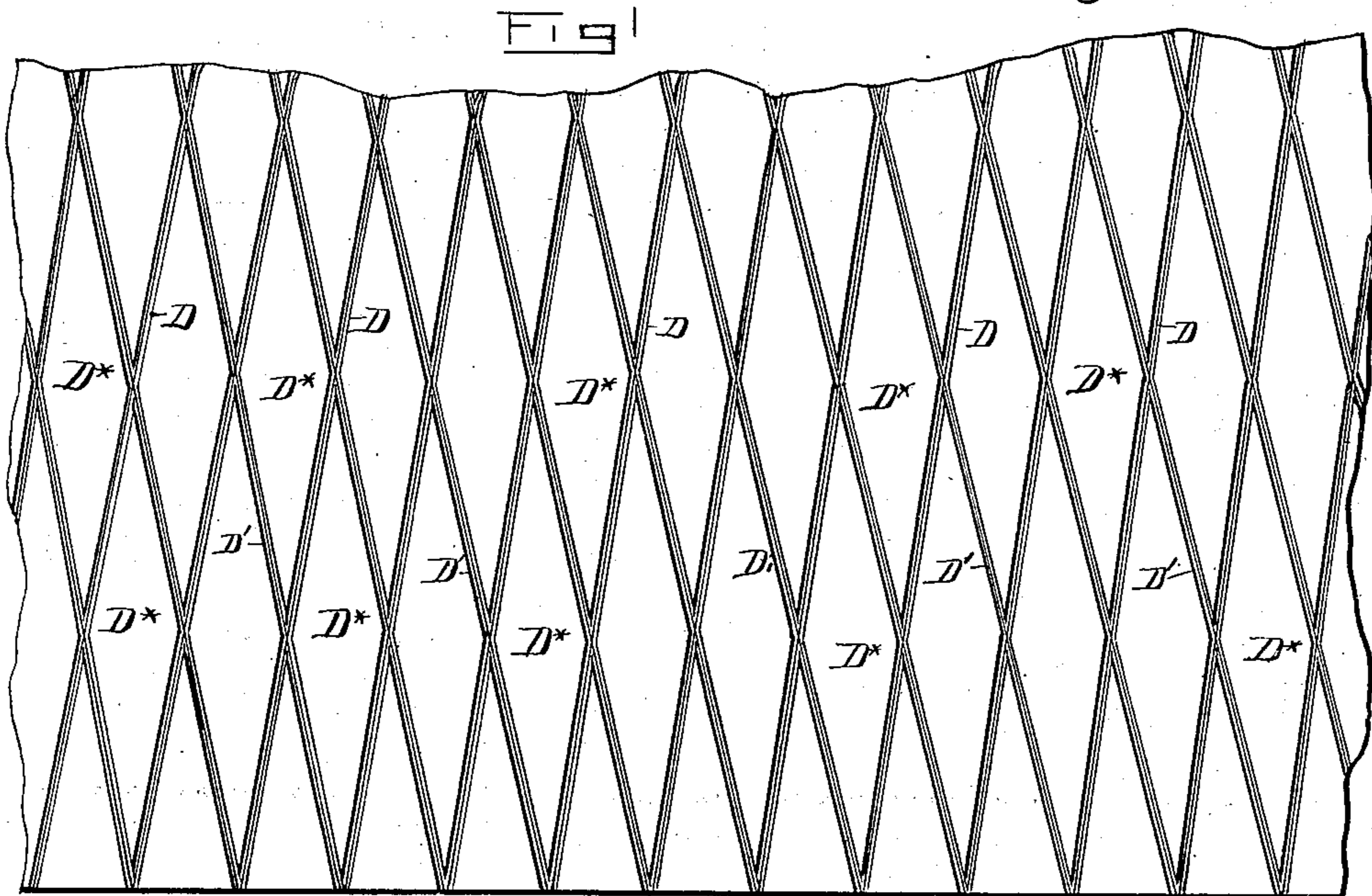
(No Model.)

B. RIORDAN.

COMBINED ROLLER AND TILE RULER FOR MARKING CONCRETE SURFACES.

No. 324,166.

Patented Aug. 11, 1885.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

BARTHOLOMEW RIORDAN, OF WASHINGTON, DISTRICT OF COLUMBIA.

COMBINED ROLLER AND TILE-RULER FOR MARKING CONCRETE SURFACES.

SPECIFICATION forming part of Letters Patent No. 324,166, dated August 11, 1885.

Application filed March 3, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, BARTHOLOMEW RIORDAN, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Combined Roller and Tile-Ruler for Marking Concrete Surfaces; 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.

My invention relates to concrete and analogous pavements, and devices for rolling and marking the same; and it consists in a roller for pressing and marking the pavement while in a soft state with a net-work of grooves or creases forming elongated diamond-shaped fields or blocks of small dimensions. Each one of the grooves or creases is continuous from one end or side of the pavement or square to the other, and runs at an angle only slightly diverging from a right line, so that the crossing grooves or creases, which are run in the same manner, but at a reversed angle, form long diamond-shaped pieces or fields, which will hold very little, if any, of the water which falls upon them, while the grooves form speedy and efficient conductors for the rain and tend to keep the pavement well drained. The intersecting lines form a complete and continuous net-work, and serve to roughen or break up the pavement to assist in walking and prevent it from cracking.

The roller by which the net-work of grooves or creases is formed has a continuous worm or spiral blade extending round the roller from one end to the other at a certain inclination, and another spiral blade also extending round it from one end to the other in the opposite direction and at a reversed inclination, which worms or blades cross each other every time they encircle the roller, and form between them long narrow diamond-shaped portions or spaces on the roller. When this roller is drawn over a concrete or cement pavement while in a soft condition, it will lay it out in a net-work of intersecting grooves or creases, which will carry off the water, and at the same time it presses, solidifies, and smooths the surface of the diamond-shaped field, while the blades,

grooves, or marks, which are of wedge shape in cross-section, tend to compress and finish the edges of the fields and make them smooth and hard.

The accompanying drawings form a part of this specification and illustrate my invention.

Figure 1 is a plan view of a piece of pavement grooved and laid out by my roller. Fig. 2 is a view of the roller.

A is the roller, with a shaft, A', to which the frame B is joined. B' is the handle by which the roller is worked, and which may be of any desired length.

The groovers or markers with which the roller is provided are marked *a* and *a'*. Those marked *a* extend spirally around the roller from one end to the other in one direction and at a given inclination, while those marked *a'* extend round the roller from end to end in the opposite direction and at a reversed inclination, crossing those marked *a*, so as to form long narrow diamond-shaped fields or blocks of small dimension between the groovers or markers *a a'* upon the surface of the roller.

The roller is applied to the pavement while it is yet in a soft state, and is rolled over it, its weight causing it to impress its groovers or markers into the body of the cement until the flat surfaces of the roller meet the surface of the pavement, when the pavement will be solidified and smoothed. The groovers or markers *a a'* are wedge-shaped, as shown, and they press the soft concrete well apart and cause the diamond-shaped fields to be very compact and solid.

The pavement finished by this roller is shown in Fig. 1; where D shows the grooves which run at one angle and are all parallel with each other, and D' shows the grooves which run at the reverse angle so as to cross the first set obliquely and form elongated diamond-shaped fields or blocks D\* of small dimension. The grooves D and D' run with very slight inclination from a right line and form good conductors for the water which falls upon the pavement. The fields or blocks being very small and narrow do not admit of much water remaining upon them; but it flows rapidly off into the grooves, and is taken by them outward toward the gutter.

The grooves cross each other at frequent intervals, and form a continuous and complete net-work of indentations for roughening the surface of the pavement, preventing it from cracking, and for carrying off the water.

Having thus described my invention, what I claim is—

1. A roller for forming a net-work of grooves or creases with elongated diamond-shaped blocks or fields between them in concrete or cement pavements having groovers or markers formed upon it, one set of which extends in a line spirally around the roller from end to end, and the other set extending spirally around the roller from end to end in an opposite direction and at a reversed inclination, whereby the surface of the roller is divided into elongated diamond-shaped portions or fields, substantially as set forth.
2. A concrete or cement pavement divided

by grooves into elongated diamond-shaped fields or blocks of small area having their greater length in a direction with a line at right angles with the curb, said grooves being in one continuous length and at an inclination only slightly divergent from a right angle with the curb and being formed all around the fields by the passage of the roller in one direction, whereby said grooves form clear unobstructed water-conveyers for the water which falls upon the small fields, and whereby the fields are compacted and well defined, substantially as set forth.

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

B. RIORDAN.

Witnesses:

J. N. KALB,  
H. A. HALL.