July 9, 1957 P. H. DUNNAM 2,798,418

JOINT FOR CONCRETE SLABS

Filed April 27, 1954

Fig. 1

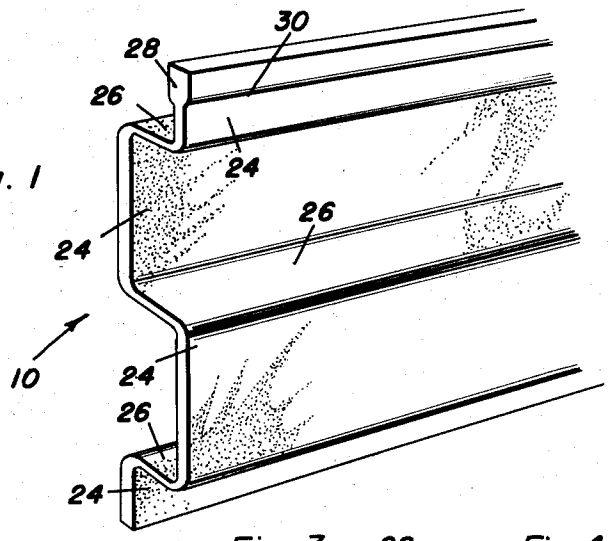


Fig. 2

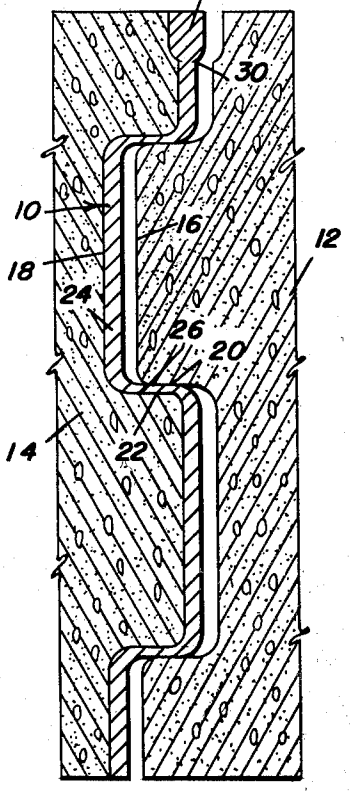


Fig. 3

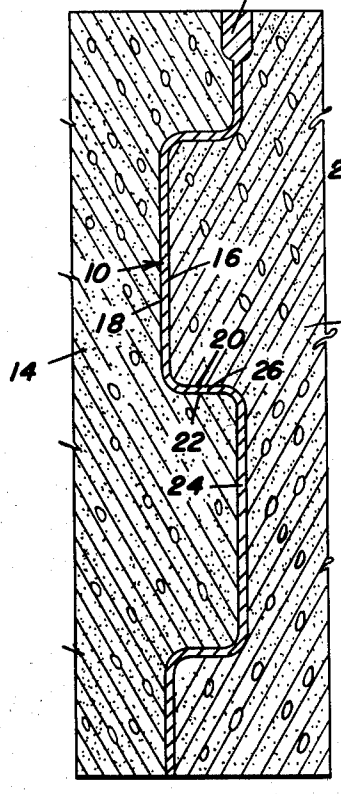


Fig. 4

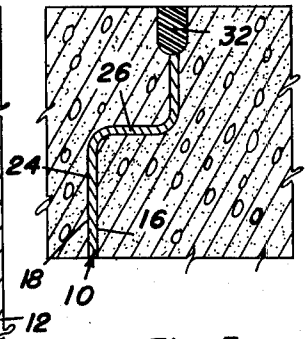
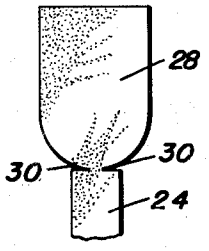


Fig. 5



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JOINT FOR CONCRETE SLABS

Pete H. Dunnam, Abilene, Tex.

Application April 27, 1954, Serial No. 425,941

1 Claim. (Cl. 94—17)

This invention relates to a novel expansion joint adapted to be used in conjunction with concrete slabs, and the like, and has for its primary object the provision of a joint structure which is adapted to allow horizontal movement of adjacent slabs while providing contact between horizontal slip faces of the slab thereby assuring adequate load transmission between slabs and seal throughout the joints.

A further object of the invention resides in the provision of a joint for concrete slabs that has vertical portions thereof which can be compressed when the slabs expand.

Another important advantage of the invention resides in the fact that the joint has sufficient rigidity to serve as a retainer form for concrete of flat slabs when the joint structure is staked down so that concrete slabs can be poured directly into the joint structure.

Still further objects and features of this invention reside in the provision of a joint for concrete slabs that is simple and inexpensive to manufacture, capable of being formed of various and readily available material, and which can be quickly produced thereby permitting wide use and distribution.

These, together with the various ancillary objects and features of the invention which will become apparent as the following description proceeds, are attained by this joint for concrete slabs, a preferred embodiment of which has been illustrated in the accompanying drawings, by way of example only, wherein:

Figure 1 is a partial perspective view of the joint structure;

Figure 2 is a sectional detailed view of the joint structure shown in use between adjacent slabs with the slabs in a contracted state;

Figure 3 is a sectional detailed view but showing the joint in a compressed state;

Figure 4 is a sectional detailed view of a modified form of the invention utilizing a poured bulb; and

Figure 5 is a detailed view illustrating the construction of the bulb integrally formed with the joint.

With continuing reference to the accompanying drawings wherein like reference numerals designate similar parts throughout the various views, reference numeral **10** generally designates the joint for concrete slabs comprising the present invention. This joint comprises a body of compressible material such as asphalt impregnated felt, or the like, and is adapted to be positioned between slabs **12** and **14** which may be formed of concrete, or the like. As can be readily seen, the slabs **12** and **14** are provided with vertical surfaces as at **16** and **18**, respectively, as well as horizontal faces **20** and **22**.

The joint **10** is, of course, provided with substantially rectangular corrugations including vertically extending

portions **24** as well as horizontally extending portions **26**. The horizontally extending portions **26** are precompressed and are therefore relatively thin when compared to the wider vertically extending portions. Secured to the uppermost of the vertically extending portions **24** is a bulb **28** of compressible material which is undercut as at **30** from the upper edge of the uppermost vertically extending portion **24** so that if desired it may be readily removed.

With the joint **10** installed in conjunction with the slabs **12** and **14**, it will be noted that the horizontal portions of the slab **12** can ride along the upper surface of the horizontal portion **26** of the joint **10**, and the horizontal portions of slab **14** can ride along the lower surface of horizontal portion **26** of the joint **10** in a manner where there will be no elastic deformation of horizonatl portion **26** of the joint **10** and a seal is maintained at these points of slip contact. Should, however, the concrete slabs **12** and **14** expand, the non-compressed vertical portion **24** will then be compressed thereby accounting for the full expansion of the slabs **12** and **14**.

When the joint **10** is used in an area of excessive sand, dirt, or other sod, the bulb portion **28** may be easily removed utilizing a gouge since there are provided the undercut portions **30** and the space so created can be filled with plastic material **32**, as can be best seen in Figure 4.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claim.

What is claimed as new is as follows:

An expansion joint between a pair of concrete slabs comprising a body of compressible material disposed between said slabs, said body having substantially rectangular oppositely directed corrugations with substantially horizontal portions and substantially vertical portions to form a corresponding configuration in the edges of the abutting slabs, the horizontal portions of said body being precompressed and relatively thin allowing horizontal surfaces of said slabs to slide along said horizontal portions due to expansion and compression of said slabs without elastic deformation of said horizontal portions to transfer vertical load from one slab to the other, said vertical portions being comparatively thick and non-compressed to allow for elastic deformation of said vertical portions upon expansion of said slabs, and a non-compressed bulb secured to the uppermost of the vertical portions, said bulb being substantially thicker than said vertical portions.

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