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(72) Inventor(s): <b>Victor Joseph Wigley</b>	(58) Field of Search: UK CL (Edition W ) <b>E1D</b> INT CL <sup>7</sup> <b>E04B, E04C</b> Other: <b>EPODOC, JAPIO, WPI</b>
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(54) Abstract Title: **Bridge section for masonry walls**

(57) A wall formed from an inner leaf and an outer leaf has a bridge section 3 comprising an outer flange 4 for securing to the outer leaf, an inner flange 6 for securing to the inner leaf and an intermediate flange 9 for retaining insulation material 10 next to the inner skin and away from the outer skin. A web 8 may connect the flanges. Ribs or grooves 12 may be provided on the bridge section 3 to direct moisture running down the bridge section 3 away from the insulation material 10 and towards the outer leaf of the wall.

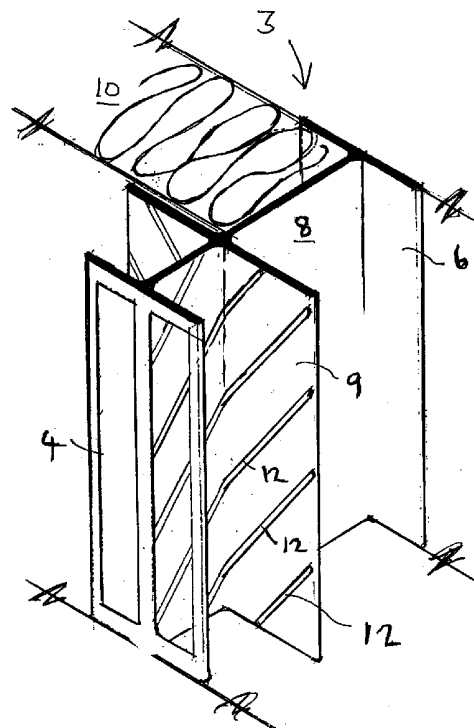


Fig 3

Drawing No 1

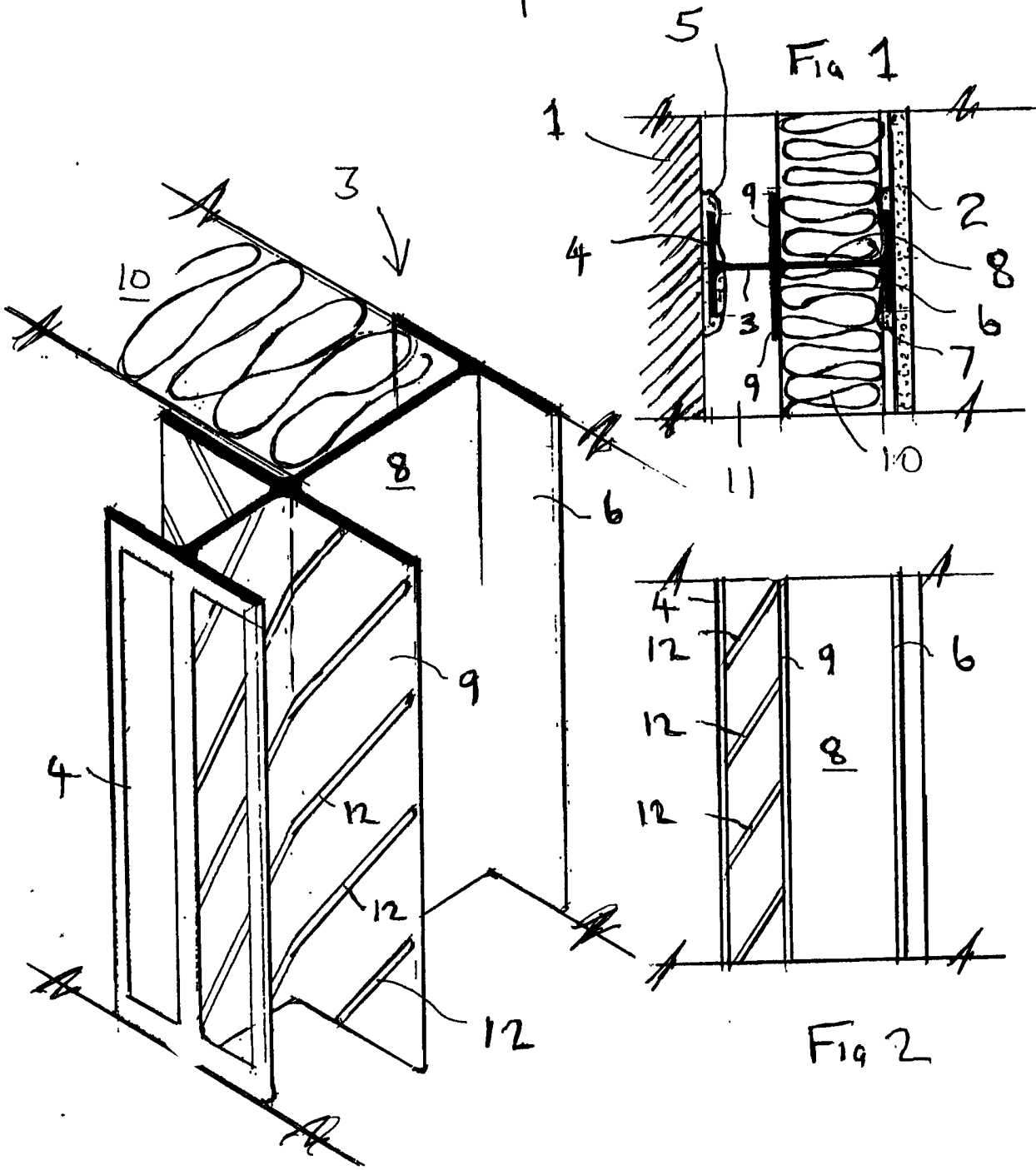


Fig 3

Fig 2

Fig 1

## IMPROVEMENTS RELATING TO MASONRY WALLS

In GB-A-02345071 I disclose a bridge section device fixed directly to the inner face of masonry walls which supports insulation material within a cavity and an inner plasterboard face.

The invention herein described is an improvement of this bridge device designed to prevent ingress of moisture onto the insulation material or plasterboard and to conduct any moisture that may accumulate through condensation or any other means away from insulation and plasterboard to the outer skin of the wall.

According to one aspect of the present invention there is provided

The invention will be better understood from the following description of a preferred embodiment thereof, given by way of example only, reference being had to the accompanying drawing wherein:

Figure 1 is a plan section of the bridge member showing plaster/adhesive dab fixing to substrate wall, intermediate planar cross section holding insulation away from substrate wall creating a cavity and inner planar face, holding insulation and supporting plasterboard.

Figure 2 is an elevation of bridge.

Figure 3 is an isometric drawing of bridge showing downward and outward sloping ridges/grooves/ducts designed to conduct any moisture to the outer substrate wall.

Figure 1 shows in horizontal cross-section a portion of the wall of a building. The wall comprises a masonry outer leaf 1 and a plasterboard inner leaf 2. The plasterboard is secured to and spaced from the masonry leaf by means of a bridge member 3 preferably, the bridge member 3 includes an outer flange 4 which is secured to the masonry leaf 1 by means of a plaster or adhesive dab 5. Similarly, the bridge member preferably includes an inner flange 6 to which the plasterboard 2 is secured by an adhesive or plaster dab 7. The outer and inner flanges 4, 6 are connected to each other by a web 8. A pair of intermediate flanges 9 extend respectively from either side

of flange 8 to hold captive insulation material 10. The insulation material may typically be a semi-rigid bat of suitable material, for example as found in polystyrene or bonded glass fibres. The insulation material 10 may have metal foil or other coverings to improve its insulation or condensation control characteristics. It will be noted that the flanges 9 maintain the insulation material 10 adjacent the inner leaf 2 and maintain a clear cavity 11 between the insulation material and the outer leaf 1.

The bridge member 3 is shown in greater detail in Figures 2 and 3. It will be noted that the surface of the intermediate flanges 9 which face the outer leaf 1, and the surfaces of the web 3 between the flanges 4 and 9, are formed with ridges 12 which act to ensure that any moisture running down the outer surface of the flanges 9 or running down the web 3 is directed away from the insulation material 10 and towards the outer leaf of the wall. The ridges 12 may be an integral part of the structure of the bridge member or may be ridges of suitable material applied to the surface of the material from which the bridge member is made.

As an alternative to ridges 12, grooves, ducts or other formations may be provided for the purpose of directing water running down the relevant surfaces away from the insulation material 10 and towards the outer leaf of the wall.

It will be noted that in the preferred embodiment of the invention that the total width of the bridge member is greatest at the intermediate flanges 9. In other words, both the outer flange 4 and the inner flange 6 are narrower than the sum total of the width of the intermediate flanges 9. This arrangement assists in the location of the insulation material 10 from the inside of the building.

## CLAIMS:

1. A bridge member for securing the inner leaf of a wall to the outer leaf of a wall, the bridge member comprising an outer flange adapted to be secured to the outer leaf of the wall, an inner flange adapted to be secured to the inner leaf of the wall and an intermediate flange for retaining insulation material adjacent the inner leaf of the wall and thereby creating an air gap between the insulation material and the outer leaf of the wall.
2. A bridge member according to claim 1 including means on at least the outer surfaces of the intermediate flange and a web which connects the intermediate flange to the outer flange for directing moisture running down the bridge member away from the insulation material and towards the outer leaf of the wall.
3. A bridge member according to claim 2 wherein the means for directing moisture comprises ribs or grooves provided on the bridge member.
4. A bridge member according to claim 3 wherein the ridges or grooves are integral with the bridge member.

**Amendments to the claims have been filed as follows**

## Claims

- (1) A wall structure comprising an outer masonry wall and inner lining of insulation and plasterboard supported on a bridge or spacer, secured to the masonry wall by means of plaster or adhesive dabbs, the bridge or spacer providing a air gap/cavity between masonry and insulation.
- (2) A bridge member according to claim 1 including means on the connecting structure of the bridge, between masonry and insulation, within the air gap created, of directing moisture away from the insulation material toward the outer leaf of the wall



INVESTOR IN PEOPLE

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Examiner: Eleanor Wade

Claims searched: 1-4

Date of search: 6 September 2004

### Patents Act 1977: Search Report under Section 17

#### Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	1	JP10061053 A Matsushita see esp figs
A	-	EP0147647 A Deko Loft & Vaeg see esp figs
A	-	EP0116039 A Foibleat Insulation
A	-	GB1042087 A Gunter see esp figs

#### Categories:

X Document indicating lack of novelty or inventive step	A Document indicating technological background and/or state of the art.
Y Document indicating lack of inventive step if combined with one or more other documents of same category.	P Document published on or after the declared priority date but before the filing date of this invention.
& Member of the same patent family	E Patent document published on or after, but with priority date earlier than, the filing date of this application.

#### Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC<sup>W</sup> :

E1D

Worldwide search of patent documents classified in the following areas of the IPC<sup>07</sup>

E04B; E04C

The following online and other databases have been used in the preparation of this search report

EPODOC, JAPIO, WPI