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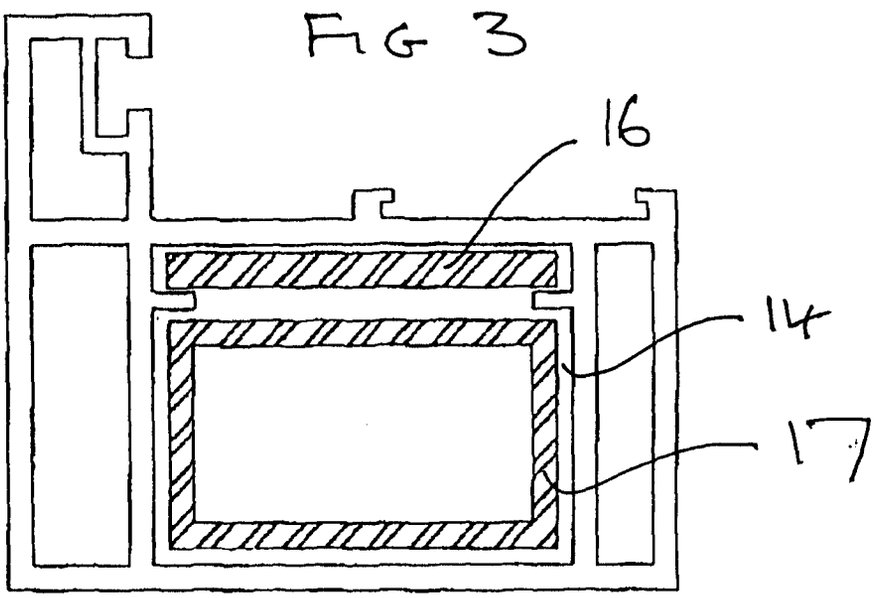
(54) Window and door profiles

(57) A profile is provided for use in the manufacture of a window or door, the profile comprising a hollow elongate member (10), the hollow elongate member (10) being shaped to receive a metal fixing plate (16). This enables components of architectural hardware to be securely attached to the profile, by means of a metal fixing plate, but without necessarily incurring the cost of providing metal reinforcing box sections. One embodiment of the invention provides a particularly versatile profile which can be fitted with a metal fixing plate 16, where reinforcement is considered unnecessary, but also has an extra space to accommodate metal reinforcing box section (17) should this be necessary for some applications.

FIG 3



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Description

The invention relates to window and door profiles.

Plastics windows and doors are commonly manufactured by securing together, eg by welding, side frame members known as profiles. These profiles are commonly hollow extrusions. Frequently, the hollow extrusions require reinforcement, which is usually in the form of a metal box section. This has the added advantage that items of architectural hardware can be secured to the profiles by fixing members which extend into the metal reinforcements.

The invention provides a profile for a window or door, the profile comprising an elongate hollow member, the hollow member being shaped to receive a metal fixing plate.

We have appreciated that for some applications, reinforcement in the form of a box section may not be necessary, so by providing an extrusion that can receive a fixing plate, components of architectural hardware can still be securely attached, but without the cost associated with the provision of reinforcing box sections.

Preferably the extrusion is shaped such that it can also receive a reinforcing box section, where reinforcement is desirable.

The extrusion may have a first area shaped to receive a fixing plate, and a second area shaped to receive a reinforcing box section.

The first and second areas may be separated by location ribs.

The invention includes a window or door when constructed using a plurality of profiles as defined above.

By way of example, a specific embodiment of the invention will now be described, with reference to the accompanying drawings, in which :-

Figure 1 is a cross-sectional view through a prior art window profile;

Figure 2 is a cross-sectional view through an embodiment of window profile according to the invention; and

Figures 3 and 4 are further cross-sectional views showing other ways in which the profile according to this embodiment of the invention may be used.

Figure 1 shows a conventional profile comprising a hollow plastics extrusion 10 reinforced by an aluminium box section 11. The box section 11 fulfils two purposes. Firstly, it provides a reinforcement for the plastics extrusion and for certain sizes of profile reinforcement is a compulsory requirement of the relevant building regulation. Secondly, the box section 11 can be arranged to receive bolts or screws, thus enabling items of architectural hardware to be fastened to the profile more securely than would be the case if the bolts or screws merely extended into the plastics material. These items may include, for example, hinges, locks, bolts or espagnolettes.

We have developed a much more versatile profile as shown in Figure 2. The profile again comprises an elongate hollow extrusion 12, but the central hollow region is divided into a first region 13 and a second region 14 by elongate location ribs 15.

For situations where reinforcement is unnecessary, but architectural hardware is still to be attached, an elongate fixing plate 16 is inserted into the region 13.

In some situations, reinforcement may still be necessary, in which case a box section 17 can be inserted into the region 14, as shown in Figure 3.

For yet more applications, it may be sufficient to utilise a box section reinforcement 17, without the plate 16, as shown in Figure 4.

The reader's attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference.

All of the features disclosed in this specification (including any accompanying claims, abstract and drawings), and/or all of the steps of any method or process so disclosed, may be combined in any combination, except combinations where at least some of such features and/or steps are mutually exclusive.

Each feature disclosed in this specification (including any accompanying claims, abstract and drawings), may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

The invention is not restricted to the details of the foregoing embodiment(s). The invention extends to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

Claims

1. A profile for a window or door, the profile comprising a hollow elongate member (10), characterised in that the hollow elongate member (10) is shaped to receive a metal fixing plate (16).

2. A profile as claimed in Claim 1, which is shaped such that it can also receive a reinforcing box section (11).

3. A profile as claimed in Claim 2, in which the hollow elongate member (10) comprises an extrusion having a first area (13) shaped to receive a fixing plate

(16) and a second area (14) shaped to receive a reinforcing box section (11).

4. A profile as claimed in Claim 3, in which the first (13) and second (14) areas are separated by location ribs (15).

5. A window or door constructed using a plurality of profiles as claimed in any one of Claims 1 to 4.

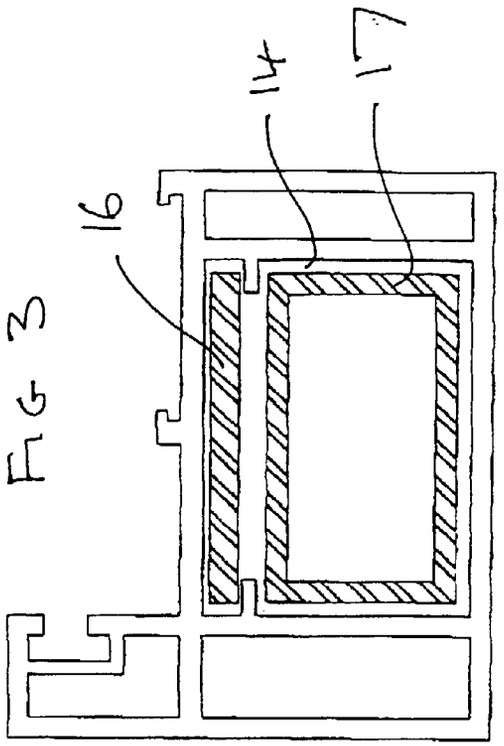

FIG 3

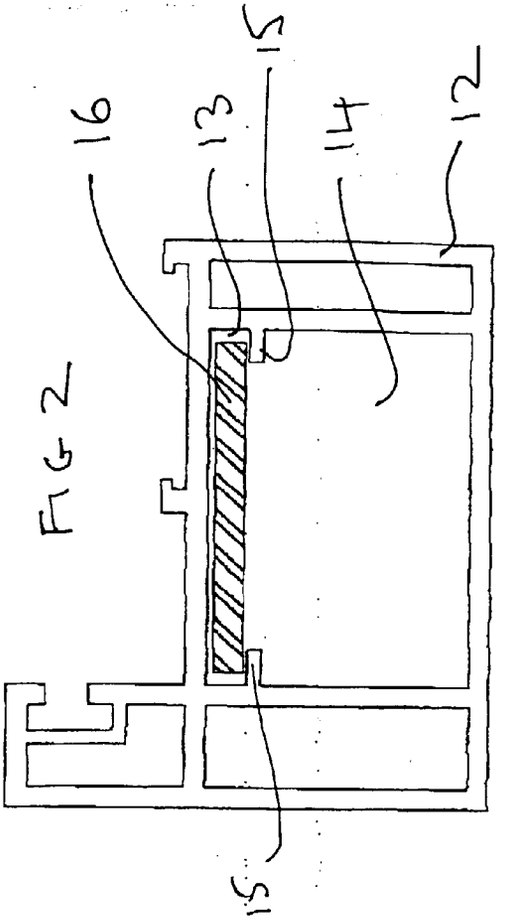

FIG 2

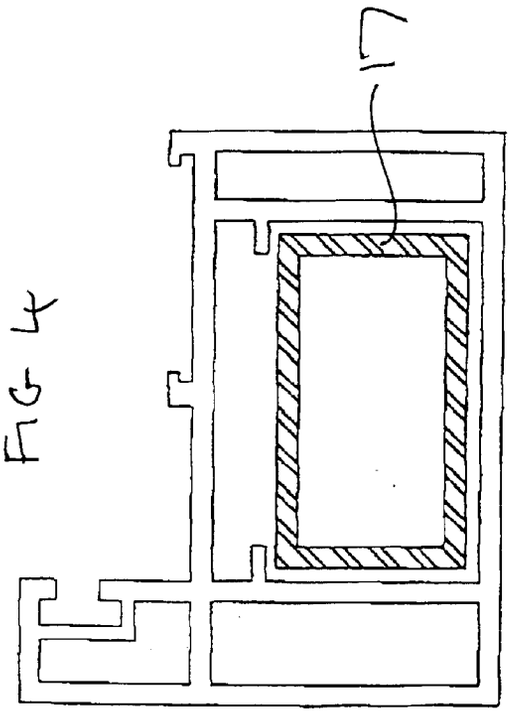

FIG 4

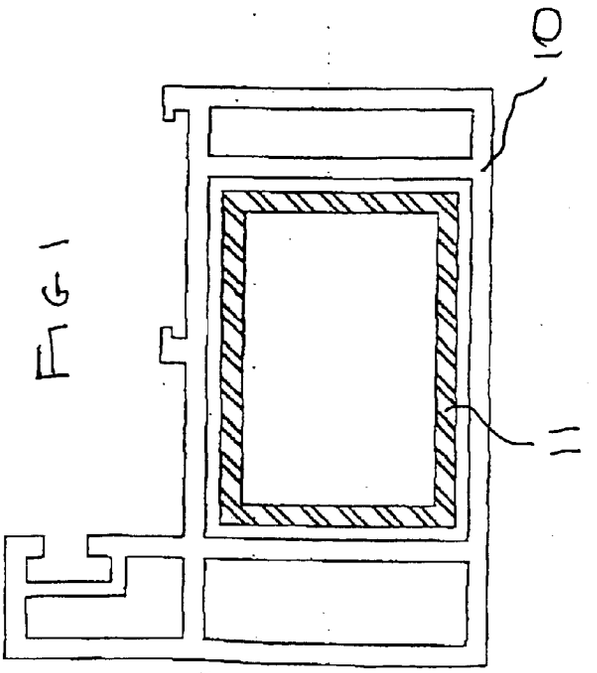

FIG 1