Aug. 30, 1955 R. M. HARPER 2,716,260

EXPANSION JOINT AND GROUND STRIP

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Fig. 1

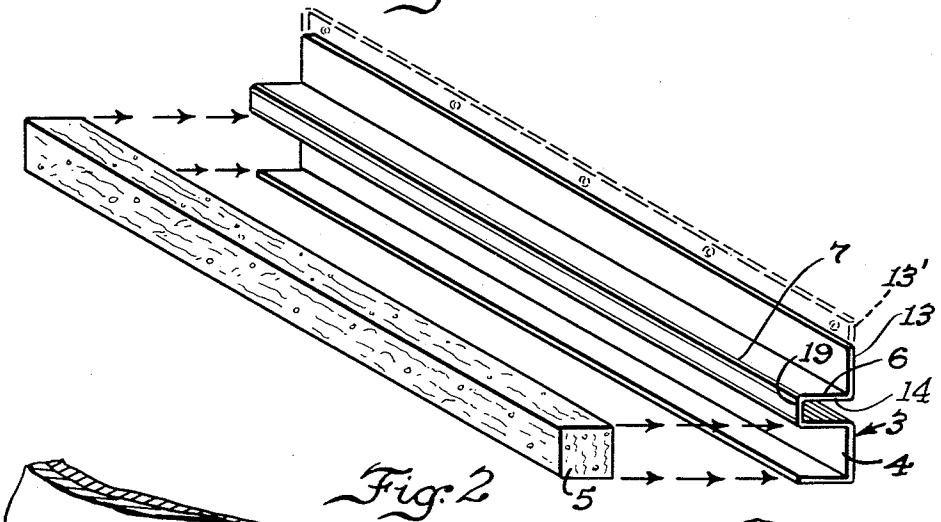
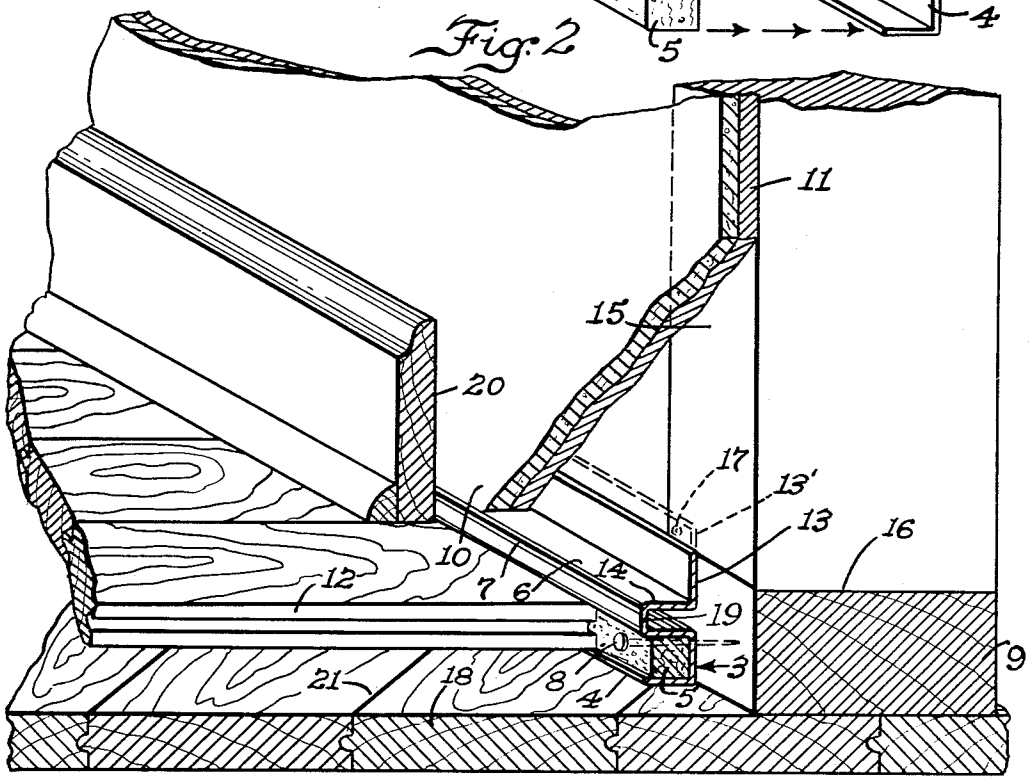


Fig. 2



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EXPANSION JOINT AND GROUND STRIP

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4 Claims. (Cl. 20—1)

This invention relates to building constructions and is more particularly concerned with an improved expansion joint and ground strip for plastered walls, designed to reduce, if not entirely eliminate, likelihood of plaster cracking, and also reduce, if not entirely eliminate, buckling of finish flooring.

The principal object of my invention is to provide an expansion joint and ground strip adapted to be secured to the bottom plate at floor level, the same being made from a strip of sheet metal bent to S-shaped cross-section defining a channel in the outer side of its lower portion in which a strip of compressible and expansible fibrous material, such as Celotex, may be secured to be abutted by the ends of the finish flooring, whereby to permit expansion and contraction of the flooring with swelling and shrinking and at the same time provide a seal against dust and dirt as well as draft, the upper loop portion of the S-section serving both as a ground strip in the slicking off of the plaster near the floor level and as an expansion joint permitting the settling of the building board and plaster applied thereto, thereby reducing, if not entirely eliminating, cracking of plaster.

The strip of S-shaped section is preferably provided with an upwardly projecting flange on the top inner edge thereof for locating abutment with the back of the building board or "rock lath" that is nailed onto the studding as a base for the plaster. This flange is preferably left free to move up or down for give and take of the strip as required in an expansion joint, but the flange may be extended upwardly sufficiently to permit nailing to the lower ends of the studding, in which event the upper portion of the S-section will move with the studding and thus allow restrained give and take of the strip to reduce likelihood of plaster cracking.

The invention is illustrated in the accompanying drawing, in which—

Fig. 1 is a perspective view of the improved expansion joint and ground strip apart from a wall construction and showing adjacent it a compressible and expansible filler strip for insertion in the channel in the lower portion of the strip; and

Fig. 2 is a perspective view of a building wall construction showing the expansion joint and ground installed, together with the filler strip, for protection of the finish flooring against buckling and protection of the plaster against cracking.

The same reference numerals are applied to corresponding parts in these two views.

The reference numeral 3 in Fig. 1 designates the expansion joint and ground strip of my invention, the same being made from a strip of sheet metal bent to an S-shaped cross-section so as to provide a channel 4 in the outer side of its lower portion, in which a strip 5 of Celotex or other similar compressible and expansible fibrous material is adapted to be entered, and also provide a U-shaped loop portion 6 that serves as a ground strip, the plaster applied over the building board or "rock lath" being slicked off on the slicking off surface defined along

the edge 7. The loop portion 6 also acts as an expansion joint for protection of the plaster against cracking when the wall of which it forms a part settles or shifts its position in relation to the floor. The strip 3 is suitably made from galvanized sheet iron of light enough gauge to enable readily nailing through it in the manner illustrated at 8 in Fig. 2, where a nail is shown passing through the filler strip 5 and through the back wall of the channel shaped lower portion 4 of the strip 3 into the bottom plate 9. The strip 3, when so constructed, also has sufficient resilience to contract and expand in a vertical direction to serve its function as an expansion joint for the protection of the plaster 10 that is applied over the building board 11. The compressibility and expansibility of the filler strip 5 compensates for swelling and shrinking of the finish flooring 12, this give and take being, of course, in a horizontal plane at right angles to the give and take required for protection of the plastered wall. An upwardly projecting flange 13 is provided on the inner edge of the top wall 14 of the loop 6 for locating abutment with the back of the building board or so-called "rock lath" 11, the latter being nailed in the usual way to the studding 15. Preferably this flange 13 will be left unsecured, inasmuch as the strip 3, it is believed, is amply secured by nails 8 entered at longitudinally spaced points along the strip fastening the same to the wooden base plate 9. However, having in mind the fact that most of the settling of walls in building construction is traceable to the flattening of the sawed-off lower ends 16 of the studding 15, I may extend the flange 13, as indicated in dotted lines at 13', so as to overlap the lower end portions of the studding, and nail the upper edge portions thereof to the studding, as indicated at 17. In that way the upper portion of the strip 3 will shift with the studding in the settling of the building and hence there will be no need for relying only upon the inherent resilience in the sheet metal of the strip to serve its expansion joint function.

In practice, the strip 3 with its filter strip 5 entered in the lower channel 4 will be nailed to the wooden base plate 9 resting on top of the sub-floor 18, nails 8 being used at regular intervals along the length of the strip. The building board 11 is then nailed to the studding 15 with the lower edge in abutment with the top wall 14 of the upper loop portion 6, and, assuming the locating flange is as shown at 13, the board 11 serves to hold the upper portion of the strip 3 against the base plate 9, but, of course, where the upper flange is extended, as indicated at 13', and is nailed to the studding 15, as indicated at 17, it does not rely upon the board 11 to hold it in place. The plaster 10 is then applied over the board 11 and slicked off along the edge 7 of the upper loop portion 6, thereby insuring having the plaster uniformly thick and flush with the front wall 19 of the upper loop portion 6, so that the mopboard 20, that is usually nailed to the studding 15, will hug the wall tightly its full length. The finish flooring 12 is nailed down before the mopboard 20 is put in, and the ends of the finish flooring pieces are pressed into tight abutment with the compressible and expansible filler strip 5 in the channel in strip 3, thereby allowing for shrinking and swelling without danger of buckling, the strip 5 also serving to seal the joint so that in the event any of the tongue and groove joints 21 in the sub-floor open up on account of shrinkage, dust and dirt cannot pass through from the basement and there is also less likelihood of drafts.

It is believed the foregoing description conveys a good understanding of the objects and advantages of my invention. The appended claims have been drawn to cover all legitimate modifications and adaptations.

I claim:

1. A combination wall and floor construction comprising a combination wall mounting and finish floor abut-

ment strip of resilient sheet metal construction and elongated form secured to the front of a bottom plate over a sub-floor and formed to a substantially S-shaped cross-section so as to afford a rectangular channel in the outer side of the lower portion of the S, and a vertically compressible and expansible rectangular top loop portion, the outer edge of said top loop portion affording a slicking-off surface for use in the application of a coating of plaster flush with said outer edge, a strip of compressible-expansible material entered in the aforesaid channel, finish flooring applied over the sub-floor in tight resilient abutment with said last-named strip in said channel, a wall board having its lower edge in resilient abutment with the top of the top loop portion of said first-named strip, and an outer plaster coating covering said wall board and coming flush at the lower edge with the slicking-off surface on the top loop portion of said first-named strip.

2. A combination wall and floor construction comprising a combination wall mounting and finish floor abutment strip of resilient sheet metal construction and elongated form secured to the front of a bottom plate over a sub-floor and formed to a substantially S-shaped cross-section so as to afford a rectangular channel in the outer side of the lower portion of the S, and a vertically compressible and expansible rectangular top loop portion, the outer edge of said top loop portion affording a slicking-off surface for use in the application of a coating of plaster flush with said outer edge, finish flooring applied over the sub-floor with the ends entered freely in the channel of said first-named strip, a wall board having its lower edge in resilient abutment with the top of the top loop portion of said first-named strip, and an outer plaster coating covering said wall board and coming flush at the lower edge with the slicking-off surface on the top loop portion of said first-named strip.

3. A combination wall and floor construction comprising a combination wall mounting and finish floor abutment strip of resilient sheet metal construction and elongated form secured to the front of a bottom plate over a sub-floor and formed to a substantially S-shaped cross-section so as to afford a rectangular channel in the outer side of the lower portion of the S, and a vertically compressible and expansible rectangular top loop portion, the inner edge portion of the top wall of the top loop portion of the S being bent upwardly defining a locating flange in substantially coplanar relationship to the vertical web of

the lower channel portion of said strip, the outer edge of said top loop portion affording a slicking-off surface for use in the application of a coating of plaster flush with said outer edge, a strip of compressible-expansible material entered in the aforesaid channel, finish flooring applied over the sub-floor with their ends entered in said channel in tight resilient abutment with said last-named strip, a wall board having its lower edge in resilient abutment with the top of the top loop portion of said first-named strip and with the back thereof abutting the front of the upwardly projecting locating flange on said first-named strip, and an outer plaster coating covering said wall board and coming flush at the lower edge with the slicking-off surface on the top loop portion of said first-named strip.

4. A combination wall and floor construction comprising a combination wall mounting and finish floor abutment strip of resilient sheet metal construction and elongated form secured to the front of a bottom plate over a sub-floor and formed to a substantially S-shaped cross-section so as to afford a rectangular channel in the outer side of the lower portion of the S, and a vertically compressible and expansible rectangular top loop portion, the inner edge portion of the top wall of the top loop portion of the S being bent upwardly defining a locating flange in substantially coplanar relationship ot the vertical web of the lower channel portion of said strip, the outer edge of said top loop portion affording a slicking-off surface for use in the application of a coating of plaster flush with said outer edge, finish flooring applied over the sub-floor with the ends entered freely in the channel of said first-named strip, a wall board having its lower edge in resilient abutment with the top of the top loop portion of said first-named strip and with the back thereof abutting the front of the upwardly projecting locating flange on said first-named strip, and an outer plaster coating covering said wall board and coming flush at the lower edge with the slicking-off surface on the top loop portion of said first-named strip.

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