A. E. DAVIS.

EXPANSION JOINT AND SUPPORT THEREFOR.

APPLICATION FILED NOV. 3, 1914.

1,289,688. Patented Dec. 31, 1918.

Fig. 1.

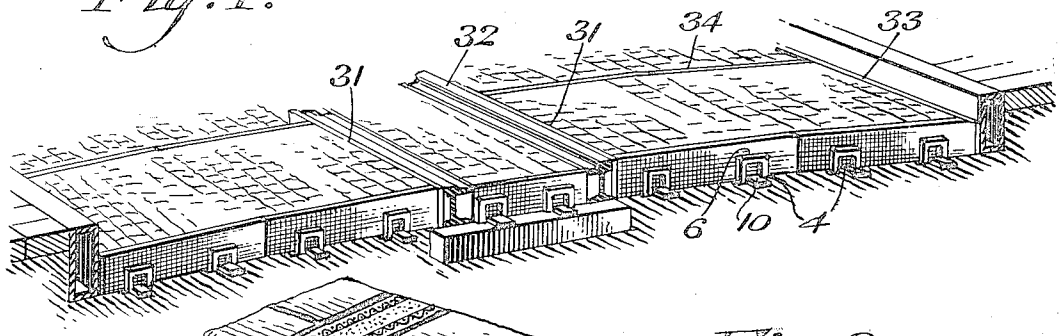


Fig. 2.

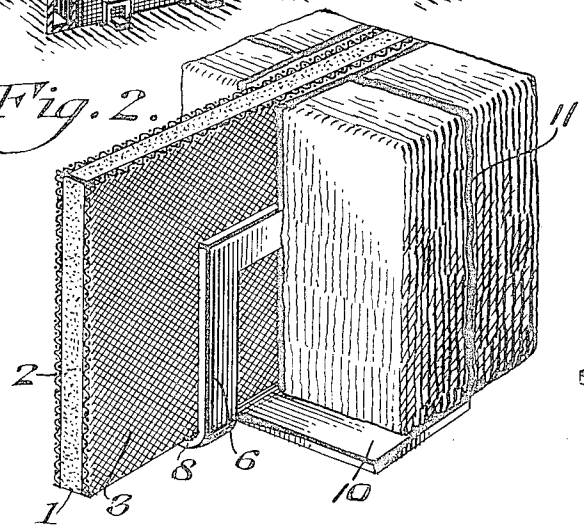


Fig. 3.

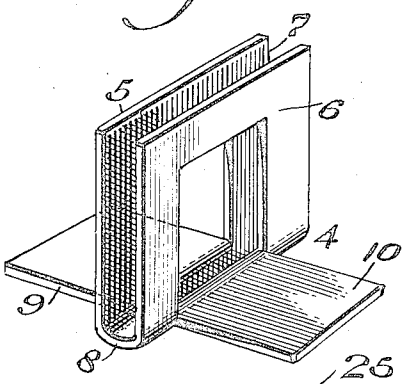


Fig. 4.

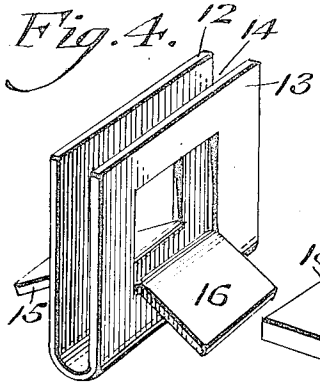


Fig. 5.

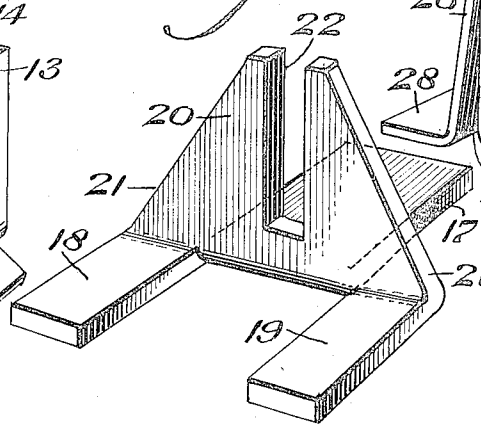
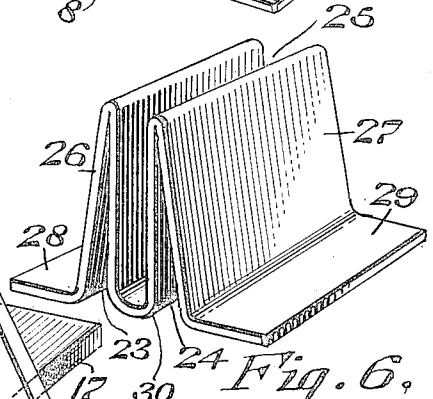


Fig. 6.



WITNESSES

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EXPANSION-JOINT AND SUPPORT THEREFOR.

1,289,688. Specification of Letters Patent. Patented Dec. 31, 1918.

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To all whom it may concern:

Be it known that I, ANTHONY E. DAVIS, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Expansion-Joint and Support Therefor, of which the following is a specification.

My present invention relates to expansion joints which are designed to be employed in conjunction with a tread surface, such as for example, a sidewalk or pavement, and is designed to be used in connection with pavements of the block type, such as, for example, wood, brick, Belgian, asphalt or other pavements, and also in connection with monolithic types of pavement construction, such as, for example, concrete, bitumen bound concrete, macadam, or other types of monolithic paving constructions.

My invention consists of a novel expansion joint, which will retain its flexibility at any temperature to which street paving is exposed and therefore at all times serve as an effective expansion joint, and I preferably employ aerated asphalt which melts at approximately 180° F. Since the asphalt is liable to breakage while being handled, the same is provided on each side with a reinforcing layer of fabric, which permits the bending of the strip around curves without breaking the asphalt and also permits of much rougher handling, without breaking, of the expansion joint strips by the workmen than can be done if fabric is not used on both sides.

It further consists of a novel construction of a supporting chair which renders the joint strips self-supporting and which is especially advantageous in monolithic types of pavement, since the work can always be stopped at a joint.

Other novel features of my invention will more clearly hereinafter appear in the detailed description thereof.

For the purpose of illustrating my invention, I have shown in the accompanying drawing, forms thereof which are at present preferred by me, since the same will give in practice satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Figure 1 represents, in perspective, a pavement in conjunction with which is employed, expansion joints and supporting chairs embodying my invention.

Fig. 2 represents, in perspective, the position which the parts assume during the process of construction.

Figs. 3, 4, 5 and 6 represent, in perspective, different types of supporting chairs embodying my invention.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings:—

1 designates a malleable joint strip embodying my invention, which preferably consists of aerated asphalt which melts at approximately 180° and is reinforced on opposite sides by the strips or layers of fabric 2 and 3, respectively, which are pressed into the asphalt or secured thereto in any desired manner, and preferably extend from the top to the bottom thereof. 4 designates a supporting chair embodying my invention which is preferably formed from an integral sheet of material, the sides of which are bent substantially parallel to each other, as indicated at 5 and 6 in Fig. 3, thereby forming a slot 7 to receive the expansion strip which is supported on the base portion 8. 9 designates a laterally extending plate portion formed by punching out a portion of the side wall 5, and 10 designates a similar laterally extending plate formed by cutting or punching out a portion of the side 6, so that the supporting chair will form a support and alinement for the expansion strip, as will be understood by reference to Figs. 1 and 2. The blocks 11 of any desired material are then set up in close proximity to the joint strip. In the drawings, I have illustrated a block construction of pavement but this is shown only for the purpose of illustrating one type of construction.

In the embodiment seen in Fig. 4, I have shown another type of supporting chair embodying my invention, which is somewhat similar to that seen in Fig. 3. This consists of a preferably integral sheet of material which is bent to form the sides 12 and 13 which extend substantially parallel to each other, and form a slot 14 to receive the joint strip. The side portions 12 and 13, respectively, have anchoring portions 15 and 16, respectively, formed by punching out a portion of said sides and bending the punched

out portions laterally and downwardly, these portions being located a desired distance above the bottom of the chair, so that they will serve as anchoring or bonding elements with the monolithic construction employed.

In the embodiment seen in Fig. 5, the chair is formed from an integral sheet of material, a portion 17 of which is cut and deflected laterally, while the remaining side portions 18 and 19 are deflected laterally in an opposite direction, so that such portions form a supporting base. The rest of the sheet is deflected upwardly, as at 20, and is preferably provided with inclined side walls 21. A slot 22 is formed to receive the joint strip.

In the embodiment seen in Fig. 6, the support is formed of an integral sheet of material which is deflected to form the side walls 23 and 24, thereby forming the slot 25, and the material is then bent downwardly to form the walls 26 and 27 and the ends are then deflected outwardly and laterally, as at 28 and 29, to form with the base portion 30 supporting members which serve to maintain the slot 25 in vertical alinement so that the joint strip received therein is supported in the desired manner.

The expansion joint may be formed at any desired location in the pavement, and in Fig. 1, I have shown, for purposes of illustration, the expansion joint 31 extending along the tracks 32 and also expansion joints 33 extending along the curb and transversely arranged expansion joints 34 which may be located at any desired intervals apart along the roadway.

After the joint strips have been placed in position, the road construction is completed in close proximity thereto, so that the malleable joint strip will provide for the expansion and contraction of the completed construction without injury thereto.

It will now be apparent that I have devised a novel and useful expansion joint and support therefor, which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description, and while I have, in the present instance, shown and described preferred embodiments thereof which will give in practice satisfactory and reliable results, it is to be understood that the same are susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a device of the character stated, a chair formed from an integral sheet of material having the upwardly extending parallelly arranged sides 5 and 6 forming a slot to receive and aline a joint strip, and having portions of the sides punched out and laterally deflected to form base portions of the chair.

2. The combination with joint strips, of chairs comprising integral sheets of material each having an upwardly extending slotted portion and provided with base flanges extending laterally from opposite sides to maintain said slotted portion in vertical alinement, a joint strip in the slot of said slotted portion, and preformed blocks positioned in close proximity to said joint strip, certain of said blocks resting on said base flanges to maintain their respective chair in position.

3. A chair comprising an integral sheet of material having an upwardly extending slotted portion and provided with base flanges extending laterally from opposite sides to maintain said slotted portion in vertical alinement, in combination with a joint strip in the slot of said slotted portion and extending above the upper end of said chair.

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