June 5, 1934. A. C. FISCHER 1,961,847

COMPOSITION SLAB

Filed Feb. 16, 1929

Fig. 1

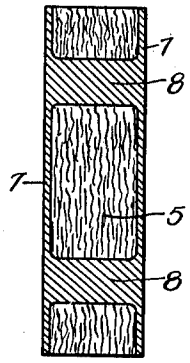


Fig. 2

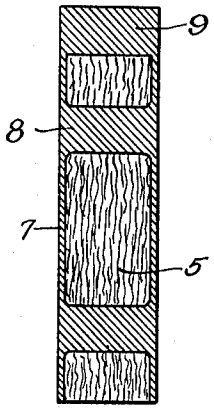


Fig. 3

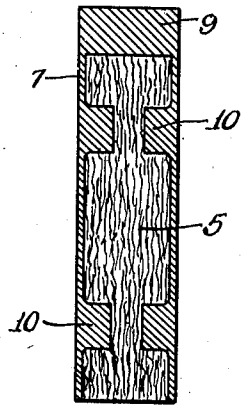
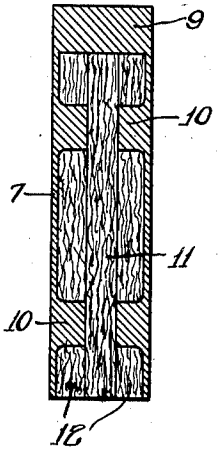


Fig. 4



Inventor:
Albert C. Fischer
Albert F. Robinson
Atty.

Patented June 5, 1934 1,961,847

UNITED STATES PATENT OFFICE

1,961,847

COMPOSITION SLAB

Albert C. Fischer, Chicago, Ill., assignor to The Philip Carey Manufacturing Company, a corporation of Ohio

Application February 16, 1929, Serial No. 340,641

9 Claims. (Cl. 94—18)

The present invention relates to a preformed composition slab or plank embodying in its structure a body or foundation member perforated with cavities and then faced with a mastic coating which fills the cavities and provides a waterproof covering for the foundation member.

This application is a continuation in part of application Serial No. 130,685, filed August 21, 1926, which matured into Patent No. 1,706,110 on March 19, 1929.

One of the objects of the invention is to provide a composition slab or strip having in its structure means for deforming in response to a compressing force to conform to any inequalities in the surfaces of members with which it may be associated.

With the foregoing object in view and others to be mentioned hereinafter, the invention consists of the novel construction and arrangement of parts as described and claimed, and as illustrated in the accompanying drawing, wherein,—

Figure 1 is a transverse section of a slab embodying the invention;

Figure 2 is a transverse section of a modified form of slab having one edge faced with a mastic crown; and

Figures 3 and 4 are transverse sections of other modifications.

Referring now to the drawing for a more particular description, the invention is typified by an expansion joint strip which is employed in paving or building structures for use between rigid elements to compensate for their contraction and expansion.

Numeral 5 represents a strip made from any material suitable for the purpose, such, for instance, as a composition of ductile material and fibrous material, or it may be simply a matted mass of fibrous material. In other words, the fibrous mat-like structure may be waterproofed or unwaterproofed, as desired.

Regardless of the material entering into the construction of the strip, it will comprise a preformed structure with a multiplicity of cavities therein. These cavities are then filled with a mastic 8 of bituminous material, and the strip 5 faced on one or both sides with surface coating 7 of the same or different material which may advantageously be integral with the cavity fillings.

When the expansion joint strip is installed between sections of paving or between any rigid elements, the mastic fillings and face coatings are capable of deforming to fill any crevices or spaces which may develop between the joint and concrete due to expansion.

This same result is realized upon contraction of the paving section, in that as the sections tend to pull away from the joint the section thus created will draw the mastic to fill any crevices. The fillings in the cavities supply a sufficient quantity of mastic material to provide for whatever excess is required on the surfaces or within the interior structure of the joint.

A joint constructed as above described is practically a self-healing joint, in that it contains this excess supply of mastic within the interior structure of the joint which is only used when the same is pulled or pressed out of the cavities. With this construction, there need not be an objectionable amount of mastic on the sides of the joint which will ooze from the top on expansion of the sections.

As a modified form, the joint may be provided with a crown 9 (Fig. 2) of mastic material along one edge which would be of a nature to mushroom when subjected to traffic and seal the space between the paving sections.

The modified embodiment in Fig. 3 embodies a construction wherein one or both surfaces of strip 5 is indented with a series of depressions for providing reservoirs in which a supply of mastic material 10 is contained. The depressions may be advantageously provided by interposing an imperforate strip 11 between perforated strips 12 (Fig. 4) after which the laminated base is enveloped with the mastic material as previously described.

The mastic adhesive may be a composition comprising bituminous material with a flow retarder incorporated therein, such as, finely divided fibrous material, or else a composition suitable for the purpose may be developed by the further addition of rubber latex or dissolved rubber. A good material suitable for the purpose would be a grade of asphalt flux of the desired fluidity, the idea being that it should not be thin enough to run but at the same time it should respond to pressure so as to sluggishly flow in response to pressure.

Though I have described with particularity of detail certain specific embodiments of my invention, yet it is not to be understood therefrom that the invention is restricted to the particular embodiments disclosed. Various modifications thereof may be made by those skilled in the art without departing from the invention.

What I claim is:

1. An expansion joint slab comprising a perforated sheet, mastic material contained in the perforations of the perforated sheet, and a covering for facing said perforated sheet.

2. An expansion joint slab comprising a base sheet having indentations formed in its face, mastic material contained in the indentations, and a covering over the face of the sheet.

3. An expansion joint slab comprising a perforated base sheet, mastic material contained in the perforations of the perforated sheet and facing one edge to form a crown, and a covering over the face of the sheet.

4. An expansion joint slab comprising an imperforated core, perforated sheets facing the core, and mastic material contained in the perforations of the perforated sheets.

5. An expansion joint slab comprising an imperforate core, perforated sheets facing the core, mastic material contained in the perforations of the perforated sheets, and a covering over the facing sheets.

6. An expansion joint slab comprising an imperforate core, perforated sheets facing the core, mastic material contained in the perforations of the perforated sheets and facing one edge to form a crown, and a covering over the mastic material and facing sheets.

7. A composition slab comprising a core having indentations formed in its face, mastic material contained in the indentations, and a covering over the face of the core.

8. A composition slab comprising a laminated core embodying in its structure an imperforate center and a perforated facing sheet, mastic material contained in the recesses of the facing sheet, and a covering for the core.

9. A composition slab comprising a laminated core embodying in its structure an imperforate center sheet and perforated facing sheets, and a covering of the same material as the mastic filling enveloping the laminated core.

ALBERT C. FISCHER.