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(71) Applicant: **Profilati S.p.A. Unipersonale**

40059 Loc. Fossatone Medicina (Bologna) (IT)

(72) Inventor: **GALLIANI, Marco**

40136 Bologna (IT)

(74) Representative: **Rapisardi, Mariacristina**

Ufficio Brevetti Rapisardi S.r.l.

Via Serbelloni, 12

20122 Milano (IT)

(54) **THERMAL BREAK FRAME**

(57) Thermal break frame comprising:

- at least one sash (1) including a sash frame (3) and at least one pane of glass (4), said sash frame (3) comprising an inner metallic sash profile (8), an outer metallic sash profile (9), and a thermally insulating sash profile (10) connecting said inner sash profile (8) and said outer sash profile (9);

- a knock frame (2) for the sash (1), comprising an inner metallic knock frame profile (5), an outer metallic knock frame profile (6), and at least one thermally insulating

profile (7) connecting said inner knock frame profile (5) and said outer knock frame profile (6);

- a first gasket (12) insertable in a sealing position between said outer knock frame profile (6) and said outer sash profile (9); characterized in that said first sealing gasket (12) is an asymmetrical co-molded lip gasket having an anchoring base (102) made of a more rigid material and a sealing element (103) made of a softer expanded material having a lip (104) with a flattenable surface (104A).

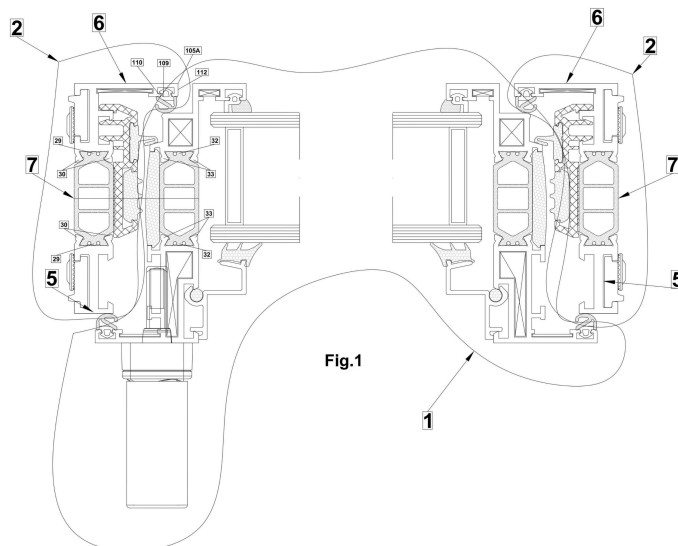


Fig.1

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Description

[0001] As is known, at present the sashes and the corresponding knock frames of thermally broken aluminium window and door fixtures are produced by joining the aluminium profile communicating with the outside to the one communicating with the inside of the room by means of an interconnection profile made of polyamide or other thermally insulating material.

[0002] The market requires ever higher performance in terms of mechanical strength, burglary resistance, acoustic attenuation and thermal insulation.

[0003] Recently, moreover, the trend towards fixtures with minimalist frames has been gaining ground, leaving as much space as possible to the glazing in order to increase the brightness of the environment.

[0004] In addition to being more aesthetically pleasing, a fixture having a high ratio between the glazing surface and the sash surface may contribute to reducing the electric power consumption required for lighting the environment.

[0005] A multitude of solutions are known which, however, are only able to satisfy some of the performance specifications required by the market and may moreover feature constructions with recesses that promote the accumulation and stagnation of rainwater and with sealing gaskets that may sometimes deform in an abnormal and unpredictable manner, thereby jeopardizing proper sealing.

[0006] The task of the present invention is to provide a thermal brake frame that is free from the drawbacks mentioned above attributable to the prior art.

[0007] Within the scope of this task, an aim of the invention is to provide a thermal brake frame with improved performance in terms of mechanical strength, burglary resistance, acoustic attenuation and thermal insulation.

[0008] A further aim of the invention is to provide a thermal brake frame with minimalist sash frames and sash abutment frames that do not impair the characteristics of mechanical strength, burglar resistance, acoustic attenuation and thermal insulation.

[0009] A further, not least, aim of the invention is to provide a thermal brake frame that promotes rainwater drainage.

[0010] This task, as well as these and other aims, are achieved by a thermal brake frame comprising:

- at least one sash including a sash frame and at least one pane of glass, said sash frame comprising an inner metallic sash profile, an outer metallic sash profile, and a thermally insulating sash profile connecting said inner sash profile and said outer sash profile;
- a knock frame for the sash, comprising an inner metallic knock frame profile, an outer metallic knock frame profile, and at least one thermally insulating profile connecting said inner knock frame profile and

said outer knock frame profile;

- a first gasket insertable in a sealing position between said outer knock frame profile and said outer sash profile;

characterized in that said first sealing gasket is an asymmetrical co-molded lip gasket having an anchoring base made of a more rigid material and a sealing element made of a softer expanded material having a lip (104) with a flattenable surface.

[0011] Preferably, said first gasket is supported by said outer stop profile, and said outer sash profile has a rear recess provided with a front engagement wall for said flattenable surface of said lip.

[0012] The first gasket configured as above provides numerous advantages.

[0013] First, sealing, both against air and against water, is highly effective, as it is achieved by contact along an extended flat contact surface created by deformation of the lip of the first gasket when the fixture is closed.

[0014] Second, the bending and shear deformation of the lip at each closing of the frame is always repeated in a well-predictable manner, with the consequence that sealing is always ensured with maximum efficiency.

[0015] In addition, the sealing element made of expanded material, by incorporating a large amount of air within its internal pores, improves thermal and acoustic insulation.

[0016] Advantageously, said lip is configured to flex towards a rear wall of said outer knock frame profile. In this way, the lip is prevented from creating recesses where rainwater may infiltrate and stagnate. Advantageously, said lip is configured to extend beyond one end of said front engagement wall. In this way, the flattenable surface of the lip of the sealing element can be flattened up to one end of said front engagement wall.

[0017] Preferably, said rear wall of said outer knock frame profile has, on its inner side, a first and a second L-shaped retention tooth delimiting a housing seat for said anchoring base.

[0018] Preferably, said anchoring base has a first and a second opposing anchoring groove for engaging the first and second retention teeth, respectively.

[0019] Preferably, said first retention tooth is positioned flush with a free end of said rear wall of said outer frame profile.

[0020] Preferably, said sealing element has a wall aligned with a wall of said first retention tooth, said wall being orthogonal to said rear wall of said outer knock frame profile.

[0021] In this way, a channel without undercuts is created, facilitating rainwater drainage

[0022] Preferably said lip extends transversely from an end of said wall of said sealing element.

[0023] Further features and advantages of the invention will become more apparent from the description of a preferred but non-exclusive embodiment of a thermal

brake frame according to the invention, illustrated by way of example and not limitation in the accompanying drawings, in which:

Fig. 1 is a sectional view of a thermal brake frame according to the invention where the sash is in the closed position;

Fig. 2 shows an enlarged detail of the side joint of the fixture of Fig. 1;

Fig. 3 is a sectional view of the thermal brake frame of Fig. 1 where the sash is in a partially open position;

Fig. 4 shows an enlarged detail of the side joint of the fixture of Fig. 3.

[0024] Equivalent parts in the description will be indicated by the same reference numeral.

[0025] Hereinafter, the term "inner" means "facing the inside of the environment enclosed by the frame", and the term "outer" means "facing the outside of the environment enclosed by the frame".

[0026] The terms "front" and "rear" refer to an observer looking at the frame from the inner side of the environment enclosed by the fixture.

[0027] With particular reference to the figures described above, the thermal brake frame comprises a sash 1 rotatable between an open position and a closed position of the fixture, and a stop frame 2 for the sash 1.

[0028] Although the following description refers to a single-sash frame, the same teachings also apply to a multi-sash frame.

[0029] The sash 1 comprises a sash frame 3, at least one pane of glass 4 and an inner handle 90.

[0030] The knock frame 2 comprises an inner metallic knock frame profile 5, an outer metallic knock frame profile 6, and at least one thermally insulating profile 7 connecting the inner knock frame profile 5 and the outer knock frame profile 6.

[0031] The sash frame 3 comprises an inner metallic sash profile 8 arranged facing the inner knock frame profile 5 when the sash 1 is in the closed position, an outer metallic sash profile 9 arranged facing the outer knock frame profile 6 when the sash 1 is in the closed position, and a thermally insulating sash profile 10 connecting the inner sash profile 8 and the outer sash profile 9.

[0032] The fixture further comprises a first gasket 12 insertable in a sealing manner between the outer knock frame profile 6 and the outer sash profile 9 when the frame is closed.

[0033] Advantageously, the first sealing gasket 12 is an asymmetrical co-moulded lip gasket having an anchoring base 102 made of a more rigid material and a sealing element 103 made of a softer expanded material, with a lip 104 having a flattenable surface 104A.

[0034] The lip 104 is configured and arranged to flex towards a rear wall 105 of the outer knock frame profile 6.

[0035] The sealing element 103, in particular, comprises the lip 104 and an interface element with the

anchoring base 102, formed by a first wall 111 and a second converging wall 113, which delimit a cavity 114 for receiving an end 115 of the anchoring base 102.

[0036] The two walls 111 and 113 converge and join at their end 116, which acts as an elastic hinge for the lip 104. The lip 104 extends transversely to walls 111, 113 from the side of the second wall 113 and is curved.

[0037] The concave side of the lip 104 faces the second wall 113.

[0038] The first sealing gasket 12 is supported by the outer knock frame profile 6.

[0039] The outer sash profile 9 features a rear recess 100 with a front engagement wall 101 for the flattenable surface 104A of the lip 104.

[0040] The recess 100, in particular, features the front wall 101 and a lateral wall 117, orthogonal to the front wall 101, connecting the front wall 101 to a rear wall 118 of the outer sash profile 9, which, when the frame is closed, aligns with the rear wall 105 of the outer knock frame profile 6.

[0041] The lip 104 is configured to extend beyond one end 101A of the front engagement wall 101 of the rear recess 100 of the outer sash profile 9.

[0042] The front engagement wall 101 of the rear recess 100 of the outer sash profile 9 is flat.

[0043] The flattenable surface 104A is represented by the convex side of the lip 104, which tends to flatten and increase the contact surface against the front engagement wall 101 of the rear recess 100 of the outer sash profile 9.

[0044] The rear wall 105 of the outer knock frame profile 6 internally has a first retaining tooth 106 and a second retaining tooth 107 in an L-shape, delimiting a housing seat 108 for the anchoring base 102.

[0045] The anchoring base 102, in turn, features a first groove 109 and a second groove 110, opposite for engagement with the first and second retaining teeth 106 and 107, respectively.

[0046] The first retaining tooth 106 is positioned flush with a free end 105A of the rear wall 105 of the outer stop profile 6.

[0047] One wall of the sealing element 103, in particular the first wall 111, is arranged flush with a wall 112 of the first retaining tooth 106, orthogonal to the rear wall 105 of the outer knock frame profile 6.

[0048] The wall 112 of the first retaining tooth 106, the first wall 111 of the sealing element 103, and the walls 101, 117 of the recess 100 delimit a channel 119 from which rainwater 119 must be drained. Compared to traditional solutions, the first sealing gasket 12 is closer to the lateral wall 117 of the recess 100, resulting in a smaller channel 119 that is therefore capable of accumulating less rainwater.

[0049] Additionally, the flush arrangement of the first sealing gasket 12 with the free end 105A of the rear wall 105 of the outer knock frame profile 6 eliminates an undercut from the channel 119, which in traditional solutions favors the stagnation of rainwater.

[0050] The lip 104, being oriented towards the outside of the channel 119, does not create a deep recess where rainwater can infiltrate and stagnate.

[0051] Furthermore, the configuration and arrangement of the first sealing gasket 12 allows for controlled deformation of the lip 104 at every closure of the fixture, unlike traditional solutions where the exact deformation of the gasket that provides external sealing of the fixture is not always predictable, possibly compromising the effectiveness of the water and air sealing.

[0052] The lip 104, which is curved at rest, tends to flatten when engaging the flat front wall 101 of the recess of the outer sash profile 9, thereby increasing the contact surface and further improving the sealing against water and air.

[0053] The length of the lip 104, which protrudes from the front end 101A of the rear recess 100, is designed to maximize the contact surface and, thus, the sealing against water and air.

[0054] In the first sealing gasket 12, the sealing element 103 in expanded material incorporates a significant amount of air in its internal pores, contributing to enhanced thermal and acoustic insulation.

[0055] The first sealing gasket 12 is made of rubber, for example, the anchoring base 102 can be made of EPDM rubber, while the sealing element 103 can be made of expanded EPDM rubber.

[0056] The interconnection profile 7 has, at opposite ends thereof, dovetail-shaped feet 29 provided with seats for an adhesive and retained by barbs 30 specifically connected, by mechanical deformation through rolling, to the inner knock frame profile 5 or to the outer knock frame profile 6.

[0057] The sash interconnection profile 10 has, at opposite ends thereof, dovetail-shaped feet 32 provided with seats for an adhesive and retained by barbs 33 specifically connected, by mechanical deformation through rolling, to the inner sash profile 8 or to the outer sash profile 9.

[0058] The sash interconnection profile 10 is arranged facing the interconnection profile 7 when the sash 1 is in the closed position.

[0059] The sash interconnection profile 10 and the interconnection profile 7 can be made of polymer, such as polyamide.

[0060] The fixture further comprises a second lip sealing gasket 13 and a third lip sealing gasket 11 between the inner knock frame profile 5 and the inner sash profile 8.

[0061] The third lip sealing gasket 11 is structurally identical to the first sealing gasket 12.

[0062] The second sealing gasket 13 separates a first air chamber 15 and a second air chamber 14 when the sash 1 is in the closed position.

[0063] The second sealing gasket 13 is more precisely configured and arranged to delimit between the knock frame 2 and the sash frame 3 a first air chamber 15 in cooperation with the first sealing gasket 12 and a second

air chamber 14 in cooperation with the third sealing gasket 11.

[0064] The second sealing gasket 13 engages a tooth 16 of the outer sash profile 9 when the sash 1 is in the closed position.

[0065] This solution contributes to reducing the overall size of the side joint of the fixture.

[0066] Moreover, since the second sealing gasket 13 does not cooperate with the sash interconnection profile 10, the latter does not need any configurational constraints to ensure sealing, and consequently, it can be identical to the interconnection profile 7.

[0067] This simplifies logistics and warehouse management.

[0068] In their preferred form as shown, the interconnection profile 7 and the sash interconnection profile 10 employed in the lateral joint of the fixture have a closed hollow polygonal cross-section, internally equipped with one or more partition webs.

[0069] The second sealing gasket 13 is supported by a block 17 made of a material more rigid than it and thermally insulating, such as a polymer, particularly ABS.

[0070] The block 17 has a seating 18 for engaging the second sealing gasket 13 and anchoring teeth 19 for engaging the outer knock frame profile 6.

[0071] The seating 18 is configured for a snap-fit connection in shape and strength of the second sealing gasket 13.

[0072] Also, the outer knock frame profile 6 has a seating 35 configured for a snap-fit connection in shape and strength of the anchoring teeth 19.

[0073] The block 17 has in particular a first portion equipped with anchoring teeth 19 in the seating 35 formed in the outer knock frame profile 6 and a second portion covering the interconnection profile 7.

[0074] The second portion of the block 17 has a flat surface 25 preferably bonded to a flat surface of the interconnection profile 7 using an adhesive layer.

[0075] The block 17 further has an engagement seat 20 for a pad 21 cooperating with a counter-pad 22 so as to define, within the second air chamber 14, a labyrinth air channel 23.

[0076] The engagement seat 20 is configured for a snap-fit connection in shape and strength of the pad 21.

[0077] The labyrinth air channel 23 is delimited by an irregular surface with projections and recesses of at least one of the pad 21 and the counter pad 22, or just the pad 21, in the illustrated case.

[0078] The pad 21 and the counter pad 22 are positioned in a facing zone between the interconnection profile 7 and the sash interconnection profile 10 when the sash 1 is in the closed position.

[0079] The counter pad 22 covers the sash interconnection profile 10 and is tightly connected to it via a snap-fit connection in a seating delimited by the tooth 16 of the outer sash profile 9 and a tooth 28 of the inner sash profile 8.

[0080] In particular, the counter pad 22 has a first

shaped end hooked to the tooth 16 of the outer sash profile 9, on the side opposite to the one where the second sealing gasket 13 engages, and a second shaped end hooked to the tooth 28 of the inner sash profile 8.

[0081] The second air chamber 14 provides, laterally to the labyrinth channel 23, a free space 24 available for a fixture hardware (not shown).

[0082] The sash profiles 8 and 9 have respective longitudinal grooves 36, 37 for housing an arm of respective fastening brackets 38, 39 used to secure, at the four corners, the four sections, two opposite horizontal sections and two opposite vertical sections, of which the inner sash profile 8 and the outer sash profile 9 are formed.

[0083] Also, the knock frame profiles 5, 6 have respective longitudinal grooves 40, 41 for housing an arm of respective fastening brackets 46, 47, which in this case are used to secure, at the four corners, the four sections, two opposite horizontal sections and two opposite vertical sections, forming the inner knock frame profile 5 and the outer knock frame profile 6.

[0084] The groove 36 of the inner sash profile 8 is delimited by a wall of the inner sash profile 8 featuring an outer recess 45 for engaging a glass stop profile 44.

[0085] At the recess 45, the groove 36 of the inner sash profile 8 is set back from the side of the interconnection profile 10 facing the glass 4.

[0086] This solution contributes to reducing the overall size of the side joint of the fixture.

[0087] The metal profiles 5, 6, 8, and 9 can be made of an aluminium alloy, such as a magnesium-silicon alloy, particularly the 6005 alloy, which provides suitable mechanical strength and burglary resistance.

[0088] The two separate air chambers 14 and 15 formed between the knock frame 2 and the sash frame 3 when the sash 1 is closed, thanks also to the labyrinth channel 23 formed in the second air chamber 14 adjacent to the first air chamber 15, contribute to improving thermal and acoustic insulation and water sealing.

[0089] The special configuration of the knock frame 2 and the sash frame 3 allows for a significant reduction in the overall size of the lateral joint of the fixture.

[0090] This provides, in addition to a highly appreciated minimalist effect currently sought after in the thermally broken glass fixture sector, a greater brightness of the environment in which the fixture is installed.

[0091] The increased glazed area of the fixture offers an additional contribution to energy savings due to the excellent thermal insulation properties of the glass currently on the market.

[0092] The thermal break frame as conceived is susceptible to numerous modifications and variants, all falling within the inventive concept, and all details are replaceable with technically equivalent elements.

[0093] In practice, the materials used, as well as the dimensions, may vary according to the needs and the state of the art.

Claims

1. Thermal break frame comprising:

- 5 - at least one sash (1) including a sash frame (3) and at least one pane of glass (4), said sash frame (3) comprising an inner metallic sash profile (8), an outer metallic sash profile (9), and a thermally insulating sash profile (10) connecting said inner sash profile (8) and said outer sash profile (9);
- 10 - a knock frame (2) for the sash (1), comprising an inner metallic knock frame profile (5), an outer metallic knock frame profile (6), and at least one thermally insulating profile (7) connecting said inner knock frame profile (5) and said outer knock frame profile (6);
- 15 - a first gasket (12) insertable in a sealing position between said outer knock frame profile (6) and said outer sash profile (9); **characterized in that** said first sealing gasket (12) is an asymmetrical co-molded lip gasket having an anchoring base (102) made of a more rigid material and a sealing element (103) made of a softer expanded material having a lip (104) with a flattenable surface (104A).

2. Thermal break frame according to claim 1, **characterized in that** said first gasket (12) is supported by said outer knock frame profile (6), and said outer sash profile (9) has a rear recess (100) with a front engagement wall (101) for said flattenable surface (104A) of said lip (104).

3. Thermal break frame according to any of the preceding claims, **characterized in that** said lip (104) is configured to flex toward a rear wall (105) of said outer knock frame profile (6).

4. Thermal break frame according to any of the preceding claims, **characterized in that** said lip (104) is configured to extend beyond an end (101A) of said front engagement wall (101).

5. Thermal break frame according to claims 3 and 4, **characterized in that** said rear wall (105) of said outer knock frame profile (6) has, on its inner side, a first and a second L-shaped retention tooth (106, 107) delimiting a housing seat (108) for said anchoring base (102).

6. Thermal break frame according to the preceding claim, **characterized in that** said anchoring base (102) has a first and a second opposing anchoring groove (109, 110) for engaging the first and second retention teeth (106, 107), respectively.

7. Thermal break frame according to claims 5 and 6,

characterized in that said first retention tooth (106) is positioned flush with a free end (105A) of said rear wall (105) of said outer frame profile (6).

8. Thermal break frame according to the preceding claim, **characterized in that** said sealing element (103) has a wall (111) aligned with a wall (112) of said first retention tooth (106), said wall (112) being orthogonal to said rear wall (105) of said outer knock frame profile (6). 5 10
9. Thermal break frame according to the preceding claim, **characterized in that** said lip (104) extends transversely from an end of said wall (111) of said sealing element (103). 15
10. Thermal break frame according to any of the preceding claims, **characterized in that** it comprises a second lip-type sealing gasket (13), and a third lip-type sealing gasket (11) identical to said first lip-type sealing gasket (12), wherein said third lip-type sealing gasket (11) is insertable between said inner knock frame profile (5) and said inner sash profile (8), and wherein said second lip-type sealing gasket (13) is configured and arranged to define, between said frame (2) and said sash frame (3), a first air chamber (15) in cooperation with said first sealing gasket (12), and a second air chamber (14) in co-operation with said third sealing gasket (11). 20 25 30

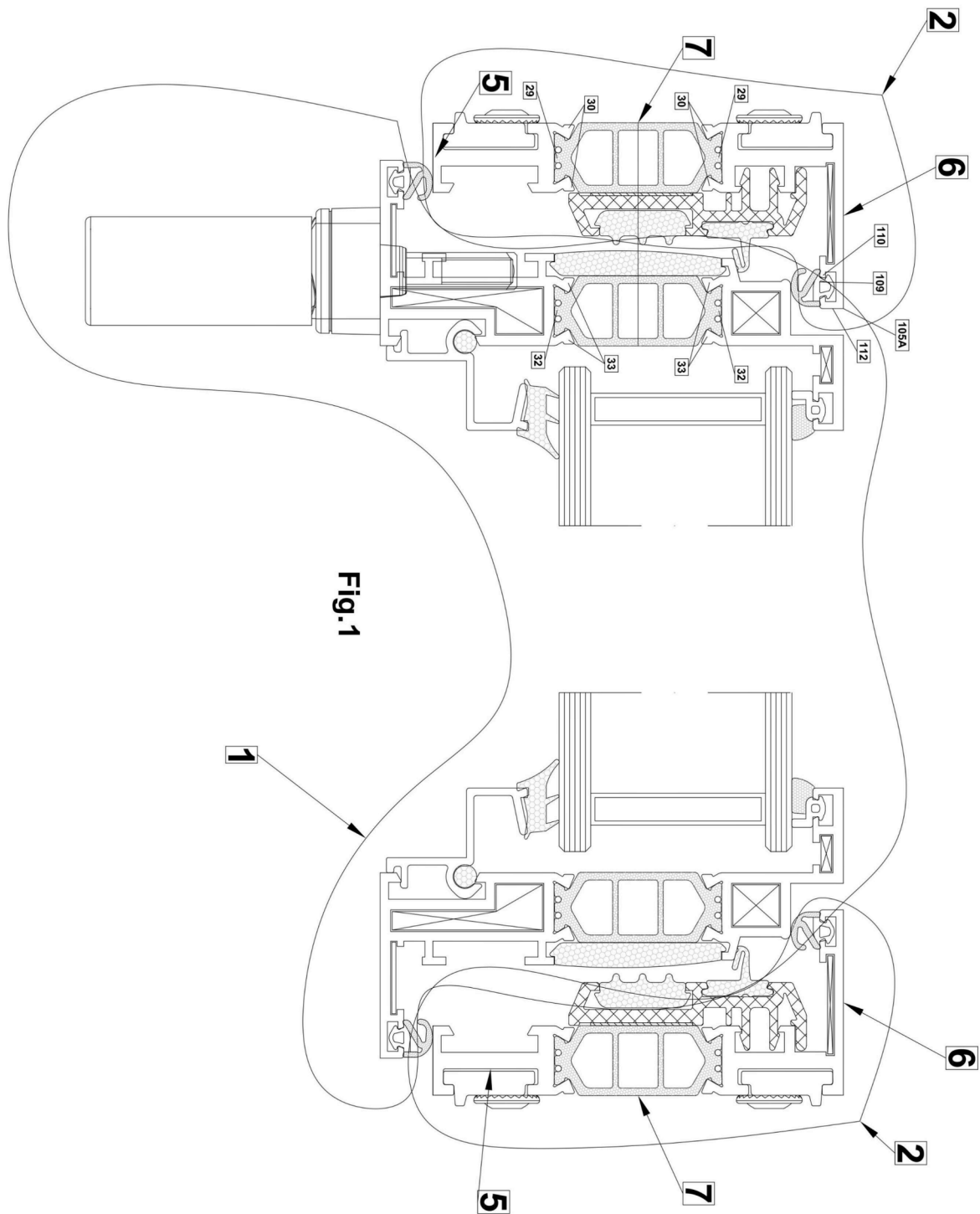
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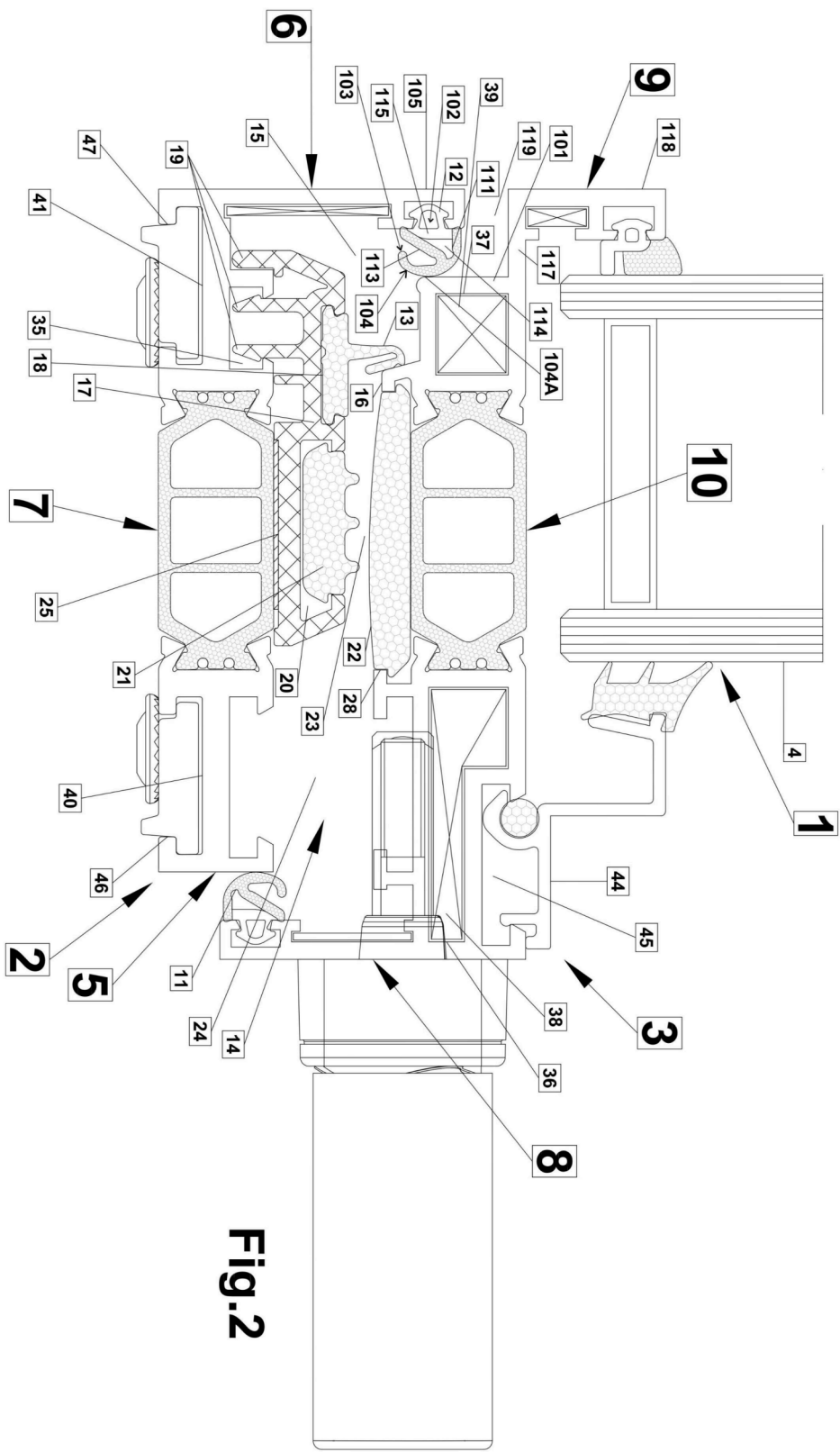
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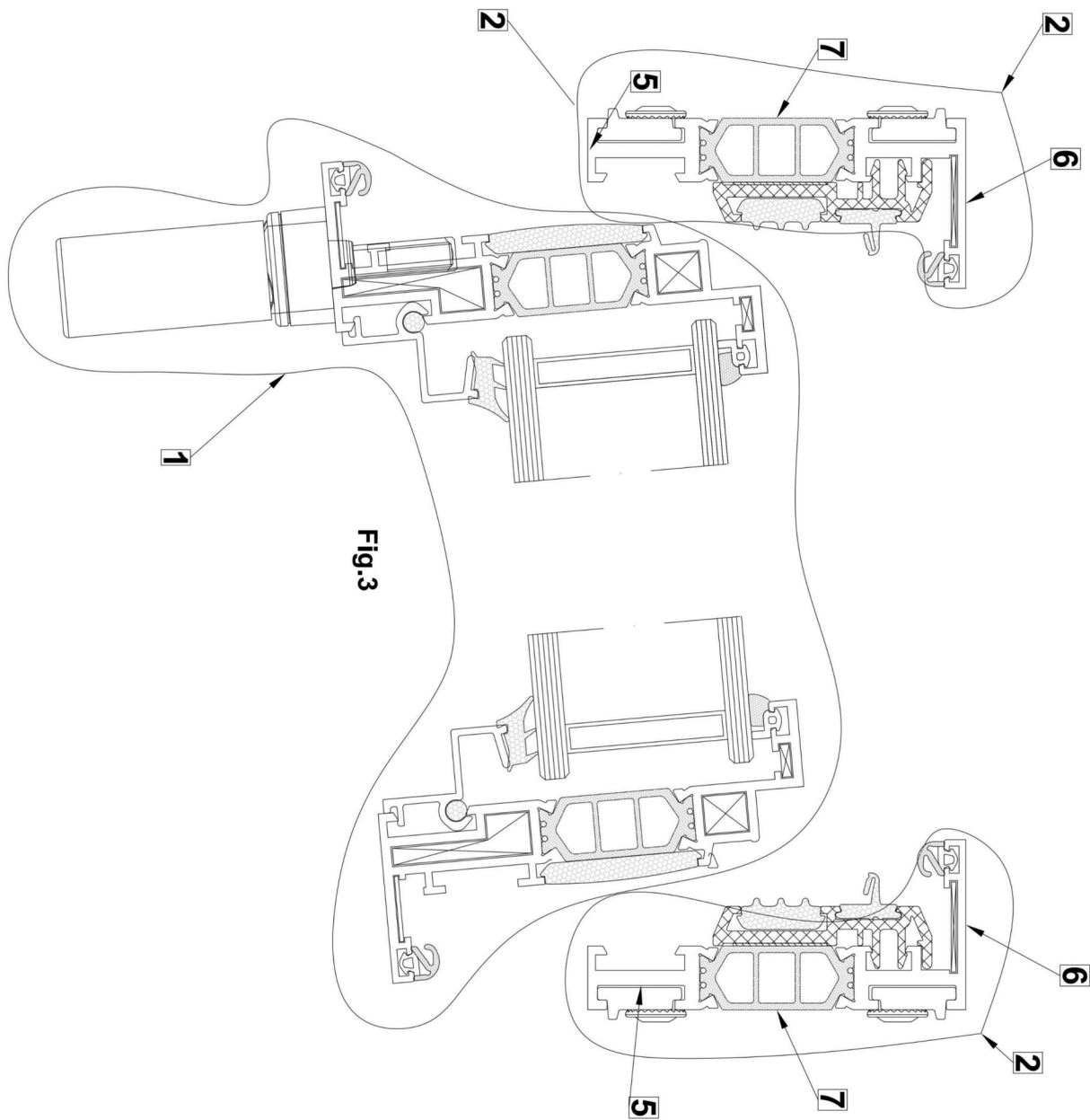
45

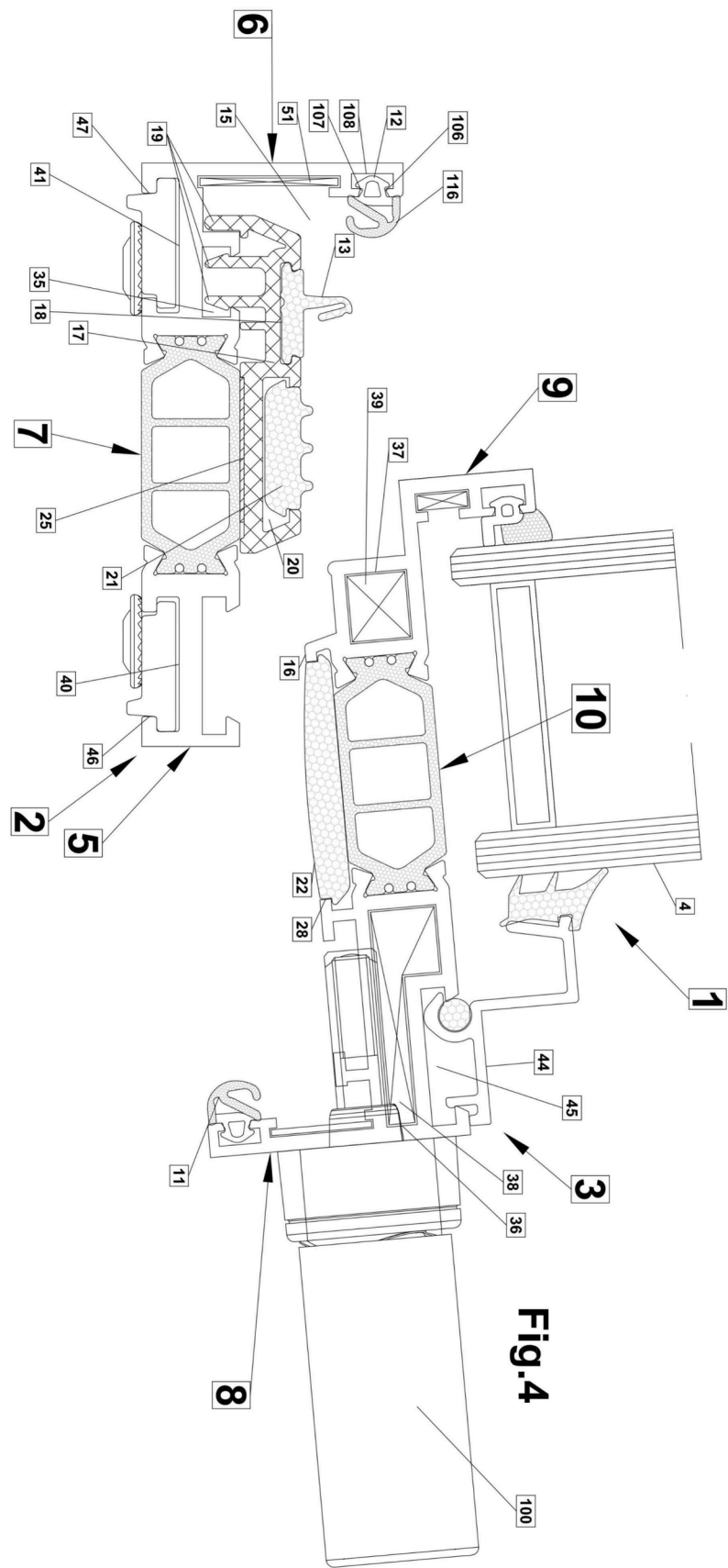
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EUROPEAN SEARCH REPORT

Application Number

EP 26 16 6317

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	DE 10 2012 111005 A1 (HEROAL JOHANN HENKENJOHANN GMBH & CO KG [DE]) 15 May 2014 (2014-05-15) * paragraph [0037]; figure 1A *	1-10	INV. E06B1/32 E06B3/263 E06B7/23 E06B3/58 E06B3/62
Y	EP 1 408 192 A2 (ALUPLAST GMBH [DE]) 14 April 2004 (2004-04-14) * paragraph [0002] * * paragraph [0009] * * paragraph [0011] - paragraph [0012] * * paragraph [0021] * * paragraph [0026]; figures 1, 3 *	1-10	
Y	EP 1 619 343 A2 (HELLENIC ALUMINIUM INDUSTRY EL [GR]) 25 January 2006 (2006-01-25) * paragraph [0015] * * paragraph [0024]; figure 4 *	1-10	
Y	EP 2 166 190 A2 (BARTELT WOLFGANG [DE]) 24 March 2010 (2010-03-24) * paragraph [0013] * * paragraph [0016] * * paragraph [0021] * * paragraph [0025]; figure 1 *	1-10	TECHNICAL FIELDS SEARCHED (IPC) E06B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		6 July 2026	Sonntag, Liana
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

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EP 26 16 6317

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06-07-2026

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 102012111005 A1	15-05-2014	NONE	

EP 1408192 A2	14-04-2004	DE 10246932 A1	22-04-2004
		EP 1408192 A2	14-04-2004

EP 1619343 A2	25-01-2006	AT E378490 T1	15-11-2007
		DE 602005003271 T2	18-09-2008
		DK 1619343 T3	25-03-2008
		EP 1619343 A2	25-01-2006
		ES 2297654 T3	01-05-2008
		PL 1619343 T3	30-04-2008
		PT 1619343 E	22-02-2008

EP 2166190 A2	24-03-2010	DE 102008034347 A1	04-02-2010
		DE 202008017626 U1	22-04-2010
		EP 2166190 A2	24-03-2010

30

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