

Aug. 16, 1960

W. W. THOM
EXPANSION JOINT COVER

2,948,994

Filed Sept. 16, 1957

2 Sheets-Sheet 1

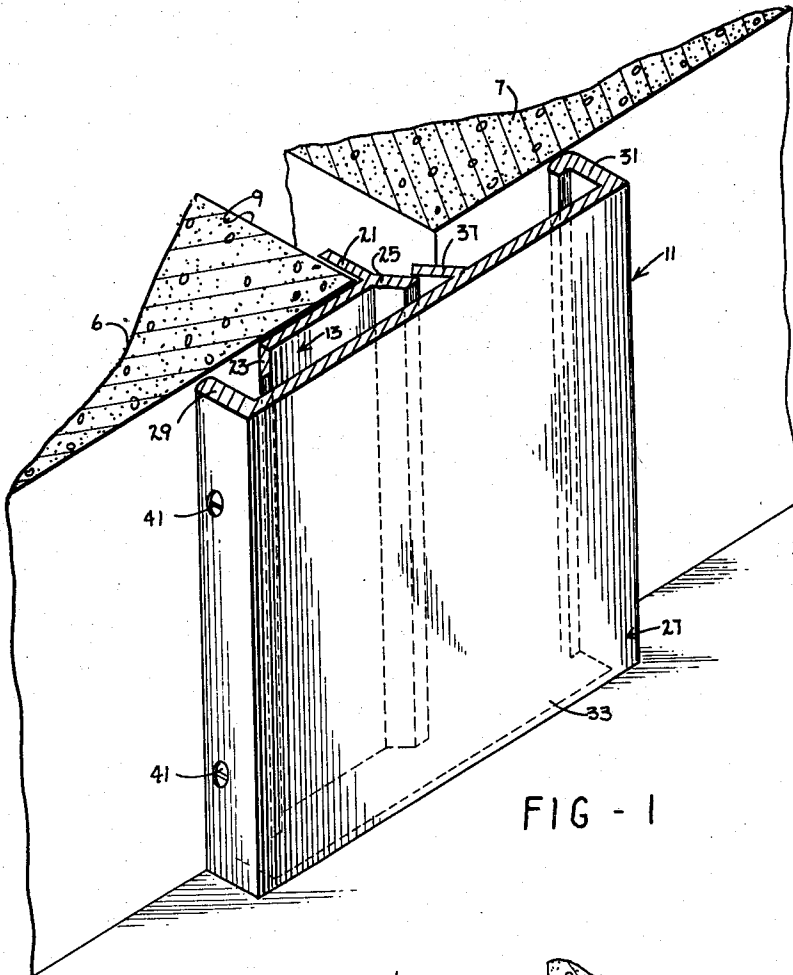


FIG - 1

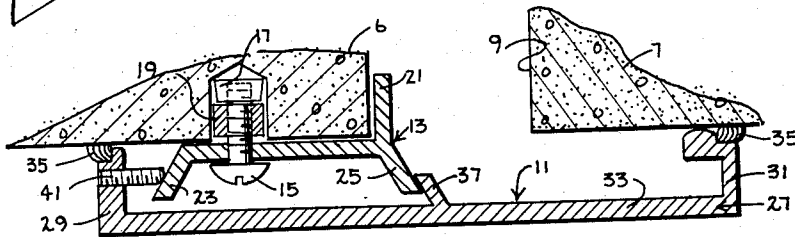


FIG - 2

INVENTOR.
W.W. THOM

BY

John H. Willardson
ATTORNEY

Aug. 16, 1960

W. W. THOM
EXPANSION JOINT COVER

2,948,994

Filed Sept. 16, 1957

2 Sheets-Sheet 2

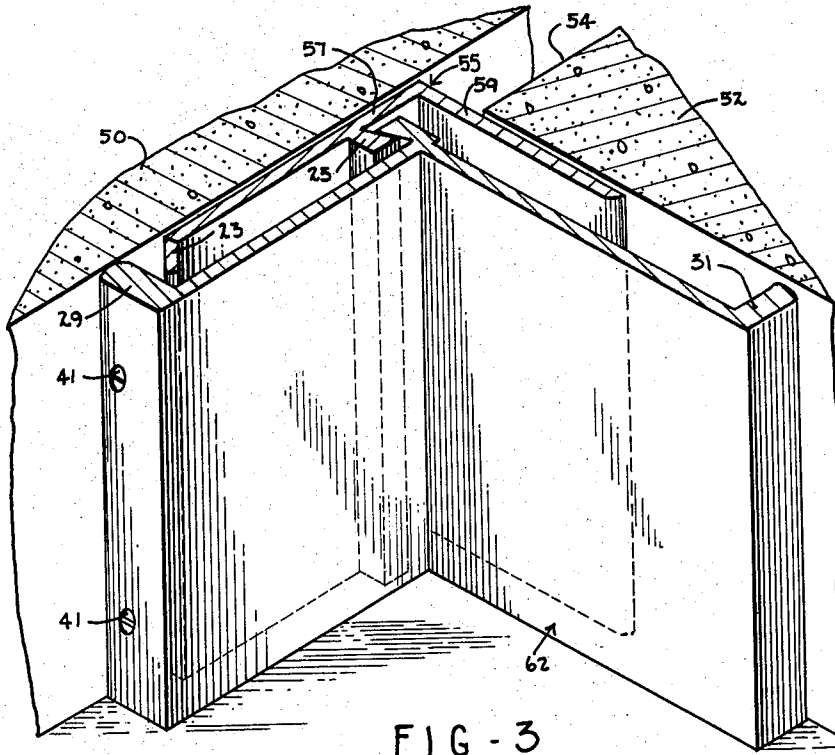


FIG - 3

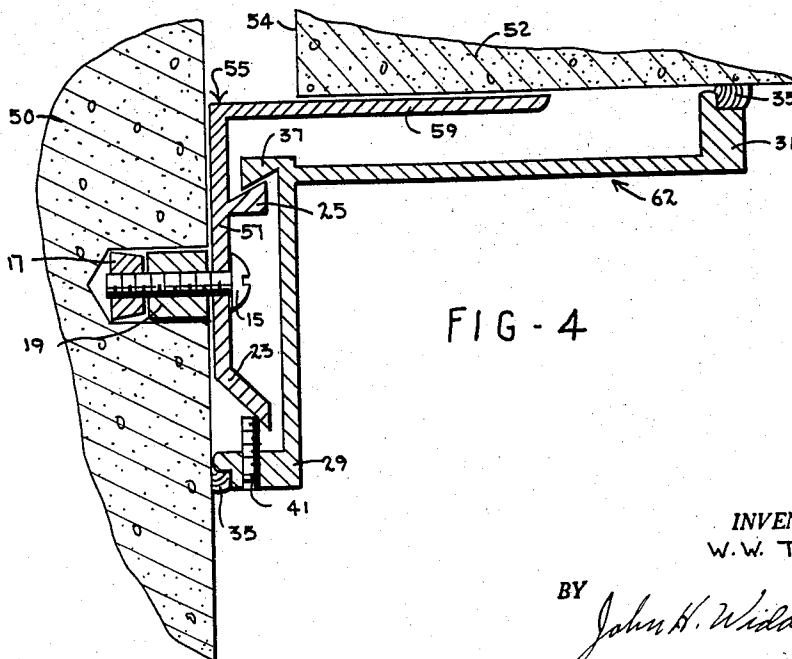


FIG - 4

INVENTOR.
W. W. THOM

BY *John H. Widdowson*
ATTORNEY

1

2,948,994

EXPANSION JOINT COVER

Wenzel W. Thom, Wichita, Kans., assignor of one-half to Cecil D. Jones, Wichita, Kans.

Filed Sept. 16, 1957, Ser. No. 684,126

6 Claims. (Cl. 50—173)

This invention relates to walls and/or ceilings. In a more specific aspect it relates to the joint between sections of walls and/or ceilings. In a still more specific aspect this invention relates to a cover strip for expansion joints in walls and/or ceilings, particularly concrete walls and/or ceilings, either monolithic concrete walls and ceilings or those made out of concrete building blocks and/or bricks.

It has long been known in the art to build structures of monolithic concrete and/or concrete blocks and/or bricks. In such buildings and structures it is desirable to make the walls and ceilings in relatively short sections, because due to expansion and contraction, a relatively long wall or ceiling will crack. The cracked or separated wall or section is unsightly and undesirable. Cracking of the wall and/or ceiling can be satisfactorily avoided by making same in sections of the monolithic concrete and/or concrete building blocks and/or brick, such sections being relatively short in the neighborhood of fifteen to twenty feet. However, preventing cracking and breaking by this means has in many instances been undesirable, because it breaks up a wall and/or ceiling area, and is unsightly. Further, problems arise in protecting the interior of the building from the elements, such as snow, rain, and the like, as a result of the joint between the sections. Means have been proposed and are known in the prior art to cover these expansion joints. None of them have been very successful, particularly commercially. They are difficult to use and install, do not do an adequate job, and are unsightly both on the interior and exterior of the building. Many of the proposed structures of the prior art to cover the expansion joint are incorporated in the joint itself, making it difficult to replace or repair the means to cover or close the joint. I have invented new expansion joint cover means which overcomes all the disadvantages of those means known in the prior art. The new expansion joint cover means of my invention is easy and economical to manufacture and install, and the means can be readily replaced or repaired. One of the chief advantages is that the expansion joint cover means of my invention can be installed on the interior or exterior of the building after the building has been constructed. Also, the new expansion joint cover means of my invention is very sightly, affording decorative features to the building, and if desired, the means can be constructed substantially unnoticeable when installed.

The new cover means for an expansion joint which is my invention, can be used to cover the joint between sections of a wall and/or ceiling, such as a metal wall and/or ceiling, a concrete wall and/or ceiling, combinations of them, and the like. The means has a base mountable on the face of one of the wall and/or ceiling sections along the joint between the sections. This base has means therewith to permit mounting on the section, and it has spaced portions projecting therefrom. An outer member is mountable on the base. This outer member has portions which overlap the joint between the

2

sections of wall and/or ceiling. The outer member has an inwardly projecting portion which is constructed to engage one of the spaced portions which project from the base. They preferably engage in locking relation.

Mounting means in the outer member are employed, and they are operable to engage the other one of the spaced portions which project from the base. Here again, the engagement is preferably in locking relation. The mounting means mounts the outer member on the base with the outer member over the expansion joint and in slidable relation with the wall and/or ceiling sections.

It is an object of my invention to provide new wall and/or ceiling joint cover means.

It is another object of my invention to provide new cover means for the expansion joint between sections of concrete wall and/or ceiling, either monolithic concrete or walls and/or ceilings built up from concrete blocks and/or bricks.

Another object of my invention is to provide new interior or exterior expansion joint cover means for the joints between the sections of concrete walls and/or ceilings which are easy and economical to manufacture and install, which are easy and convenient to replace and/or repair, which can be mounted interiorly or exteriorly after the building or structure has been completed, and which are decorative when installed.

Other objects and advantages of the new expansion joint cover means of my invention will become apparent to those skilled in the art upon reading this disclosure.

Drawings accompany and are a part of this disclosure. These drawings depict preferred specific embodiments of the new expansion joint cover means of my invention, and it is to be understood that such are not to unduly limit the scope of my invention.

In the drawings:

Fig. 1 is a perspective view partly in cross section of a preferred specific embodiment of the new expansion joint cover means of my invention in place on the interior of a building or structure covering the expansion joint between two sections of concrete wall and/or ceiling.

Fig. 2 is a cross sectional plan view of the expansion joint cover means shown in Fig. 1, with the exception that the specific embodiment shown in Fig. 2 is designed for exterior use.

Fig. 3 is a perspective view partly in cross section of a preferred specific embodiment of the new expansion joint cover means of my invention installed interiorly to cover the expansion joint between two sections of concrete wall which abut with one section against the face of the other section.

Fig. 4 is a cross sectional plan view of the expansion joint cover means of Fig. 3, with the exception that the specific embodiment of Fig. 4 is designed for exterior mounting and use.

Following is a discussion and description of the new expansion joint cover means of my invention made with reference to the drawings whereon the same reference numerals are used to indicate the same or similar parts and/or structure. The discussion and description is of preferred specific embodiments of the new expansion joint cover means of my invention, and it is to be understood that such is not to unduly limit the scope of my invention.

Figs. 1 and 2 of the drawings show the preferred specific embodiment of the expansion joint cover means of my invention for joints between two sections of a concrete wall or ceiling when the sections abut end to end or lay side by side, respectively. The wall and/or ceiling sections are numbered 6 and 7. They are separated by an expansion joint 9. Wall or ceiling sections 6 and 7 can be monolithic concrete, or they can be constructed of concrete building block and/or brick.

The expansion joint cover of my invention 11 in use and when mounted covers expansion joint 9 as shown in Figs. 1 and 2 of the drawings. These expansion joints 9 normally extend from floor to ceiling except when broken by a window or door, or from wall to wall, except when broken by a light fixture or inlet. The expansion joint cover has a base member 13, which is preferably made elongated in a strip. The base member is mounted on the face of concrete section 6 along joint 9. Bolts 15 pass therethrough and threadedly seat in nuts 17 recessed in holes in concrete section 6. Expansion bushings 19 maintain the bolt and nut assembly in the holes in concrete section 6. Base member 13 has a portion 21 which is preferably provided to position and maintain the base member in the proper place. This portion 21 projects into joint 9 so that the base member 13 covers the corner of concrete section 6 adjacent joint 9. Base member 13 has two spaced portions 23 and 25 which project outwardly therefrom at an angle with the portion of base member 13 contacting the face of concrete section 6, and of course, at an angle with the face of concrete section 6. Base member 13 can conveniently be extruded to form same, and I prefer that it be made of metal such as aluminum or magnesium, or alloys of such metals. Other materials, of course, can be used to form base member 13. Also, leaded holes and mounting screws can be used to mount base member 13 on concrete section 6 instead of the bolt 15, nut 17, and bushing 19 assembly shown.

An elongated outer member 27 is mounted on base member 13. This outer member 27 overlaps joint 9 to cover same. It has end portions 29 and 31 which project inwardly at right angles to the face portion 33. They contact concrete wall sections 6 and 7, respectively, in slidable relation thereto. As shown in Fig. 1, the ends of these end portions 29 and 31 are preferably rounded for interior use of my cover means. In Fig. 2, the inner ends of end portions 29 and 31 are recessed to receive calking compound 35. This is desirable in exterior use of my expansion joint cover means. Outer member 27 has an inwardly projecting portion 37 therealong, which projects at an angle corresponding to the angle of projection of portion 25 of base member 13. This provides for the mounting and setting of outer member 27 in slidable relation to base member 13. Also, as clearly shown in the drawings, the portions 25 and 37 of base member 13 and outer member 27, respectively, mount the parts together in locking relation. End portion 29 of outer member 27 has a plurality of set screws 41 mounted therein in spaced relation. These screws 41 are used to mount outer member 27 on base member 13. They function as tightening screws. The ends of the screws 41 slidably contact the outer surface of projecting portion 23 of base member 13, and when tight, screws 41 lock outer member 27 on base member 13. Screws 41 are loosened to place outer member 27 in position on base member 13. Then, the screws are tightened to hold the members 13 and 27 together, and to force end portions 29 and 31 into contact with concrete sections 6 and 7 firmly. Here again, outer member 27 is preferably constructed by extrusion methods using preferably metal, such as aluminum or magnesium, or their alloys.

In Figs. 3 and 4 is shown a preferred specific embodiment of the new cover means of my invention for use in corners to cover the expansion joint between concrete sections 50 and 52, which can be either wall sections or ceiling sections, that is, a wall and ceiling section where the end of one section abuts against the face of the other section. Expansion joint 54 is normally provided therebetween. In this embodiment base member 55 has a portion 57 which lays along the face of concrete section 50. A portion 59 of the base member 55 turns the corner and lays across the face of concrete section 52. This positions base member 55 properly to cover joint

54. As in the other instance, base member 55 is conveniently mounted on the concrete section 50 by bolt 15, nut 17, and bushing 19 set and secured in holes spaced in concrete section 50 along base member 55. The outer member mounting means of base member 55 is the same as in the embodiment of Figs. 1 and 2. Portions 23 and 25 project therefrom at an angle to portion 57. Elongated outer member 62 is mounted on base member 55 in the same manner as in the embodiment of Figs. 1 and 2. A projecting portion 37 central of outer member 62 has an angled side which contacts the outer side of projecting portion 25 of base member 55. Portions 37 and 25 when in mounting contact, are in sliding and locking relation. Set screws 41 in end portion 29 of outer member 62 function in the same manner as in the embodiment of Figs. 1 and 2 hereof. When mounted, the end portions 29 and 31 of outer member 62 firmly contact concrete wall and/or ceiling sections 50 and 52, respectively, in slidable relation. The outer end shape of the end portions 29 and 31 in Fig. 3 is preferred for interior use, while that of Fig. 4 is preferred for exterior use. Calking 35 is inserted in the space provided by the recesses in end portions 29 and 31 and the face of concrete sections 50 and 52, respectively. Base member 55 and outer member 62 can conveniently be made by extrusion methods, and here again, I prefer to use the metals as have been set forth hereinbefore.

As is seen, the outer members 27 and 62 can be ornamented and/or finished as desired. They can be made relatively very thin and flat to hardly be noticeable on the buildings wherein they are used. And, it has been found that the expansion joint cover means of my invention in use is very attractive and decorative itself. One of the chief advantages of the new expansion joint cover means of my invention is that it can be completely installed after the walls and ceilings of the building have been constructed at the same time as the trim is put in and on the building.

As will be evident to those skilled in the art, various modifications of my invention can be made, or followed, in the light of this disclosure and discussion, without departing from the spirit or scope of the disclosure or from the scope of the claims.

I claim:

1. An expansion joint cover assembly for structural sections disposed in spaced relationship and defining an elongated joint therebetween, said assembly comprising an elongated, relatively rigid base member adapted to be mounted on the outer face of one of the structural sections adjacent the margin thereof, said base member being provided with spaced, longitudinally extending first and second member portions projecting outwardly therefrom and from each other; an elongated, relatively rigid cover member overlying said base member and adapted to overlie the joint between said structural sections and a longitudinal segment of the other structural section in proximity to said joint, said cover member being provided with a plurality of spaced, inwardly projecting, longitudinally extending member portions, a pair of said member portions on the cover member being positioned outwardly of and in proximity to corresponding first and second member portions on the base member, one of said pair of member portions on the cover member being positioned at an angle to complementally engage the second member portion on said base member in slidable and interlocking relationship thereto; and connector means on the other of said pair of member portions on the cover portion in proximity to the first member portion on said base member and disposed to releasably engage the said first member portion and thereby lock the cover member to said base member, said cover member having a third inwardly projecting, longitudinally extending member portion spaced transversely of the cover member from said pair of member portions thereon and adapted to

5

slidingly overlies said segment of said other structural section.

2. An assembly as set forth in claim 1 adapted to be mounted on a pair of structural sections disposed in perpendicular relationship and wherein said cover member is of generally transversely L-shaped configuration provided with first and second planar elements, said first pair of member portions on the cover member being on one of the planar elements, and the third member portion on said cover member being on the other planar element adjacent the longitudinal terminal edge.

3. An assembly as set forth in claim 1 wherein said base member is provided with a third member portion thereon, extending longitudinally of the latter and projecting in a direction opposed to the other member portions thereon, said third member portion being adapted to be positioned to engage the margin of said one structural section defining said joint and thereby maintain the base member in proper position during mounting of the latter on said one structural section.

4. An expansion joint cover assembly for structural sections disposed in spaced relationship and defining an elongated joint therebetween, said assembly comprising an elongated, relatively rigid base member adapted to be disposed on the outer face of one of the structural sections adjacent the margin thereof defining said joint and positioned exteriorly thereof; securing means on the base member and adapted for connecting the latter to one of said structural sections, said base member being provided with first and second outwardly projecting, longitudinally extending, transversely spaced member portions disposed on opposite sides of said securing means, the first member portion being provided with an outer surface on the side thereof remote from said securing means and disposed at an acute angle with respect to the face of the proximal structural section, the second member portion being provided with surface means thereon facing away from said first member portion and toward the proximal structural section; an elongated, relatively rigid cover member overlying said base member and adapted to overlie the joint between said structural sections and a longitudinal segment of the other structural section in prox-

6

imity to said joint, said cover member being provided with a plurality of inwardly projecting, longitudinally extending, transversely spaced member portions, a pair of said member portions on the cover member being disposed outwardly of corresponding first and second member portions on said base member, the member portion of said pair thereof proximal to said first member portion on the base member having a surface on the inner side thereof facing said first member portion disposed to engage said surface on said first member portion in interlocking relationship thereto; and connector means on the other member portion on said cover member and disposed to releasably engage said surface means on the second member portion to thereby lock the cover member to said base member, said cover member having a third inwardly projecting, longitudinally extending member portion spaced transversely of the cover member from said pair of member portions thereon and adapted to slidingly overlie said segment of said other structural section.

5. An assembly as set forth in claim 4 wherein said connector means includes a series of screws threadably mounted on said other member portion on the cover member in substantially parallel relationship to said base member, said surface means on said second member portion being disposed to receive the innermost ends of said screws.

6. An assembly as set forth in claim 4 wherein said surface means on said second member portion includes a face disposed at an acute angle with respect to the face of the proximal structural section.

References Cited in the file of this patent

UNITED STATES PATENTS

1,357,713	Lane	Nov. 2, 1920
2,286,019	Smith	June 9, 1942
2,580,034	Lyons	Dec. 25, 1951
2,770,002	Thompson	Nov. 3, 1956
2,789,670	Gay et al.	Apr. 23, 1957

FOREIGN PATENTS

994,347	France	of 1951
---------	--------	---------