(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 544 401 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
22.06.2005 Bulletin 2005/25

(51) Int Cl.[7]: **E06B 3/30**, E06B 3/263

(21) Application number: **04078376.3**

(22) Date of filing: **14.12.2004**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR LV MK YU

(30) Priority: **18.12.2003 BE 200300668**

(71) Applicant: **Reynaers Aluminium, naamloze vennootschap**
2570 Duffel (BE)

(72) Inventor: **Van Put, Michel**
2640 Mortsel (BE)

(74) Representative: **Donné, Eddy**
Bureau M.F.J. Bockstael nv
Arenbergstraat 13
2000 Antwerpen (BE)

(54) Window, door or the like and synthetic profile applied therein

(57) Window or the like formed of profiles with a predominantly L-shaped section, whereby at least one of these profiles has provisions for anchoring a glazing bead and an insulating rabbet and which is also provided with a guide for an end lath, characterised in that the glazing bead, the guide for the end lath and the insulating rabbet (23) are made in one piece.

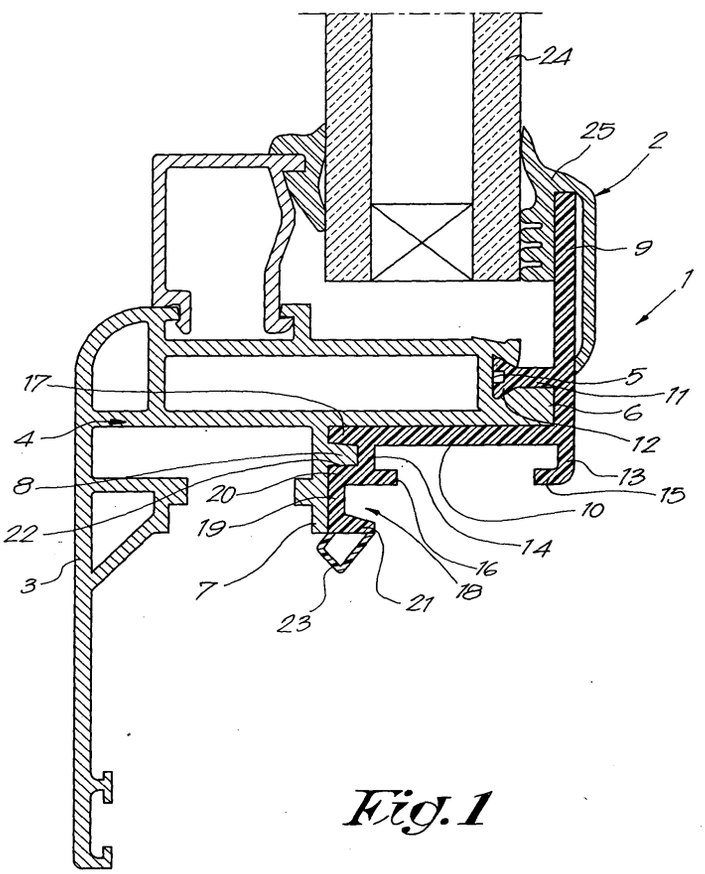

Fig. 1

EP 1 544 401 A2

Description

[0001] The present invention concerns a window, door or the like, more particularly a window or the like in which is provided a glass panel.

[0002] As is known, such windows or the like consist of jambs and joists in the shape of profiles which are extruded for example out of aluminium, whereby these profiles have provisions for anchoring what is called a glazing bead in order to hold the glass panel and for anchoring an insulating rabbet, which makes it possible to seal the gap between a rotatable leaf and a casing concerned, and whereby these profiles are also provided with a guide for an end lath working in conjunction with means which make it possible to lock the window concerned or the like.

[0003] A disadvantage of such known aluminium profiles is that they are sensitive to galvanic corrosion when the applied end lath is made of steel or contains steel.

[0004] Another disadvantage of such known aluminium profiles is that they have a relatively complex construction which is difficult to extrude.

[0005] Another disadvantage is that the guide for the end lath is relatively sensitive to wear, as the end lath which is also made of aluminium can only be shifted with difficulty due to a relatively large frictional resistance of metal on metal.

[0006] Another disadvantage is that when the guide for the end lath is extruded in one piece with the aluminium profile, this guide will only be appropriate for a certain type of interlock, so that different profiles are necessary for different interlocks, which is disadvantageous in that particularly expensive extrusion dies are required, as well as extra storage space to keep the different types of profiles in store.

[0007] The present invention aims a window or the like with profiles providing a solution to the above-mentioned and other disadvantages.

[0008] To this end, the invention concerns a window or the like formed of profiles having a predominantly L-shaped section, whereby at least one of these profiles has provisions for anchoring a glazing bead and an insulating rabbet, and which is also provided with a guide for an end lath, and whereby the glazing bead, the guide for the end lath and the insulating rabbet are made in one piece.

[0009] An advantage of a window or the like according to the invention is that the end lath does not get into contact with the profiles, such that no galvanic effect occurs when the profiles are made for example of aluminium whereas the end lath contains steel, as a result of which the window or the like will not corrode and will have a longer life.

[0010] Another advantage of a window or the like according to the invention is that the profile of the jambs and/or joists has a relatively simple construction, so that manufacturing these profiles may become relatively cheap.

[0011] Another advantage is that the type of guide for the end lath does not depend on the profile, so that irrespective of the applied end lath, a standard profile can be used.

[0012] The glazing bead, the guide for the end lath and the thermal insulation are preferably made of plastic, so that also the friction between the guide and the end lath provided therein can be reduced, with a relatively long life for the end lath and guide as an advantage.

[0013] The present invention also concerns a synthetic profile which can be applied in the above-mentioned jambs and joists of the window or the like according to the invention, whereby this synthetic profile is mainly composed of a glazing bead, a guide and an insulating rabbet.

[0014] In order to better explain the characteristics of the invention, the following preferred embodiment of a window or the like according to the invention and of a synthetic profile according to the invention are described as an example only without being limitative in any way, with reference to the accompanying drawings, in which:

figure 1 represents a section of a part of a window or the like according to the invention; figure 2 represents a section of two abutting window parts according to the invention to a smaller scale.

[0015] Figure 1 represents a section of a profile 1 of a window or the like according to the invention, in which a synthetic profile 2 is applied.

[0016] The profile 1 of the window or the like is, in this case, made of aluminium and has a predominantly L-shaped section with two legs 3-4.

[0017] The second leg 4 is, in this case, made double-walled and has a dovetailed notch 5 on its free end which is confined on one side by a protruding part 6 in the extension of the second leg 4.

[0018] Further, the second leg 4 has a protrusion 7 standing about halfway the length of the second leg 4, crosswise on said leg 4, and which is provided with a rib 8, extending in the direction of the free end of the second leg 4.

[0019] The above-mentioned synthetic profile 2 is made predominantly L-shaped and thus has two legs 9-10, whereby the first leg 9 has a protrusion 11 with a free end 12 which, in this case, is made in the shape of a dovetailed thickening.

[0020] The second leg 10 has two ribs 13-14, a rib 13 in the extension of the leg 9 and a rib 14 at a distance from the free end 17 of the leg 10 respectively, whose free ends 15-16 are bent towards each other so as to form a guide.

[0021] A U-shaped part 18 which is formed of a base 19 upon which are provided two standing edges 20-21, is fixed with one edge 20 to the above-mentioned second rib 14, whereby a recess 22 is formed between the

above-mentioned edge 20, the free end 17 of the leg 10 and the rib 14 on this same leg 10.

[0022] Finally, a flexible and protruding insulating rabbet 23 is provided on the free edge 21 of the U-shaped part 18 which, in this case, is situated partly in the extension of the protrusion 7 of the profile 1 of the window or the like and which has a slantingly directed edge in relation to said protrusion 7.

[0023] The above-mentioned insulating rabbet 23 is preferably made of a soft plastic, such as for example a rubber, whereas the rest of the synthetic profile 2 is preferably made of a hard plastic, such as for example polyvinyl chloride (PVC) or the like.

[0024] Applying the synthetic profile in the profile of the window or the like is simple and as follows.

[0025] The synthetic profile 2 is fixed with the dovetailed free end 12 of the protrusion 11 in the dovetailed groove 5 in the profile 1 of the window or the like, in such a position that the second leg 10 of the synthetic profile 2 connects to the second leg 4 of the profile 1 of the window or the like.

[0026] The rib 8 on the protrusion 7 hereby fits in the above-mentioned recess 22 in the synthetic profile 2, whereas the insulating rabbet 23 is situated more or less centrally in relation to the length of the first leg 3 and the second leg 4 of the window profile 1 or the like.

[0027] In this position, the first leg 9 of the synthetic profile 2 forms a glazing bead for a panel, more particularly a glass panel 24, which can be provided in the window or the like, whereby a sealing 25 is provided over the free end of the first leg 9 of the synthetic profile 2 which is preferably made of a soft rubber, and which can also serve as a rabbet for a leaf profile or the like working in conjunction with the window profile 1 and which also forms a seal against water seeping in.

[0028] It should be noted that, naturally, it is always possible to fix the sealing 25 to the synthetic profile 2 by means of injection moulding, for example, as a result of which this sealing 25 forms a whole with the above-mentioned synthetic profile 2.

[0029] In the guide, which is formed by the second leg 10 of the synthetic profile 2 and the ribs 13-14 provided on it, can be pushed an end lath which works in conjunction with means for locking the window concerned or the like in the known manner.

[0030] When the above-mentioned synthetic profile 2 according to the invention is applied in two profiles working in conjunction, of two window parts, for example of two abutting rotatable leafs, as represented in figure 2, the insulating rabbets 23 of both profiles are pushed against each other when the window is closed, as a result of which the gap between both window parts is sealed against draughts, and as a result of which a thermal bridge is also formed between both window parts.

[0031] The present invention is by no means limited to the embodiment given as an example and represented in the accompanying drawings; on the contrary, such a window and such a synthetic profile can be made according to different variants while still remaining within the scope of the invention.

Claims

1. Window or the like formed of profiles with a predominantly L-shaped section, whereby at least one of these profiles has provisions for anchoring a glazing bead and an insulating rabbet and which is also provided with a guide for an end lath, **characterised in that** the glazing bead, the guide for the end lath and the insulating rabbet (23) are made in one piece.

2. Window or the like according to claim 1, **characterised in that** the glazing bead, the guide and the insulating rabbet (23) are made in the shape of a synthetic profile (2).

3. Window or the like according to claim 2, **characterised in that** the synthetic profile (2) is made L-shaped, whereby a first leg (9) is part of the above-mentioned glazing bead and whereby the guide consists of the second leg (10) upon which, at a distance from each other, ribs (13-14) are provided and whereby the free ends (15-16) of these ribs (13-14) are bent towards each other.

4. Window or the like according to claim 3, **characterised in that** on the above-mentioned first leg (9) of the synthetic profile (2) is provided a protrusion (11) which can work in conjunction with the provisions for anchoring the glazing bead in the profile (1) of the window or the like.

5. Window or the like according to any one of claims 3 or 4, **characterised in that** the above-mentioned first leg (9) is provided with a sealing (25).

6. Window or the like according to claim 3, **characterised in that** the synthetic profile (2) has a U-shaped part (18) which is provided on one of the above-mentioned ribs (14), whereby a recess (22) is defined between this U-shaped part (18), the latter rib (14) and a free end (17) of the second leg (10).

7. Window or the like according to claim 6, **characterised in that** the profile (1) of the window or the like has a protrusion (7) fixed more or less centrally on a second leg (4) of this profile, which protrusion (7) comprises a rib (8) which can work in conjunction with the above-mentioned recess (22).

8. Window or the like according to claim 6, **characterised in that** on the U-shaped part (18) of the synthetic profile (2) is provided an insulating rabbet (23).

9. Window or the like according to claim 8, **characterised in that** the shape and dimensions of the synthetic profile (2) are such that the insulating rabbets (23) of synthetic profiles (2) of two abutting window parts can work in conjunction.

10. Window or the like according to claim 1, **characterised in that** the glazing bead and the guide are made of a hard plastic and **in that** the insulating rabbet (23) is made of a soft plastic.

11. Window or the like according to claim 10, **characterised in that** the glazing bead and the guide are made of polyvinyl chloride (PVC) and **in that** the insulating rabbet (23) is made of rubber.

12. Synthetic profile which can be applied in a window or the like according to any one of the preceding claims, **characterised in that** it is mainly composed of a glazing bead, a guide for an end lath and an insulating rabbet (23).

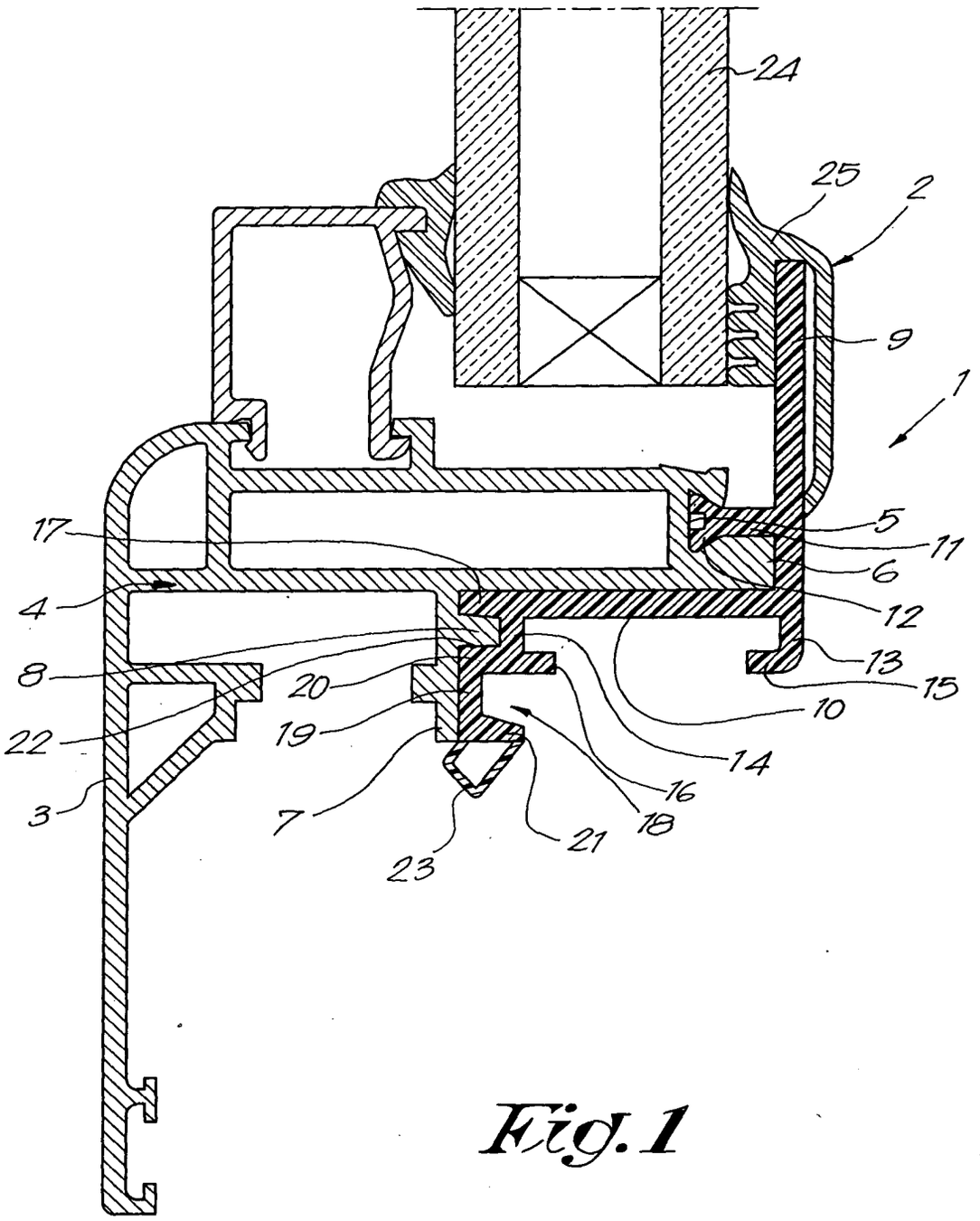

Fig. 1

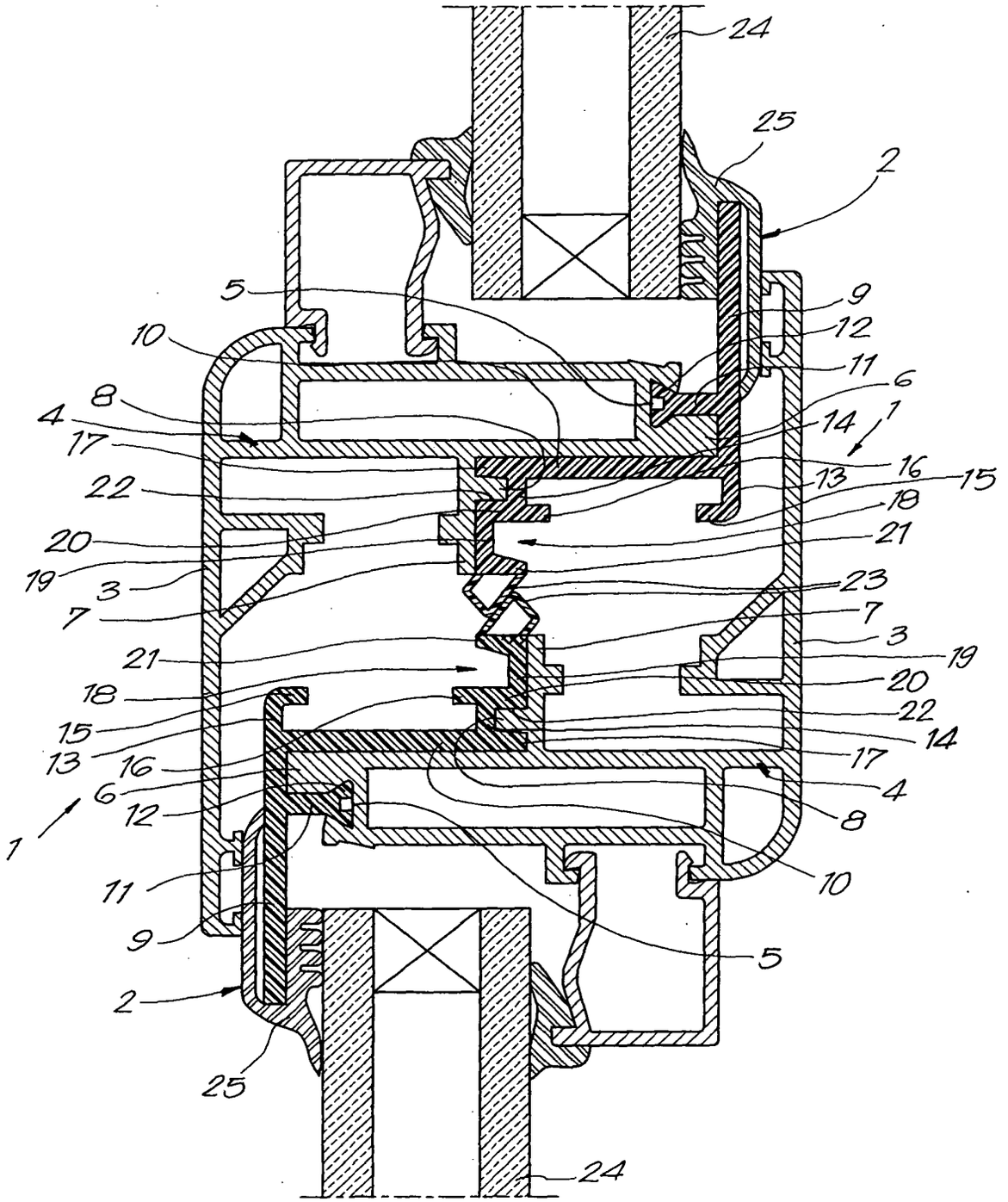
24
25
2
5
9
12
10
11
6
8
14
1
4
17
16
15
22
13
18
20
21
19
3
23
7
7
3
21
19
18
20
15
22
13
14
16
17
6
4
12
8
1
10
11
5
9
2
25
24

Fig.2