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H. W. PAUL ET AL

2,307,293

WALL JOINT

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Fig. 1.

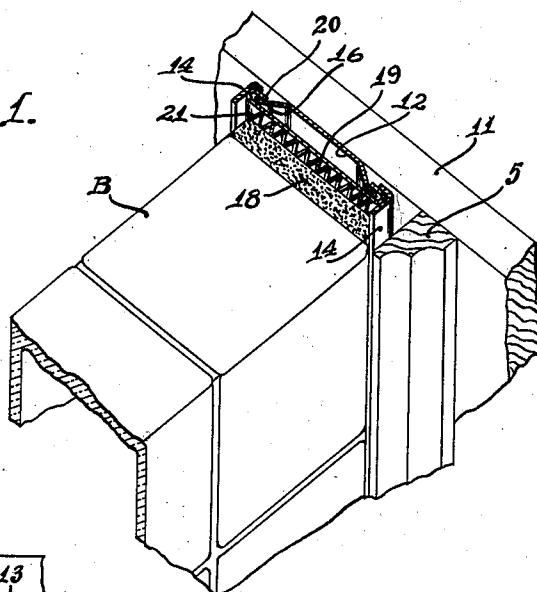


Fig. 3.

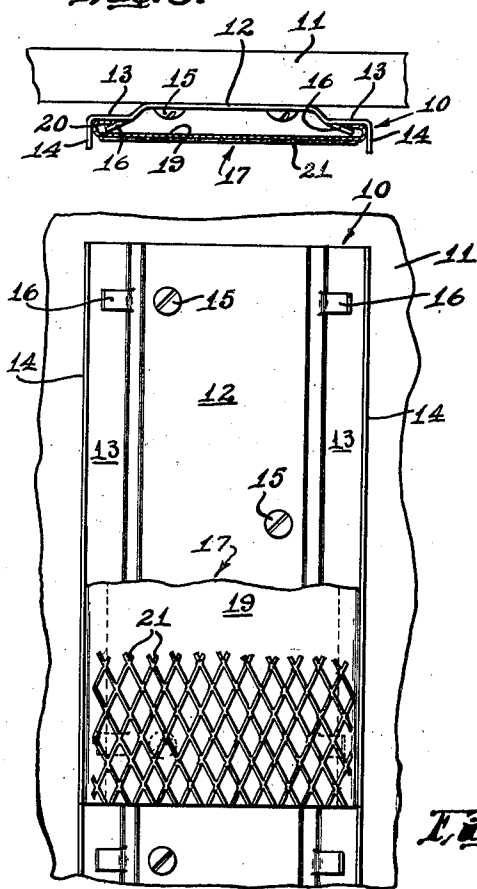


Fig. 2.

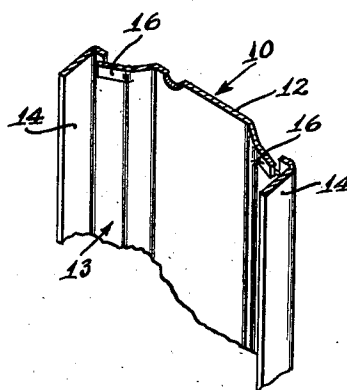


Fig. 4.

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WALL JOINT

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8 Claims. (Cl. 72-106)

The present invention relates to improvements in means for securing structural blocks in frames and has for its main object the provision of a novel form of yielding wall joint which, in addition to securely retaining the blocks in position, will provide for expansion and contraction of a panel of such blocks and permit independent movement of adjacent panels.

A further object of our invention is the provision of a novel all-metal structure of the above character in which a portion thereof is permanently anchored to the structural framework and the other portion is bonded securely to the structural blocks which constitute the panels.

Other objects will be in part apparent and in part pointed out hereinafter.

In the drawing:

Fig. 1 is a fragmentary sectional perspective view of the yielding wall joint.

Fig. 2 is a front elevational view with parts broken away to disclose the construction thereof.

Fig. 3 is an end elevational view of the channel unit.

Fig. 4 is a fragmentary perspective view partly in section of the channel iron section.

In the illustrated embodiment of our invention, the structure consists of a resilient channel unit 10 which is attached to the structural framework 11. This channel unit includes an elongated medial base portion 12, opposed bearing portions 13 which are disposed parallel to the base portion, and a pair of longitudinal flanges 14 which define the sides of the channel unit. The channel unit is adapted to be anchored to the structural framework by means of screws 15 or other fastening devices. The aforementioned bearing portions 13 which are formed integral with the base portion are spaced outwardly from the latter and therefore disposed in spaced relationship to the structural framework 11 so that they are free to move relative to the base and framework during expansion and contraction of the corresponding panel of structural blocks B. Tongues 16 or fingers are struck forwardly from the bearing portions 13 at points spaced longitudinally along the channel for the purpose of effecting separable connection between the channel unit and a composite strip 17 which is anchored to the blocks B by a mortar joint 18.

This composite strip 17 includes a base strip 19 which spans the open side of the channel unit and has its marginal portions folded inwardly upon themselves in spaced relation to the strip proper to produce longitudinal flanges 20. These

flanges engage the bearing portions 13 of the channel unit and are held against lateral movement by the fingers 16. A foraminous sheet 21, or strip of expanded metal, is welded or otherwise secured to the outer face of the base strip 19 for the purpose of insuring satisfactory bonding of the mortar 18 and said composite strip 17.

With a construction such as has been described above, it is apparent that the yielding bearing portions 13 together with the inherent resiliency of the marginal inwardly turned portions of the composite strip 17, will permit the necessary expansion and contraction of the structure without any danger of cracking or otherwise distorting the block panels. In assembling one of these expansion joints, it is only necessary to anchor the channel unit to the structural framework and then slide the composite strips into position beneath the fingers or tongues 16, as illustrated in Fig. 3. The adjacent blocks of the panel may project a short distance into the channel so as to completely obscure the mortar from view and the metal unit itself may be obscured from view by a molding strip S.

Modifications may be resorted to within the spirit and scope of the appended claims.

We claim:

1. In a yielding wall joint, a resilient metal channel including a base portion for attachment to a support, resilient bearing portions along the opposed longitudinal margins of and integral with said base portion, longitudinal flanges at the outer margin of the bearing portions defining the sides of said channel unit, a strip lying within the unit and contacting only said flanges and bearing portions, and means for securing said unit and strip together.

2. In a yielding wall joint, a resilient metal channel including a base portion for attachment to a support, resilient bearing portions along the opposed longitudinal margins of and integral with said base portion, longitudinal flanges at the outer margin of the bearing portions defining the sides of said channel unit, a strip lying within the unit and contacting only said flanges and bearing portions, and means for securing said unit and strip together, said strip having inwardly turned marginal portions yieldingly spacing the strip from said bearing portions.

3. In a yielding wall joint, a resilient metal channel including a base portion for attachment to a support, resilient bearing portions along the opposed longitudinal margins of and integral with said base portion, longitudinal flanges at the

outer margin of the bearing portions defining the sides of said channel unit, a strip lying within the unit and contacting only said flanges and bearing portions, means for securing said unit and strip together, and a foraminous sheet attached to the outer surface of said strip.

4. In a yielding wall joint, a resilient metal channel including a base portion for attachment to a support, resilient bearing portions along the opposed longitudinal margins of and integral with said base portion, longitudinal flanges at the outer margin of the bearing portions defining the sides of said channel unit, a strip lying within the unit and contacting only said flanges and bearing portions, means for securing said unit and strip together, said strip having inwardly turned marginal portions yieldingly spacing the strip from said bearing portions, and a foraminous sheet attached to the exterior face of said strip.

5. In a yielding wall joint, a resilient metal channel including a base portion for attachment to a support, resilient bearing portions along the opposed longitudinal margins of and integral with said base portion, longitudinal flanges at the outer margin of the bearing portions defining the sides of said channel unit, a strip lying within the unit and contacting only said flanges and bearing portions, said strip having inwardly turned marginal portions yieldingly spacing the strip from said bearing portions, and a plurality of tongues struck outwardly from the bearing portions and overlapping the inwardly turned marginal portions of said strip.

6. In a yielding wall joint, a resilient metal channel including a base portion for attachment to a support, resilient bearing portions along the opposed longitudinal margins of and integral with said base portion, longitudinal flanges at the outer margin of the bearing portions defining the sides of said channel unit, a strip lying within

the unit and contacting only said flanges and bearing portions, said strip having inwardly turned marginal portions yieldingly spacing the strip from said bearing portions, a plurality of tongues struck outwardly from the bearing portions and overlapping the inwardly turned marginal portions of said strip, and a foraminous sheet attached to the exterior surface of said strip.

7. In a yielding wall joint, a resilient metal channel unit including a base portion for attachment to the support, bearing portions at the opposed longitudinal edges of the base portion, said bearing portions being positioned in a vertical plane outwardly from the base portion, outwardly directed parallel flanges on said bearing portions defining the longitudinal margins of the channel unit, a strip spanning the channel unit and having its longitudinal marginal portions in engagement with said bearing portions, and means for separately connecting the channel unit and strip and holding the strip and bearing portions inter-engaged.

8. In a yielding wall joint, a resilient metal channel unit including a base portion for attachment to the support, bearing portions at the opposed longitudinal edges of the base portion, said bearing portions being positioned in a vertical plane outwardly from the base portion, outwardly directed parallel flanges on said bearing portions defining the longitudinal margins of the channel unit, a strip spanning the channel unit and having its longitudinal marginal portions in engagement with said bearing portions, means for separately connecting the channel unit and strip and holding the strip and bearing portions inter-engaged, and a foraminous sheet attached to the outer face of said strip.

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