June 5, 1934. J. E. H. BROWN 1,961,580

PAVEMENT JOINT

Filed Nov. 14, 1931

Fig. 1

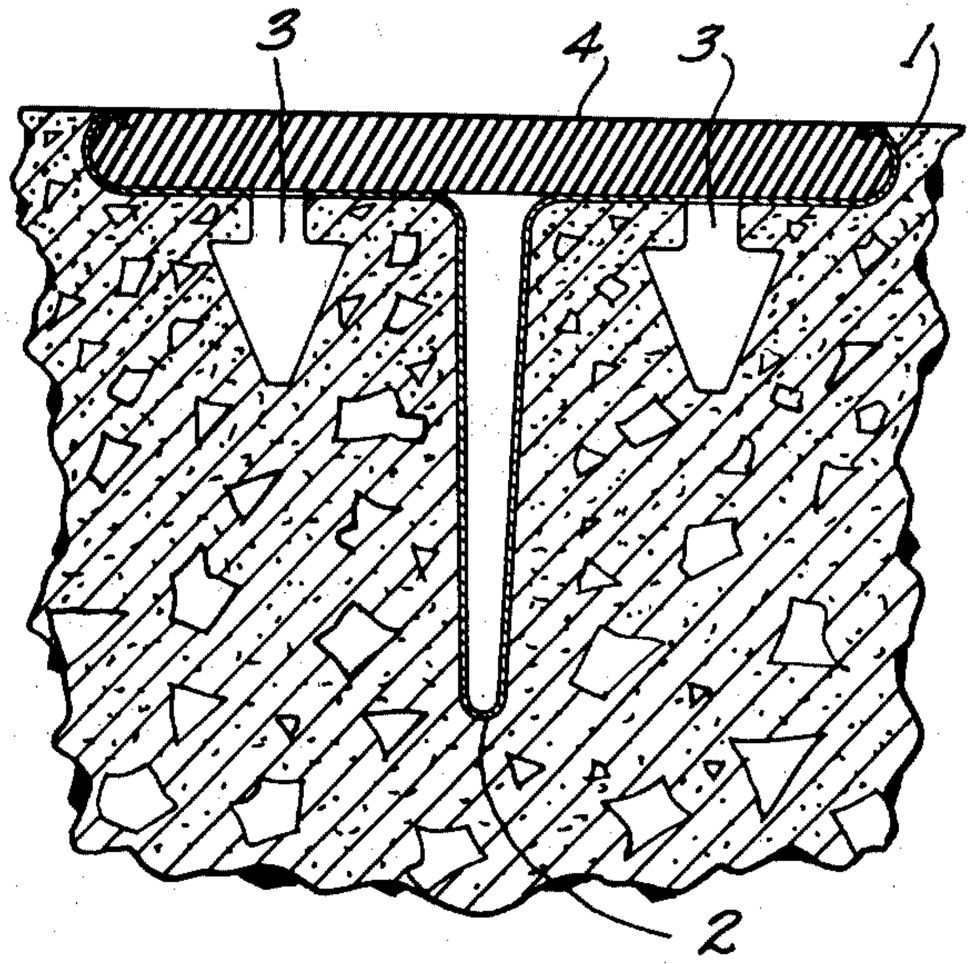


Fig. 2




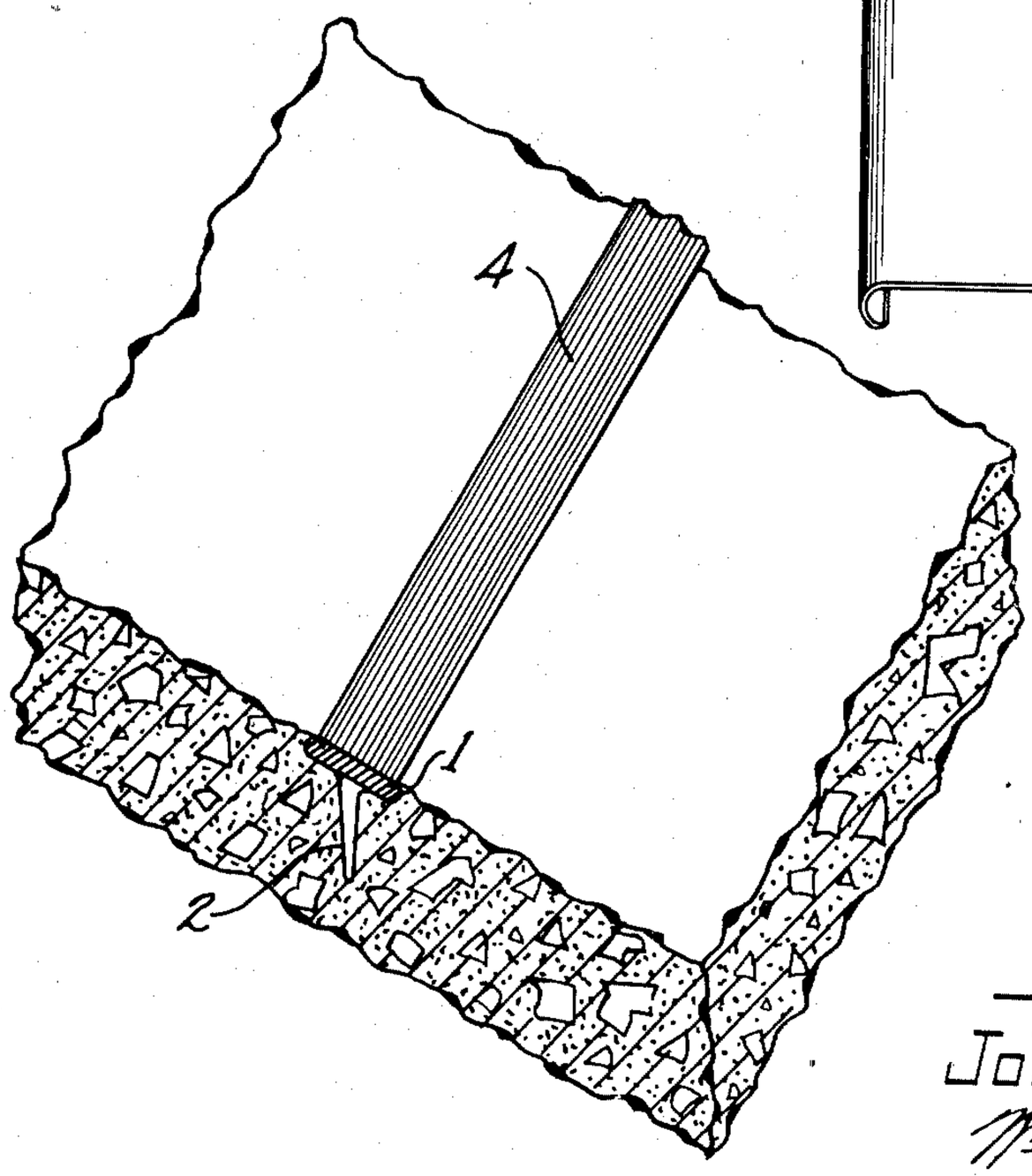


Fig. 3

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## PAVEMENT JOINT

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Application November 14, 1931, Serial No. 574,938

3 Claims. (Cl. 94—1.5)

My invention relates in general to pavement joints, and more specifically to a weakened plane center joint for street pavements or the like, which also serves as a traffic line marker.

As is well known, it has been found advisable to provide a longitudinal center joint in concrete highways to compensate for the expansion and contraction of the pavement during changes of temperature. For instance, during the night an inequality of cooling is known to cause longitudinal cracks in the road. In order to overcome this, it has become the practice to provide an expansion joint or weakened plane along the center of the road so that the edges can lift and fall without cracking the road at any point except along that plane. It has also been common practice to apply a center line painted or similarly applied along the center of the pavement longitudinally to separate traffic lanes.

It is, therefore, the object of my invention to provide an improved center joint which efficiently supplies a longitudinal weakened plane along the center of the pavement, and which also provides an improved traffic lane marker which is lasting and easily applied.

Among other objects of my invention are: To provide an improved traffic lane marker of mastic or other material, anchored in the pavement, and which may be of any desired color.

To provide a weakened plane center joint efficiently anchored in the pavement sealed at the top by preformed or mastic material, which material also provides the traffic lane marker.

Other objects of improvement not specifically mentioned will be apparent from the following detailed description of the embodiment of the invention disclosed in the accompanying drawing.

Fig. 1 is a sectional view of the device of my invention showing it in position in a pavement and with the pavement cut away to show the anchors in position.

Fig. 2 is a view taken from the bottom of a section of a strip with the lower end tilted up slightly.

Fig. 3 is a top view taken from a slight angle of a center joint in position in a pavement.

Referring to the drawing, 1 designates a strip of sheet metal formed as shown with an element 2 extending downward from the center portion thereof. This element 2 may be of substantially V shape as shown in the drawing, or the two sides of the V-shaped element 2 may be close together and parallel to each other if desired. Also, it should be understood that if desired the downwardly extending element 2 may be made in any desired form, such as a single part projecting downward, the only requisite being to provide an element which gives a dividing line in the pavement or separates the two sides thereof. The upper ends of the V-shaped channel are bent outward and extend horizontally like distances and are then curved upward and inward to form hook-shaped or curled edges along the length of the strip. At various distances along the horizontal portions of the strip a series of arrow-shaped anchors, such as 3, are punched out of the body of the material and bent downward at right angles, as clearly shown in Figs. 1 and 2. These anchors may, of course, be of any desired shape other than that shown, the main requisite being that the lower portion is enlarged to provide anchors or holding surfaces to hold the device securely to the concrete when the anchors are embedded therein.

In the flat channel formed by the horizontal sections of part 1 and the curved edges thereof is inserted a preformed strip of filler or mastic material, such as 4, which may be similar to that used in preformed expansion joints, which fits snugly in place between the curved edges. These edges may, if desired, be clamped down to hold the filler more securely and may lie below the upper edges thereof. The filler used is preferably of bituminous material, it may vary in form and color, and serves the dual purpose of sealing the top of the V-shaped element 2, and also acts as a traffic lane marker longitudinally along the center of the highway. The material is tough and lasting, and fiber, felt, or other strengthening materials may be used to toughen the filler.

After the device is formed from strips of sheet metal as shown in Fig. 2, the top surface of part 1 is preferably coated with asphalt or other waterproof adhesive and the strips 4 are inserted and the devices are ready for use on a highway. The strips may be made of any desired length convenient for handling and shipping.

The assembled strips are placed in the highway as shown in Figs. 1 and 3 with the concrete level with or slightly above the strip 4. The anchors 3 are as shown embedded in the concrete and hold the device securely in place. The strip is preferably secured in the pavement after the concrete has been poured and is formed into place as shown before the concrete has set.

It will thus be seen that the part 2 extending

below the strip 4 provides a weakened plane along the center of the highway so that if the edges of the pavement tend to rise or fall with expansion and contraction the pavement will crack or give only along the line of the provided weakened plane.

The traffic lane marker provided by strip 4 is also very desirable, and is a distinct advance over the present method of painting a strip along the center of the roadway. The strip 4 being of bituminous, asphaltic, or other compound will act as a preservative to the metal strip of material forming the weakened plane since with high temperatures bituminous elements of the strip may melt and flow over the metal strip to preserve it from rust.

Having fully described the features and aspects of my invention, what I consider to be new and desire to have protected by Letters Patent will be pointed out in the appended claims.

What is claimed is:

1. A combined weakened plane center joint and traffic lane marker consisting of a wide strip of preformed mastic material flush with the upper surface of the concrete, a metallic member having its outer edges curved over the edges of the strip and extending flush with the under side thereof to the center of the strip, said member having a loop projecting down into the concrete and projections cut out from that part of the member flush with the under side of the strip, said projections anchored in the pavement to hold both the member and the strip locked to the pavement.

2. A traffic lane marker comprising a metallic strip having a V shaped part extending downward into the concrete acting as a weakened plane, extensions from the sides of the V part extending outward parallel to the upper surface of the concrete and just below said surface, anchors embedded in the concrete attached to the under side of said extensions, and a strip of preformed mastic material lying on said extensions and secured thereto by the edges thereof bent over the edge of the strip.

3. A combind weakened plane center joint and traffic lane marker for a pavement formed as a unitary structure from sheet metal having a fold extending down into the pavement, the ends of said fold bent outward near the surface of the pavement and parallel to the surface thereof, said ends bent over and partly enclosing a strip of preformed mastic material, and anchors extending into the pavement from said ends holding the joint secured to the concrete.

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