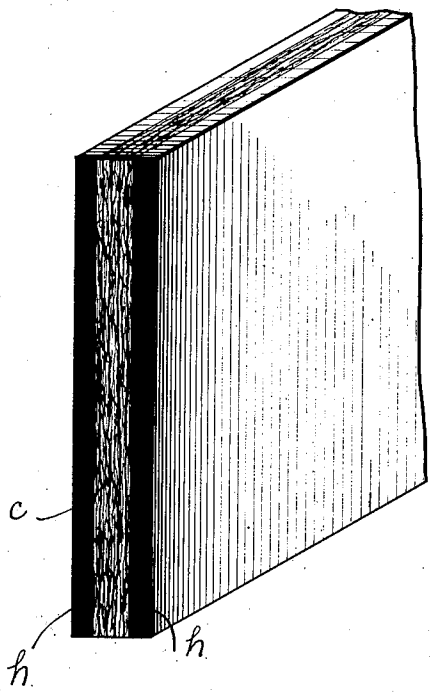
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CONSTRUCTIONAL MATERIAL

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Inventor:
Albert C. Fischer

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ALBERT C. FISCHER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE PHILIP CAREY MANUFACTURING COMPANY, A CORPORATION OF OHIO

CONSTRUCTIONAL MATERIAL

Original application filed May 25, 1921, Serial No. 472,319. Patent No. 1,662,567, dated March 13, 1928. Divided and this application filed April 14, 1926. Serial No. 101,941.

This is a division of my application Serial No. 472,319, which was filed on May 25, 1921 and matured into Patent No. 1,662,567 on March 13, 1928.

This invention relates to improvement in expansion joint used for paving and construction purposes and any situation where expansion and contraction must be provided for.

Heretofore it has been customary to either pour the joint or build up solid bituminous joints or solid composition joints, which, upon being put under pressure would be compressed and become elongated surfaces, or bulge under compression.

This invention relates particularly to a flexible, boardlike structure in contra-distinction to a rigid, boardlike structure, and is composed of vegetable fibres of various kinds, such as, flax, hemp, straw or any other ingredients which may be suitably matted together in felted form, to form such fibrous material into continuous sheets. This vegetable material may be waterproofed or not, as is preferred, by subjecting it to any bituminous or petroleum waterproofing saturants, thus making the material waterproof but not destroying the felted, matted form, which gives to the expansion joint the inherent power of compression within itself and the power to re-expand of its own accord. The use of such mats of fibrous material prevents breakage of the joint, thus enabling it to be handled in a rough manner and still not be destroyed, whereas all solid bituminous joints whether provided with felt sides or otherwise, become very brittle in cold weather and a minimum shock breaks or cracks the entire joint.

Another object of my invention is to mat this fibrous material together in such a manner that it may present smooth sides to the face of the concrete, and by rolling or forming this matted, fibrous material between rollers, making various formations thereon in the shape of elevations and depressions or corrugations against which the concrete is formed, such elevations and corrugations being uniform and oppositely constructed so that the thickness of the expansion joint at any one point is uniform; thus, if a corrugation is elevated on one side the opposite side of that elevation would be depressed on the opposite side of the joint. The purpose of these elevations and depressions primarily is to prevent the joint from creeping out of the crevice, and also allow the concrete to form itself so as to encounter difficulty in one slab raising above the other in the shape of a wedge.

Another object of my invention is to form this fibrous material as in matted form in a wet condition, then run through form presses or suitable machinery to mat the material together. The material should then preferably be dried, either in warming ovens or otherwise, and if desired, suitably waterproofed.

Heretofore it has been customary either to mix material like that used for roofing felt in with the asphalt, making a solid, heavy biuminous joint, or use a heavy body structure and apply saturated felt as side surfacing materials to the solid body structure, or else to build up the joint from such saturated felts in layers with bituminous layers between the sheets of saturated felt, in the same manner as 3 and 4-ply roofing materials have been prepared.

Another object of my invention is to prepare a joint which is lighter in structure than solid bituminous joints, thus affecting economy in transportation and affecting economy in the necessary amount of solid material needed for the expansion joint. Heretofore, the solid bituminous joints, when under compression in warm weather, have always oozed out of the crevice and have been flattened on the pavement by the passing traffic, so that the bituminous matter could not get back into the crevice thus making a defective joint. By using a fibrous body of the type described this cannot happen, as the material is both compressible within itself and re-expansive when the pressure is released, without oozing out of the crevice. The material of the present invention may be waterproofed, as stated before, and suitably coated in various ways to preserve its body and protect it against the wear of the traffic.

With these and incidental objects in view, the invention consists of certain novel features of construction and combination of designs, and methods of coating or double saturating, the essential elements of which are hereinafter described.

With reference to the drawing which accompanies and forms a part of this specification, the figure indicates a fibrous expansion joint which may or may not be waterproofed, as shown at —*c*—, faced with saturated felt sides, as shown at —*h*—, which facing may be cemented thereto with bituminous or other adhesive substances.

This invention relates particularly to saturated felt reinforcing sides upon an elastic compressible foliated structure, acting as the interior body structure, said saturated felt facings being adhered thereto with bituminous or other adhesive substances. The foliated structure may be waterproofed with suitable material for the purposes as described, thus forming a highly resilient elastic body structure.

I claim:

1. An expansion joint comprising a flexible, boardlike strip, embodying in its structure interrupted and irregularly overlapping mats of intermixed fibrous material to provide a compressible and elastic core, and facing sheets of saturated felt attached to the core.

2. An expansion joint comprising a waterproof, flexible, boardlike strip, embodying in its structure interrupted and irregularly overlapping intermixed fibers to provide a compressible and elastic core, and facing sheets of saturated felt attached to the core.

3. An expansion joint comprising a flexible, boardlike strip, embodying in its structure interrupted and irregularly overlapping intermixed fibers to provide a compressible and elastic core being impregnated with waterproof binding material having the inherent quality of adding compressibility thereto and facing sheets of saturated felt applied to the side of the core.

4. An expansion joint comprising a flexible, boardlike strip embodying in its structure interrupted and irregularly overlapping intermixed fibers to provide a compressible and elastic core, said core being impregnated with bituminous material and having a facing sheet of saturated felt applied to the side thereof.

5. Constructional material comprising a flexible, boardlike strip, embodying in its structure interrupted and intermixed mats of fibrous material irregularly overlapping one another to provide a compressible and elastic core, and a layer of saturated felt applied to the side thereof.

6. Constructional material comprising a flexible, boardlike strip, embodying in its structure interrupted and irregularly overlapping intermixed fibers impregnated with bituminous material to provide a waterproofed compressible and elastic core, and a layer of saturated felt applied to the side thereof.

7. Constructional material comprising a body of bituminous material and linear fibers which have been mixed together into a reenforced compressible and elastic mass and faced on either side with a cover sheet of saturated felt.

Signed at Chicago, Illinois, this 30th day of March, 1926.

ALBERT C. FISCHER.