July 4, 1933. W. JOHNSON 1,916,620

PAVEMENT AND PAVING UNIT

Filed June 19, 1931

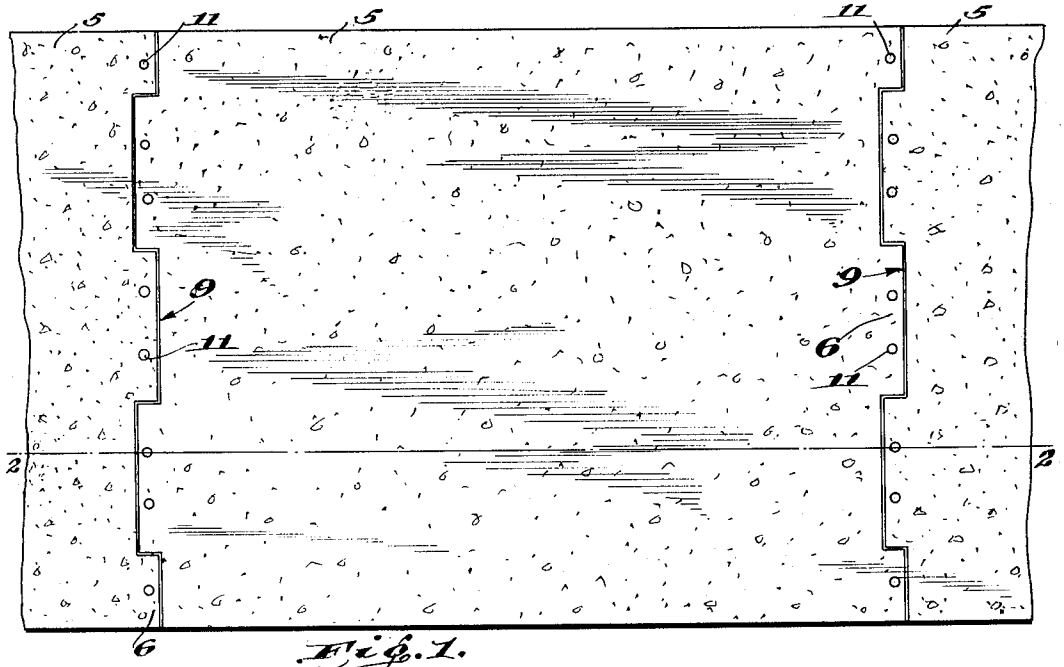


Fig. 1.

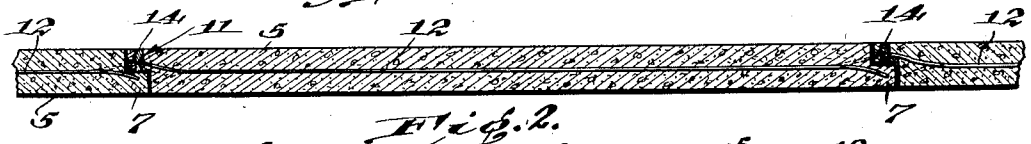


Fig. 2.

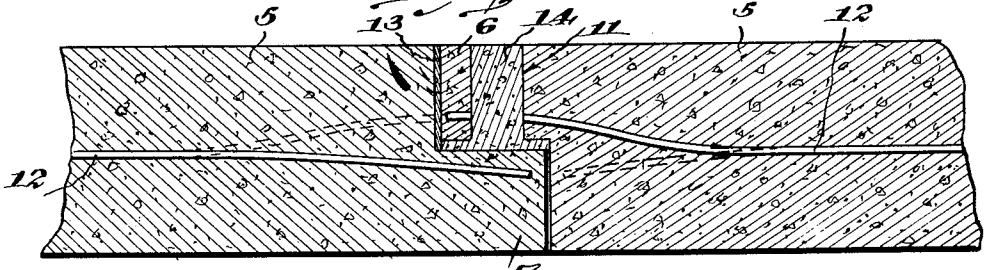


Fig. 3.

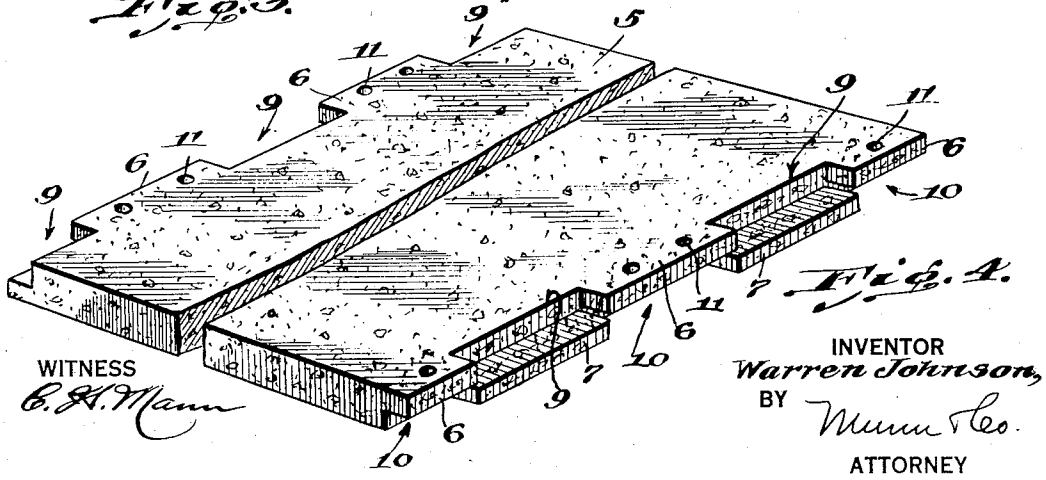


Fig. 4.

WITNESS
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Patented July 4, 1933 1,916,620

UNITED STATES PATENT OFFICE

WARREN JOHNSON, OF NEW ORLEANS, LOUISIANA

PAVEMENT AND PAVING UNIT

Application filed June 19, 1931. Serial No. 545,580.

My invention relates to pavements for sidewalks, streets or highways and to paving units for use in constructing the same.

It is an object of the present invention to provide a pavement composed of a plurality of preformed slabs so interconnected as to eliminate uneven sagging of individual units.

A further object of the invention is to provide an improved interlocking joint for the slabs used in constructing my improved pavement.

A further object of the invention is to provide a novel reinforced preformed concrete slab having alternate depressions and projections in the edges thereof for interlocking engagement with projections and depressions in adjacent edges of adjacent slabs when laid in a pavement.

Other objects and advantages of the invention will become apparent during the course of the following detailed description which should be read in conjunction with the accompanying drawing, which forms a part of this specification and in which:

Figure 1 is a top plan view of a section of pavement constructed according to the invention;

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is an enlarged detail sectional view of one of the joints between adjacent slabs, and

Fig. 4 is a perspective view of one of the slabs embodying the invention.

Referring now more specifically to the drawing, wherein like numerals refer to like parts throughout the same, my improved pavement is composed of preformed slabs 5 formed of concrete or other suitable plastic material laid on top of a suitable bed (not shown).

Each of the concrete slabs is formed with spaced tongues or projecting portions 6 and 7 flush with the upper and lower faces respectively of the slab and projecting laterally thereof. The tongues 6 and 7 are arranged in staggered relation and are formed of a thickness a little less than half the thickness of the slab proper so as to produce slightly oversized recesses 9 between the tongues 6 and recesses 10 between the tongues 7. The recesses 9 and 10 in the edges of the slabs are approximately equal in depth to the thickness of the tongues the difference being only 1/8″ or so in favor of the recesses. Each of the tongues 6 is provided with one or more holes or openings 11 which extend vertically therethrough for a purpose to be later described.

The slabs 5 are reinforced by means of suitable steel reinforcing wires or rods 12 which extend substantially throughout the length of the slabs approximately midway between the upper and lower faces thereof. The ends of the reinforcing rods are bent either up or down so as to extend into and reinforce the respective tongue portions 6 and 7 as clearly shown in Figs. 2 and 3.

When the slabs or blocks 5 are laid together to form my improved pavement, the tongues or projections 6 of one slab fit within the recesses 9 in the edges of an adjacent slab and the projections 7 fit within the recesses or depressions 10 thereof whereby the adjoining slabs will be so interlocked that each depends upon the other, thereby preventing any of the individual slabs from moving up, down or side-ways with respect to any other slab.

After the slabs are laid, tarred or felt paper strips 13 are inserted between the projections 6 and the rear walls of the depressions 9 to allow for expansion of the slabs. Cement grout or other plastic binder 14 is then forced into the holes 11 in the tongues 6, the grout filling the space between the bottom face of the projections 6 and the upper face of the projections 7 so as to bind the slabs firmly together and to maintain them in proper relative positions so that their upper faces will remain flush at all times. The grouting material adheres to the surfaces of the various projections and so binds the projections together as to make an absolutely solid joint.

A pavement constructed according to my invention will be easy to construct with relatively unskilled labor since the slabs 5 will be preformed of the correct proportions during manufacture and will merely have to be assembled on a proper bed or sub-surface in

order to insure a perfect roadway or other pavement structure.

While a preferred embodiment of the invention has been shown and described, it will be understood that various changes in the details of construction may be made without departing from the spirit of the invention as defined by the appended claims.

I claim:

1. A pavement comprising a plurality of polygonal slabs, upper and lower tongue members formed with the sides of said slabs and disposed in staggered relationship, said tongue members being slightly less than half the thickness of the slab, the upper tongue members being formed with the upper portion of the slab and the lower tongue members being formed with the lower portion thereof whereby to form recesses with which interlocking engagement is made by alternate tongues, the upper tongues of one slab being slightly spaced from the lower tongues of the next adjacent slab and being formed with openings extending vertically therethrough, and a plastic binder forced into said openings and in the spaces between said tongue portions to produce a solid joint.

2. A pavement comprising a plurality of interfitting slabs, each of said slabs having upper and lower tongue portions along the meeting edges thereof, the upper tongue portions of one slab opposing the lower tongue portion of the next adjacent slab in spaced relationship, said upper tongue portions having vertical openings extending therethrough, and a plastic binder in said openings and in the space between said tongues.

3. A pavement comprising a plurality of slabs, upper and lower tongue portions along the meeting ends of the slabs, the arrangement of the tongue portions providing recesses for the mutual interfitting of the tongue portions, said tongue portions being of less thickness than the depth of the recesses, the upper tongue portions having openings extending therethrough, a binder between the horizontal adjoining surfaces of said tongue portions holding the top surfaces of the upper tongue portions and slabs on a level, said binder also filling the openings, and a compressible expansion strip between the upright ends of the upper tongues and adjacent walls of the respective recesses.

WARREN JOHNSON.