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E1R RRH

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EP 1249554 A	**WO 2000/017466 A**
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(58) Field of Search
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INT CL[7] **E04D, E06B**
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(54) Abstract Title
Glazing joint

(57) A glazing joint comprises a first elongate strip 4 having a cap 5 and a pair of spaced legs 6 extending therefrom and a second elongate strip 1 having a cap 2 and a leg 3 extending therefrom. In a first aspect the space between the legs 6 of the first strip 4 is greater than the thickness of the leg 2 of the second strip 1 and the width of each cap 5, 2 is greater than the distance between the outer sides of the legs 6 of the first strip 4. In a second aspect the leg 3 of the second strip 1 is positioned in use between the legs 6 of the first elongate strip 4 within a cavity defined by opposed edges of adjacent sheets of glazing material joined by the glazing joint. In this second aspect the outer surfaces of the legs 6 of the first strip 4 lie in contact with the opposed edges of the glazing sheets and the caps 5, 2 of the elongate strips lie over the open ends of the cavity defined between the edges of the sheets of glazing material. Strips of double sided adhesive tape 8 may be provided on the outer surfaces of the legs 6 of the first strip 4. Guide tongues 9 may be provided on the tips of the legs 6 of the first strip 4. The strips may be formed from a plastics material such as extruded UPVC.

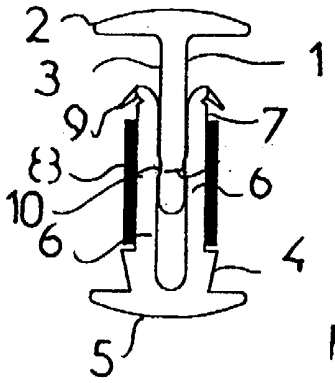

FIG. 1

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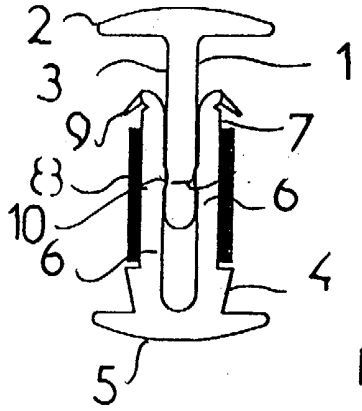

FIG. 1

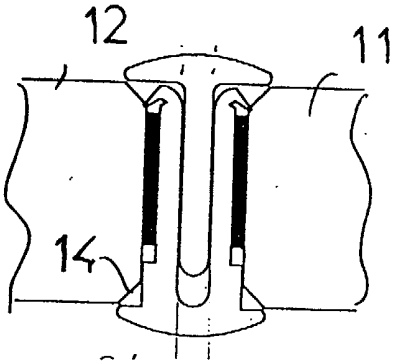

FIG. 2

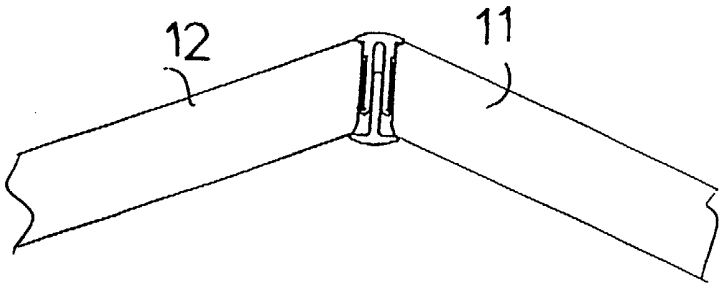

FIG. 3

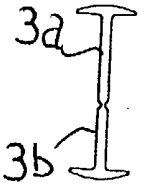

FIG. 5

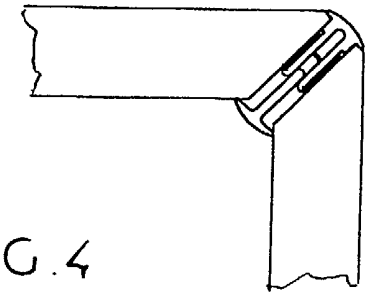

FIG. 4

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GLAZING JOINT

This invention relates to apparatus for providing a joint between adjoining sheets of glazing material, eg glass or a transparent or translucent plastics material such as UPVC. More especially, but not exclusively, the invention concerns a glazing joint of transparent or translucent material for sealing a cavity between two adjoining sheets of glazing material.

Glazing joints are, of course, well known. These tend to comprise beads of a flowable sealant which is injected into the cavity defined between adjoining sheets of glazing material. In time the bead sets to define a resilient joint. Such joints are commonly referred to as wet joints. Disadvantages of such joints include that they are time consuming to instal, they require a skilled operator for effective installation and that they are often difficult to remove. Dry joints do not suffer from these disadvantages and the present invention concerns such of joints.

In one aspect, the invention provides apparatus for providing a joint between adjoining sheets of glazing material, the apparatus comprising a first elongate strip having a cap and a pair of spaced legs upstanding therefrom which in use are positioned within a cavity defined between opposed edges of two sheets of glazing material, and a second elongate strip formed with a cap and an upstanding leg which in use is positioned between the legs of the first strip, the arrangement being such that the outermost surfaces of the legs of the first strip lie in contact with the opposed edges of the glazed sheets and the caps of the two elongate strips lie over the open ends of the cavity defined between the edges of the sheets of glazing material.

In another aspect, the invention provides a glazing joint comprising a first elongate strip formed with a cap and two spaced legs upstanding from the cap, and a second elongate strip formed with a cap and one leg upstanding therefrom, the space between the legs of the first strip being substantially the same or slightly greater than the thickness of

the leg of the second strip, and the width of each cap being greater than the distance between the outer sides of the two legs of the first strip.

In a preferred embodiment, strips of double-sided adhesive tape are adhered to the outer surfaces of the legs of the first strip. The exposed adhesive surface of the tape may be protected by a removable strip prior to installation of the joint. Outwardly extending guide tongues may be provided on the tips of the legs of the first strip to prevent, or reduce, contact between the exposed adhesive surface and the opposed edge of the adjacent glazing sheet during installation.

The strips may be produced from a plastics, e.g. UPVC, material and may be extruded.

The invention will now be described by way of example only with reference to the accompanying diagrammatic drawings in which:

Figure 1 is an end view of a joint in accordance with the invention;

Figures 2, 3 and 4 show the joint of Figure 1 in position in a cavity between two adjoining sheets of glazing material; and

Figure 5 is an end view of one strip of the illustrated joint in its pre-assembly form.

The joint illustrated in Figure 1 comprises a transparent or translucent elongate strip 4 extruded from a plastics material. The strip is formed with a cap 5 and two spaced apart upstanding legs 6. The under surface of the cap 5 is formed with a shallow curve and the width of the cap is greater than the distance between the outer sides of the legs 6. In this way the side edges of the cap 5 define overlapping portions which extend beyond the limits of the legs 6. The outer side of each leg 6 includes a collar and a recessed portion 7 to which is secured a strip 8 of solid adhesive. Alternatively, strips of resilient material whose surfaces are coated with an adhesive may be employed. In an alternative embodiment no collar is provided, the outer sides of the legs 6 being generally planar. The

outer most adhesive surface of each strip 8 is initially covered with a strip of peelable paper-like material to protect the integrity of the adhesive prior to use.

Guide tongues 9 extend outwardly from each distal end of the legs 6. These act as guides as the strip is inserted into a cavity between two adjoining sheets of glazing material.

The strips 4 are generally supplied to the installer with the strips 8 adhered to the legs 6 with the outer adhesive surfaces of the strips 8 covered with the protective peelable strips.

The joint also comprises a transparent or translucent elongate strip 1 extruded from a plastics material, e.g. UPVC crystal. This strip has a cap 2 from which is upstanding a leg 3. The width of the cap 2 is the same or substantially the same as that of the cap 5.

The thickness of the leg 3 of the strip 1 is slightly less than the space in between the leg 6 of the strip 4. As we see from Figure 1, in use the leg 3 of the strip 1 defines a push fit between the legs 6 of the strip 4. Each side of the leg 3 is formed with a longitudinal recess into which can locate complimentary longitudinal extending ridges 10 of the legs 6.

Typically, the height of each leg 6 is around 9mm with the width of the tape 8 being around 6mm. Typically, the guide tongues extend some 0.25mm beyond the outer surface of each leg.

As will be seen from Figures 2 and 3, in use the elongate strip 4 is located within the cavity defined between two adjoining sheets of glazing material 11, 12 with the now exposed adhesive sides of the strips 8 adhered not only to the outer sides of the legs 6 but also to the opposed edges of the sheets 11, 12. Some form of clamping mechanism may be required to maintain alignment of the glazing sheets before the adhesive is completely cured. As shown the sheets 11, 12 carry bevels 14 against which can engage the tongues 9.

The leg 3 of the strip 1 is then pushed into the space between the legs 6 of the strip 4 to complete the joint. In this position, the under surface of each cap 2, 5 lies over the open ends of the cavity and in contact with the opposed faces of the sheets 11, 12.

In Figure 2 the glazing sheets are positioned in line, in Figure 3 the sheets 11, 12 are angled and in Figure 4 the sheets 11, 12 lie normal one to the other. The joint is fully capable of providing a sealed joint in both of these, and other situations.

As will be seen from Figure 5, two strips 1 having legs 3a, 3b of different lengths can be provided as an integral set. Thus the legs are joined at their tips to enable either one or both legs to be selected for use. It will be appreciated that the length of leg 3 required for the joint illustrated in Figure 4 will be greater than the required length for the joint illustrated in Figure 2. The integral strip illustrated in Figure 5 enables the user to select one or other strip depending upon a particular requirement of the joint under installation.

It will be appreciated that the foregoing is merely exemplary of glazing joints in accordance with the invention and that various modifications can readily be made thereto without departing from the true scope of the invention.

CLAIMS

1. A glazing joint comprising a first elongate strip formed with a cap and two spaced legs upstanding from the cap, and a second elongate strip formed with a cap and one leg upstanding therefrom, the space between the legs of the first strip being substantially the same or slightly greater than the thickness of the leg of the second strip, and the width of each cap being greater than the distance between the outer sides of the two legs of the first strip.

2. Apparatus for providing a joint between adjoining sheets of glazing material, the apparatus comprising a first elongate strip having a cap and a pair of spaced legs upstanding therefrom which in use are positioned within a cavity defined between opposed edges of two sheets of glazing material, and a second elongate strip formed with a cap and an upstanding leg which in use is positioned between the legs of the first strip, the arrangement being such that the outermost surfaces of the legs of the first strip lie in contact with the opposed edges of the glazed sheets and the caps of the two elongate strips lie over the open ends of the cavity defined between the edges of the sheets of glazing material.

3. Apparatus as claimed in claim 1 or claim 2 wherein strips of double-sided adhesive tape are adhered to the outer surfaces of the legs of the first strip.

4. Apparatus as claimed in claim 3 wherein the exposed adhesive surface of the tape is protected by a removable strip prior to installation of the joint.

5. Apparatus as claimed in any one of the preceding claims wherein outwardly extending guide tongues are provided on the tips of the legs of the first strip.

6. Apparatus as claimed in any one of the preceding claims wherein the strips are produced from a plastics.

7. Apparatus as claimed in claim 6 wherein the plastics is extruded UPVC.

8. A glazing joint and apparatus for providing a joint between adjoining sheets of glazing material substantially as herein described and as described with reference to the accompanying diagrammatic drawings.

INVESTOR IN PEOPLE

Application No: GB 0207807.9 **Examiner:** Eleanor Wade
Claims searched: 1-7 **Date of search:** 9 May 2003

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	1,2,6,7	US 4707894	Polycast Technology Corp
X	1,2,6,7	US 5678383	Danielewicz
X	1,2	GB 2304365	Leach et al.
X	1	GB 2312462	Sureframe
X	1	EP 1249554	Henkenjohann
X	1,5	FR 2312636	Roehm GmbH
X	1,6,7	WO 0017466	Ultraframe UK Ltd
X	1,5	US 5655346	Holmes
X	1	DE 2857264	Dornier System GmbH

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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:

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E1R

Worldwide search of patent documents classified in the following areas of the IPC[7]:

E04D, E06B

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

EPODOC, JAPIO, WPI