Feb. 12, 1929. 1,701,629

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PREFORMED EXPANSION JOINT

Original Filed Dec. 26, 1925

Fig. 1.

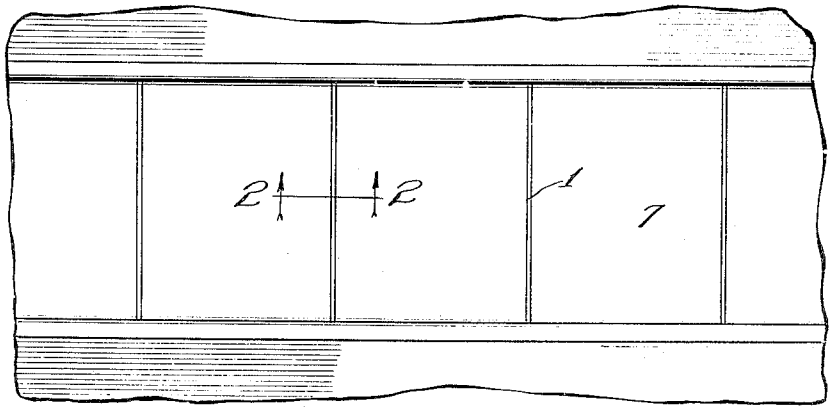


Fig. 2.

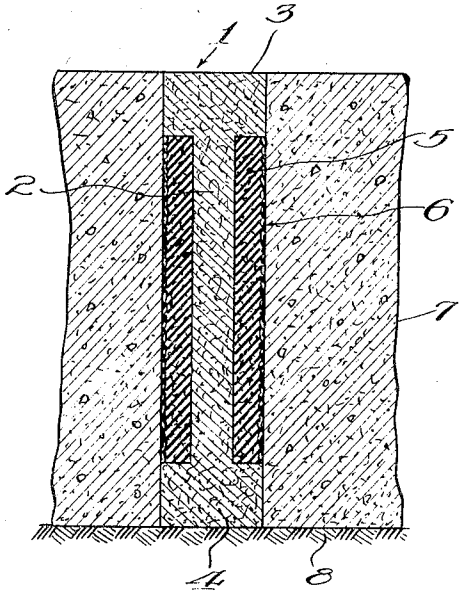
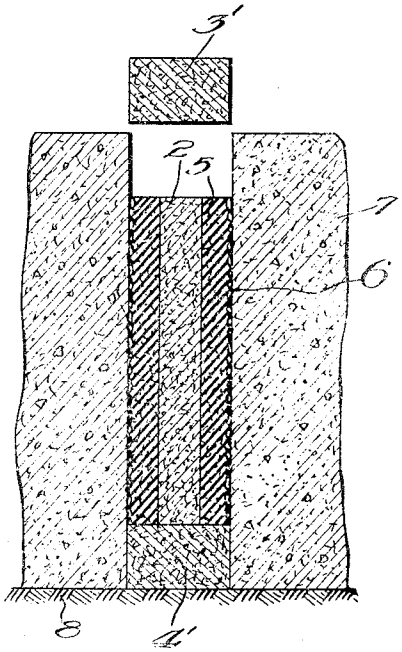


Fig. 3.



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UNITED STATES PATENT OFFICE.

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PREFORMED EXPANSION JOINT.

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This invention relates to improvements in a preformed expansion joint, and refers more particularly to an expansion joint which would be adaptable to numerous and varied uses, for instance, in a construction of concrete, brick, wood, block, and other forms of monolithic pavement or road construction where expansion joints are employed, as well as in the construction of buildings, foundations, bridges, reservoirs, and other types of monolithic concrete construction and wherever the use of a high grade preformed expansion joint of the character herein described, is desirable.

Expansion joint fillers should contain certain inherent characteristics, among which may be mentioned flexibility to allow for proper expansion and contraction, and rigidity to permit economical stacking, shipping, handling and installation.

The expansion joint of the present invention, possesses these desirable characteristics and properties to a marked degree.

Briefly, the expansion joint of the present invention comprises a reinforcing base of felted, fibrous material preferably recessed intermediate its width, said recesses being filled with a bituminous compound.

In the drawings, Fig. 1 is a top plan view illustrating a road or pavement utilizing a pre-formed expansion joint of the present invention.

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

Fig. 3 is a similar cross sectional view showing the end sections of the reinforcing base as being removable.

Referring more in detail to the drawings, and more particularly to Fig. 2, a reinforcing base referred to as a whole 1 may comprise the body portion 2 and end sections 3 and 4. The reinforcing base may preferably take the form of an I bar as clearly shown, for the purpose of securing desired results. The body portion 2 is preferably constructed of felted or molded fibrous material, and the end sections 3 and 4 are preferably of the same material. The end sections 3 and 4 in any event, are preferably wider than the body portion 2 to provide recesses for the reception of the bituminous compound 5. The bituminous compound may be asphalt, either alone or compounded with a filler such as a waste, fuller's earth, sawdust, sand, infusorial earth, and the like. The upper surface of the bituminous compound may be substantially flush with the surfaces of the end sections 3 and 4, or may be above or below said surfaces. A coating of granular surfacing 6 may be applied to the surface of the bituminous compound, if desired. This surfacing may comprise stone, slate, granite chips, sand, fine gravel, or other granular substances, preferably of a size not greater than would pass a one-fourth inch sieve.

If the granular surfacing 6 is not desirable, a coating of talc, clay, mica or similar substance may be applied to the outside surfacing to prevent sticking of the bituminous surface when coming in contact with other surfaces. When using asphalt as a bituminous compound, it should preferably have a melting point of not less than 150° F., more or less, and not exceeding 300° F. more or less, it having been predetermined that bituminous material within this range is sufficiently flexible to permit desirable expansion and contraction. This bituminous compound is preferably poured or formed in the recesses while in heated liquid condition.

The numeral 7 designates a fragment of adjacent concrete or monolithic pavement, and 8 a fragment of the ground on which the pavement is laid.

It may be desirable in certain instances, to provide a pre-formed expansion joint having one or both end sections removable. This may be accomplished by utilizing the construction shown in Fig. 3, of which the end sections designated 3′ and 4′ respectively, may be removable. These end sections 3′ and 4′ may be attached to the structure by forcing continuous lengths of fibrous stock into two ends of a machine which is being used to apply the bituminous compound to the body portion 2. In this way, the end sections will adhere to the composite structure through the adhesive qualities of the bituminous material.

The thickness of the body portion 2 should preferably be not more than one-half the thickness of the completed preformed joint.

Therefore, according to the present invention, I have provided a pre-formed expansion joint which has the desirable characteristics heretofore mentioned. The thickness of the completed pre-formed joint may vary from one-fourth to two inches. The thickness of the body portion 2 may vary from $\frac{1}{32}$ to $\frac{3}{4}$ inches more or less.

I claim as my invention:

1. A pre-formed expansion joint, comprising a reinforcing base of felted or molded fibrous material, filled with a bituminous compound, said base comprising a body portion and enlarged end sections, substantially simulating in cross section an I.

2. A pre-formed expansion joint, comprising a reinforcing base of felted or molded fibrous material, filled with a bituminous compound, said base comprising a body portion, and angularly disposed end sections.

3. A pre-formed expansion joint, comprising a reinforcing base of felted or molded fibrous material, filled with a bituminous compound, said base comprising a body portion, and angularly disposed end sections, which latter are removable relative to the body portion.

4. A pre-formed expansion joint, comprising a reinforcing base of felted or molded fibrous material, filled with a bituminous compound, said base comprising a body portion, and angularly disposed end sections simulating an I-bar.

5. A pre-formed expansion joint, comprising a reinforcing base of felted or molded fibrous material, comprising a body portion having enlarged ends, the space between opposite ends and adjacent the body portion being filled with a bituminous composition.

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