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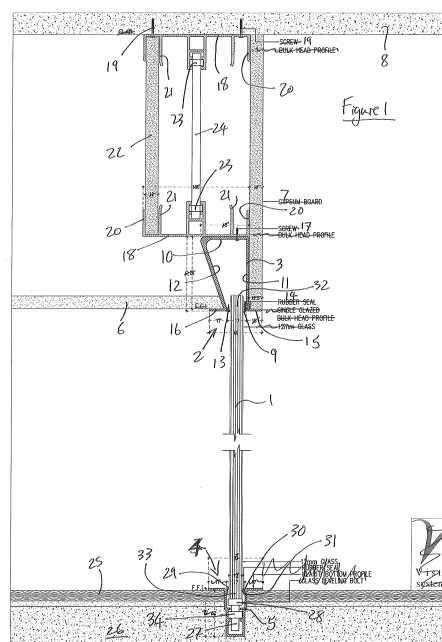
This application was filed on 05-06-2018 as a divisional application to the application mentioned under INID code 62.

(54) **MOUNTING PARTITIONING PANELS**

(57) A building is provided with a partitioning panel mounted in first and second channels defined in respective first and second elongate extrusions. The first extrusion is mounted in ceiling space located above a suspended ceiling of the building with the first channel defining an opening formed in the ceiling. The second extrusion is mounted in flooring of the building in space defined below a visible upper surface of the flooring with the second channel defining an opening with substantially the same cross-sectional width as the first channel opening. The partitioning panel has a vertical extent greater than the vertical separation between the first and second extrusions.

The partitioning panel is mounted in place by a method comprising several steps. The first extrusion is mounted in ceiling space located above a suspended ceiling with the upper channel opening forming an opening in the ceiling, the horizontal width of the upper channel being greater at positions internally thereof than at the upper channel opening. The second extrusion is mounted in flooring in space defined below a visible upper surface of the flooring. The panel is selected to have an extent between a first edge of the panel and a second edge of the panel opposite the first that is greater than the separation between the suspended ceiling and the visible upper surface of the flooring, the panel defining an upper edge portion adjacent the first edge and a lower edge portion adjacent the second edge. The upper edge por-

tion is offered up to the upper channel with the plane of the panel making an acute angle to the vertical. The upper edge portion is slid into the upper channel at said acute angle. The panel is rotated into the vertical plane with its upper edge portion within the upper channel, and its lower edge portion is dropped into the lower channel.



Description

[0001] This disclosure relates to the mounting of partition panels.

[0002] It is a common practice to provide partitioning panels, typically of glass, in offices mounted in respective upper and lower channels. Heretofore, the vertical height of such panels has necessarily had to be less than the vertical height between the position at which the panel is supported in the lower channel and the surface of the ceiling, typically a suspended ceiling, in order to allow the panel to be fitted.

[0003] The present disclosure has arisen from work seeking to avoid or overcome this restriction.

[0004] In accordance with one aspect of the present disclosure, there is provided a method of mounting a generally planar partitioning panel in a generally vertical orientation in vertically separated upper and lower open channels respectively defined by a first elongate extrusion having a first extruded section and a second elongate extrusion having a second extruded section, the method comprising the steps of: mounting the first extrusion in ceiling space located above a suspended ceiling with the upper channel opening forming an opening in the ceiling, the horizontal width of the upper channel being greater at positions internally thereof than at the upper channel opening; mounting the second extrusion in flooring in space defined below a visible upper surface of the flooring; selecting a panel having an extent between a first edge of the panel and a second edge of the panel opposite the first that is greater than the separation between the suspended ceiling and the visible upper surface of the flooring, the panel defining an upper edge portion adjacent the first edge and a lower edge portion adjacent the second edge; offering up the upper edge portion to the upper channel with the plane of the panel making an acute angle to the vertical; sliding the upper edge portion into the upper channel at said acute angle; rotating the panel into the vertical plane with said upper edge portion within the upper channel; and dropping the lower edge portion into the lower channel.

[0005] The first extrusion may take many forms, including an extruded section with a generally circular internal cross-section with the channel opening extending along the length of the circular section; but, in preferred embodiments, the first extrusion has a generally trapezoidal internal cross-section, with the upper channel opening defining one of the two parallel sides of the trapezium and an internal wall of the first extrusion defining the other of the two parallel sides of the trapezium, with the said other side being greater in extent than the one side.

[0006] The second extrusion may also take many forms. It may be sunk into the subfloor beneath the visible flooring, which may be provided, for example, by carpet, carpet tiles, luxury vinyl flooring, wood blocks, wood strips or wood panels. Alternatively, where it is not practicable to cut into the subfloor, the second extrusion, may take a shallower form being fitted into the visible flooring

above the subfloor.

[0007] In a particularly preferred arrangement, within the open lower channel, there are mounted at least two internally threaded sockets at spaced positions along the length of the channel, and corresponding headed threaded members are threadedly engaged with respective said sockets; and the lower edge portion of the panel rests on the respective heads of the threaded members when dropped into the lower channel. As will be appreciated, the co-operating threaded members and sockets allow both for height adjustment and for counteracting minor irregularity in the distance between ceiling and floor.

[0008] The respective edges of the channel openings are preferably provided with elastomeric sealing strips.

[0009] In a second and alternative aspect of this disclosure, there is provided a mounting system for mounting a generally planar partitioning panel in a generally vertical orientation, the system comprising first and second elongate extrusions respectively defining first and second open channels; the first extrusion being adapted for mounting in ceiling space located above a suspended ceiling with the first channel opening forming an opening in the ceiling, the cross-sectional width of the first channel parallel to the plane of the first channel opening being greater at positions internally thereof than at the channel opening; and the second extrusion being adapted for mounting in flooring in space defined below a visible upper surface of the flooring, and having a second channel opening with substantially the same cross-sectional width as the first channel opening; whereby a panel having an extent between a first edge of the panel and a second edge of the panel opposite the first that is greater than the separation between the suspended ceiling and the visible upper surface of the flooring, the panel defining an upper edge portion adjacent the first edge and a lower edge portion adjacent the second edge, may be mounted when the first and second elongate extrusions have respectively been mounted in the said ceiling space and in the said flooring by offering up the upper edge portion to the first channel with the plane of the panel making an acute angle to the vertical; sliding the upper edge portion into the first channel at said acute angle; rotating the panel into the vertical plane with said upper edge portion within the first channel; and dropping the lower edge portion into the second channel.

[0010] Reference may now be made to the accompanying drawings which illustrate particular embodiments of the mounting system, by way of example only, in which:-

Fig. 1 is a sectional view through a partition panel mounted between a first extrusion in a suspended ceiling behind a bulkhead board and a second extrusion mounted in a sub-floor;

Fig. 2 is a sectional view similar to Fig. 1 in which an alternative embodiment of second extrusion is mounted in flooring above a sub-floor;

Fig. 3 is a sectional view similar to Fig. 1 in which a modified first extrusion is mounted in a suspended ceiling;

Fig. 4 is a sectional view similar to Fig. 3 in which a pair of glass panels are mounted in a double-glazed arrangement in modified extrusions.

[0011] Turning first to Fig. 1, a partition panel, suitably a glass panel 1, is shown mounted in a generally vertical orientation in an upper channel 2 defined by a first elongate extrusion 3 having a first extruded section and a lower channel 4 defined by a second elongate extrusion 5 having a second extruded section. The upper channel 2 is mounted at the edge of a suspended ceiling 6 suitably formed from gypsum board behind a bulkhead board 7 also suitably formed of gypsum board, the whole being suspended from ceiling proper 8.

[0012] In the illustrated arrangement, the first extrusion 3 has an internal cross-section in the form of a right trapezium with the upper channel opening 9 defining one of the two parallel sides of the trapezium and a rear internal wall 10 defining the other of the two parallel sides of the trapezium, internal wall 10 being greater in extent than the channel opening 9. A second wall 11 of the trapezium forms a right angle with rear wall 10 and provides support behind bulkhead board 7. The remaining wall 12 of the trapezium extends at an angle from the channel opening to rear wall 10. Upper channel opening 9 is provided with a seal in the form of respective elastomeric sealing strips 13, 14 along the respective elongate sides thereof.

[0013] Either side of upper channel opening 9, extrusion 3 has respective flanges 15, 16. Flange 15 supports an edge of bulkhead board 7, while flange 16 supports an edge of the suspended ceiling 6. A series of screws 17 positioned at spaced intervals along internal rear wall 10 of extrusion 3 mount the extrusion 3 to one of a pair of bulkhead profiles 18, each in the form of an elongate extrusion shown in section in Fig. 1, the other such bulkhead profile being fixed by screws 19 directly to ceiling proper 8. Each bulkhead profile 18 is formed with spaced parallel walls 20, 21 along each edge and inboard of each edge. A back board 22 is slotted into the gap between these walls, along one edge of the bulkhead profiles, while outer walls 20 along the other edge provide rear support to bulkhead board 7. Each bulkhead profile has respective captive nuts 23 and a tie bolt 24 is mounted between them. The tie bolt 24 has threads of opposite hand at its opposite ends, and the captive nuts have cooperating threads also of opposite hands in the two bulkhead profiles 18 so that turning the tie bolt 24 one way or the other will adjust the spacing between the two bulkhead profiles 18.

[0014] Flooring 25 such as a carpet, carpet tiles, luxury vinyl flooring, wood blocks, wood strips or wood panels is mounted over a subfloor 26, typically of concrete. Second extrusion 5 is sunk into the subfloor 26 beneath the

visible flooring 25 through which it passes. Fig. 1 shows an internally threaded socket 27 within lower channel 4. A headed threaded member 28 is threadedly engaged with socket 27. At least one other, and preferably a plurality of, similar socket(s) and headed member(s) will be located at (a) position(s) spaced from the first socket along the length of extrusion 5. Respective elastomeric sealing strips 29, 30 extend along either side of lower channel opening 31.

[0015] In order to mount the panel 1, which it will be noted has a height greater than the separation between headed member 28 and the suspended ceiling 6, an upper edge portion 32 thereof is offered up to upper channel opening 9 at an angle to the vertical, and is slid past sealing strips 13, 14 at the said angle into space within the extrusion, the angled wall 12 of the cross-section of the extrusion 5 allowing for this. When the upper edge portion 32 has been slid sufficiently into upper channel 2 to allow a lower edge portion 33 of the panel 1 to be pushed forwardly into position above lower channel opening 31 by rotating the panel within the upper channel 2 into a vertical plane, the lower edge portion 33 may be dropped into lower channel opening 31 past the sealing strips 29, 30 to rest on heads 34 of the headed members 28.

[0016] Turning now to Fig. 2 which shows a variant of the arrangement of Fig. 1 suitable for use when it is not feasible to cut into the subfloor to mount second extrusion 5 therein. The Fig. 2 arrangement employs a much shallower second extrusion 35 which may be located in the visible flooring 25, for example between carpet tiles 36. A screw mounts the rear of extrusion 35 to the subfloor 26, and lower edge portion 33 of panel 1 dropped between sealing strips 29, 30 on either side of lower channel opening 31 sits on a wood packer 37.

[0017] There is also a minor change in the first extrusion 3 in the Fig. 2 embodiment. Forward flange 15 is connected to an upstanding edge panel 38 to define a space between upstanding edge panel 38 and second wall 11 to receive a lower edge of bulkhead board 7.

[0018] It is unnecessary for the upper channel 2 to be located adjacent to a bulkhead. Fig. 3 shows an upper channel 2 provided by an alternative embodiment 39 of first extrusion. In this case, a pair of bulkhead profiles 18 provided with captive nuts 23 and a tie bolt 24 as in the Fig. 1 arrangement support a pair of back boards 22 between the respective parallel walls 20, 21. First extrusion 39 still has an internal cross-section in the form of a trapezium, but not a right trapezium in this case. Rear wall 40 is parallel to upper channel opening 9. Both of the remaining walls 41, 42 of the trapezium extend at an angle to the upper channel opening. As a result, upper edge portion 32 of panel 1 may be offered up to the upper channel opening 9 from either side, whereas in the Fig. 1 arrangement, this would only be possible from the right.

[0019] Fig. 4 shows how the system may be modified to accommodate double glazing, which may be important in offices to reduce sound transmission through the glass

panels. A pair of glass panels 1 are mounted in upper and lower double channel extrusions 43, 44. Upper channel extrusion 43 defines respective left and right upper channels 45, 46. Right channel 46 is generally similar to the configuration of extrusion 3 shown in Fig. 1, while left channel 45 is its mirror image, the two being conjoined. Right channel 46 has an angled internal wall 47 corresponding to angled wall 12 of the Fig. 1 arrangement, allowing a panel 1 to be offered up to right upper channel 46 from the right, while left upper channel 45 has an angled internal wall 48 allowing the other panel 1 to be offered up to left upper channel 45 from the left. Upper channel extrusion 43 is mounted to bulkhead profile 18 by screws 49 extending through a rear wall 50 common to the two channels. A cover plate 51 serves as an infill between the two channels. Lower channel extrusion 44 defines left and right channels 52, 53 similar to lower channel 4 of the Fig. 1 arrangement with interconnecting walls 54 and 55. A cover plate 51 again serves as an infill between the two channels.

Claims

1. A method of mounting a generally planar partitioning panel (1) in a generally vertical orientation in vertically separated upper (2, 45, 46) and lower (4, 52, 53) open channels respectively defined by a first elongate extrusion (3, 39, 43) having a first extruded section and a second elongate extrusion (5, 35, 44) having a second extruded section, the method comprising the steps of: mounting the first extrusion (3, 39, 43) in ceiling space located above a suspended ceiling (6) with the upper channel opening (9) forming an opening in the ceiling, the horizontal width of the upper channel being greater at positions internally thereof than at the upper channel opening; mounting the second extrusion (5, 35, 44) in flooring (25) in space defined below a visible upper surface of the flooring; selecting a panel (1) having an extent between a first edge of the panel and a second edge of the panel opposite the first that is greater than the separation between the suspended ceiling and the visible upper surface of the flooring, the panel defining an upper edge portion (32) adjacent the first edge and a lower edge portion (33) adjacent the second edge; offering up the upper edge portion (32) to the upper channel (2, 45, 46) with the plane of the panel making an acute angle to the vertical; sliding the upper edge portion (32) into the upper channel (2, 45, 46) at said acute angle; rotating the panel (1) into the vertical plane with said upper edge portion (32) within the upper channel (2, 45, 46); and dropping the lower edge portion (33) into the lower channel (4, 52, 53).
2. A method according to Claim 1, wherein the first extrusion has a generally trapezoidal internal cross-

section (9, 10, 11, 12; 9, 40, 41, 42), with the upper channel opening (9) defining one of the two parallel sides of the trapezium and an internal wall (10, 40, 50) of the first extrusion defining the other of the two parallel sides of the trapezium, with the said other side being greater in extent than the one side.

3. A method according to Claim 1, wherein the first extrusion has an extruded section with a generally circular internal cross-section with the channel opening extending along the length of the circular section.
4. A method according to any preceding Claim, wherein the second extrusion (5, 44) is sunk into a subfloor (26) beneath the flooring (25).
5. A method according to any of Claims 1, 2 or 3, wherein the second extrusion (35) is fitted into the flooring (25, 36) between the visible upper surface and a subfloor (26).
6. A method according to Claim 4 or Claim 5, wherein the flooring (25) is provided by one or more of carpet, carpet tiles, luxury vinyl flooring, wood blocks, wood strips and wood panels.
7. A method according to any preceding Claim, wherein, within the open lower channel (4), there are mounted at least two internally threaded sockets (27) at spaced positions along the length of the channel, and corresponding headed threaded members (28) are threadedly engaged with respective said sockets; and wherein the lower edge portion (33) of the panel rests on the respective heads of the threaded members when dropped into the lower channel.
8. A method according to Claim 7, including the additional step of rotating the headed threaded members (28) in their respective sockets (27) to adjust for height adjustment and/or to counteract minor irregularity in the distance between ceiling and floor.
9. A method according to any preceding Claim, wherein respective edges of the channel openings are provided with elastomeric sealing strips (13, 14; 29, 30).
10. A mounting system for mounting a generally planar partitioning panel (1) in a generally vertical orientation, the system comprising first (3, 39, 43) and second (5, 35, 44) elongate extrusions respectively defining first (2, 45, 46) and second (4, 52, 53) open channels; the system being **characterised in that** the first extrusion (3, 39, 43) is adapted for mounting in ceiling space located above a suspended ceiling (6) with the first channel opening forming an opening in the ceiling, the cross-sectional width of the first channel parallel to the plane of the first channel opening (9) being greater at positions internally thereof

than at the channel opening; **in that** the second extrusion (5, 35, 44) is adapted for mounting in flooring (25) in space defined below a visible upper surface of the flooring, and has a second channel opening with substantially the same cross-sectional width as the first channel opening; whereby a panel (1) having an extent between a first edge of the panel and a second edge of the panel opposite the first that is greater than the separation between the suspended ceiling and the visible upper surface of the flooring, the panel defining an upper edge portion (32) adjacent the first edge and a lower edge portion (33) adjacent the second edge, may be mounted when the first and second elongate extrusions have respectively been mounted in the said ceiling space and in the said flooring by offering up the upper edge portion (32) to the first channel (2, 45, 46) with the plane of the panel making an acute angle to the vertical, sliding the upper edge portion (32) into the first channel (2, 45, 46) at said acute angle, rotating the panel (1) into the vertical plane with said upper edge portion (32) within the first channel (2, 45, 46), and dropping the lower edge portion (33) into the second channel (4, 52, 53).

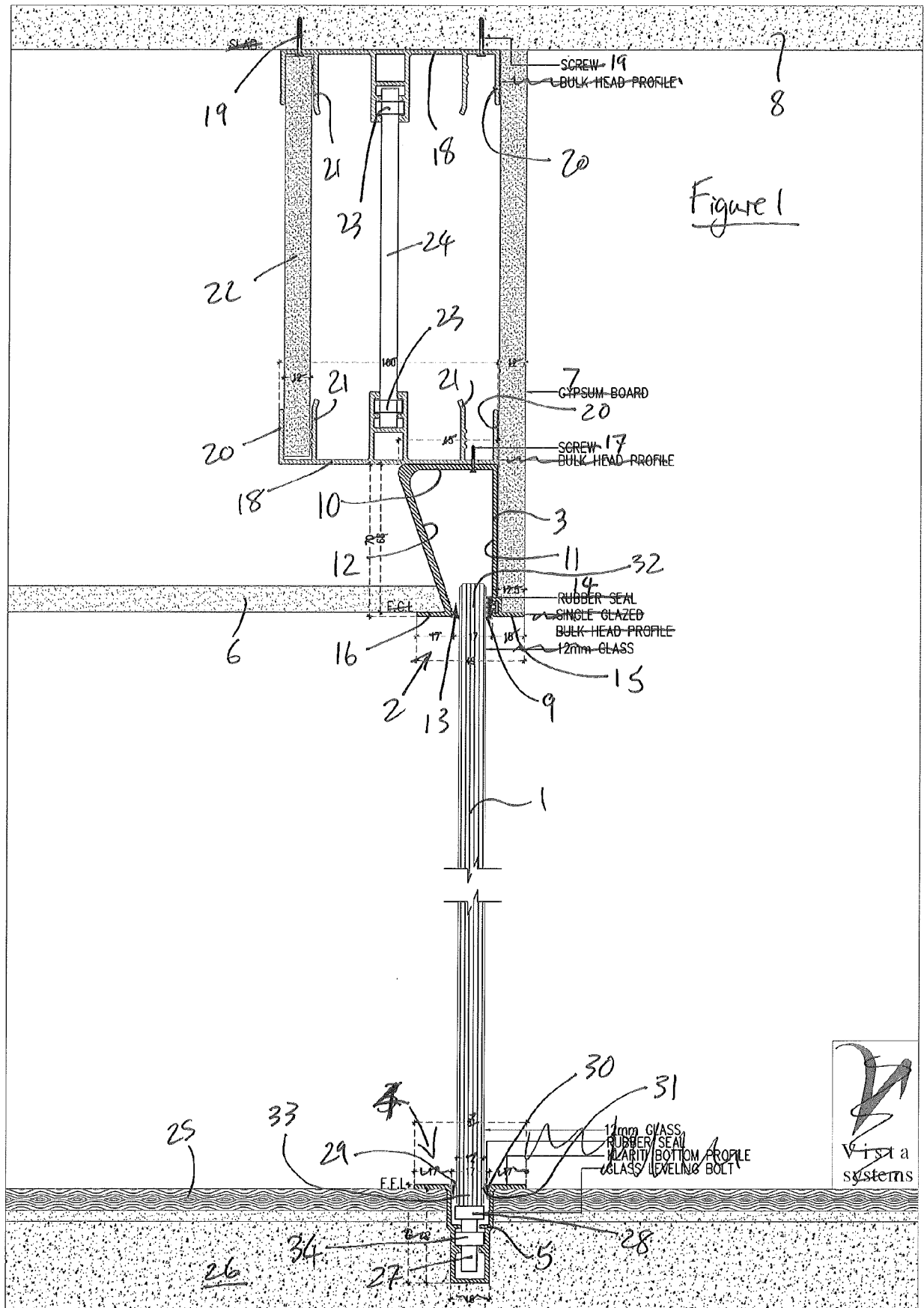
11. A mounting system according to Claim 10, further **characterised in that** the first extrusion (3, 39, 43) has a generally trapezoidal internal cross-section (9, 10, 11, 12; 9, 40, 41, 42), with the upper channel opening (9) defining one of the two parallel sides of the trapezium and an internal wall (10, 40, 50) of the first extrusion defining the other of the two parallel sides of the trapezium, with the said other side being greater in extent than the one side.

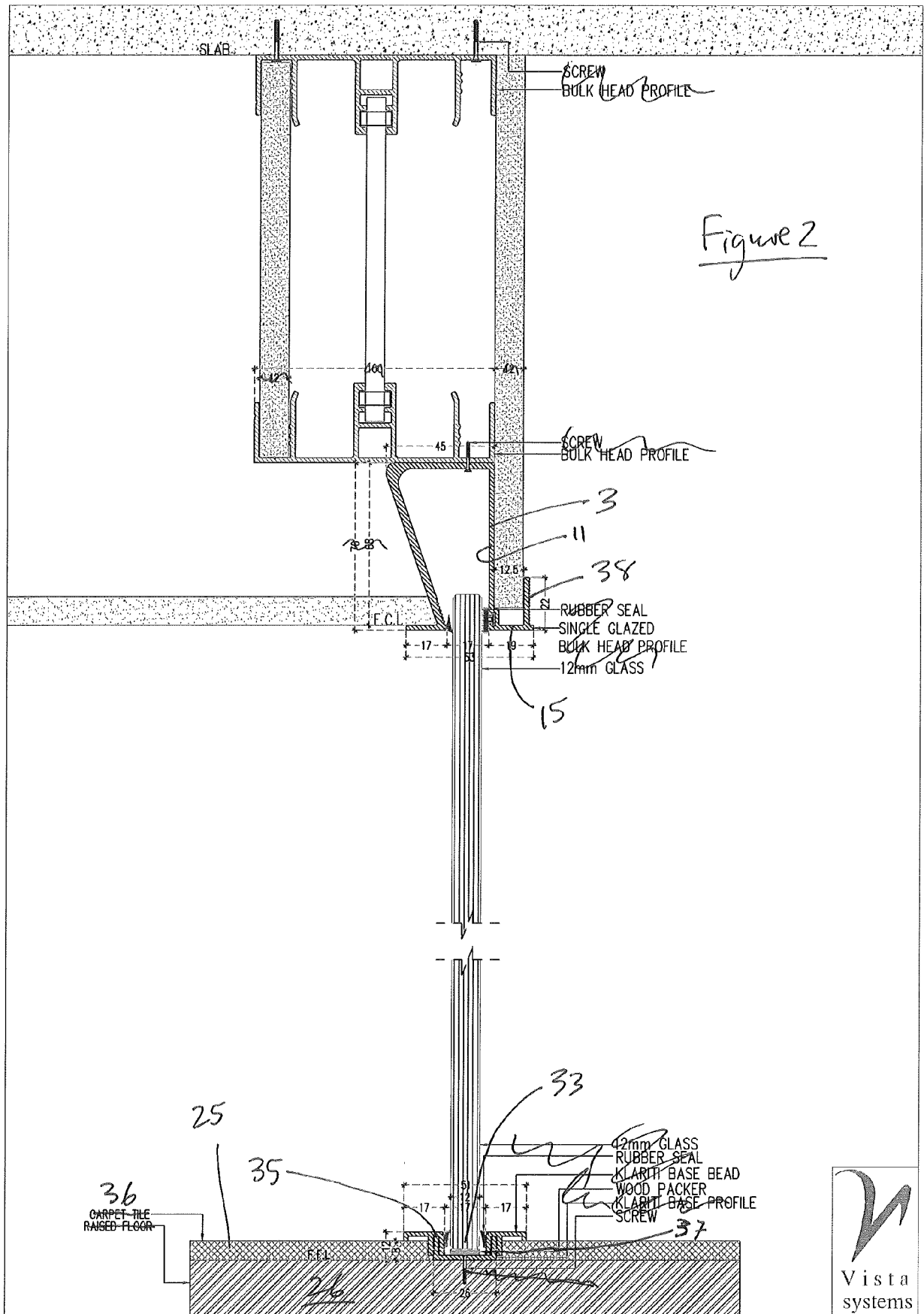
12. A mounting system according to Claim 10, further **characterised in that** the first extrusion has an extruded section with a generally circular internal cross-section with the channel opening extending along the length of the circular section.

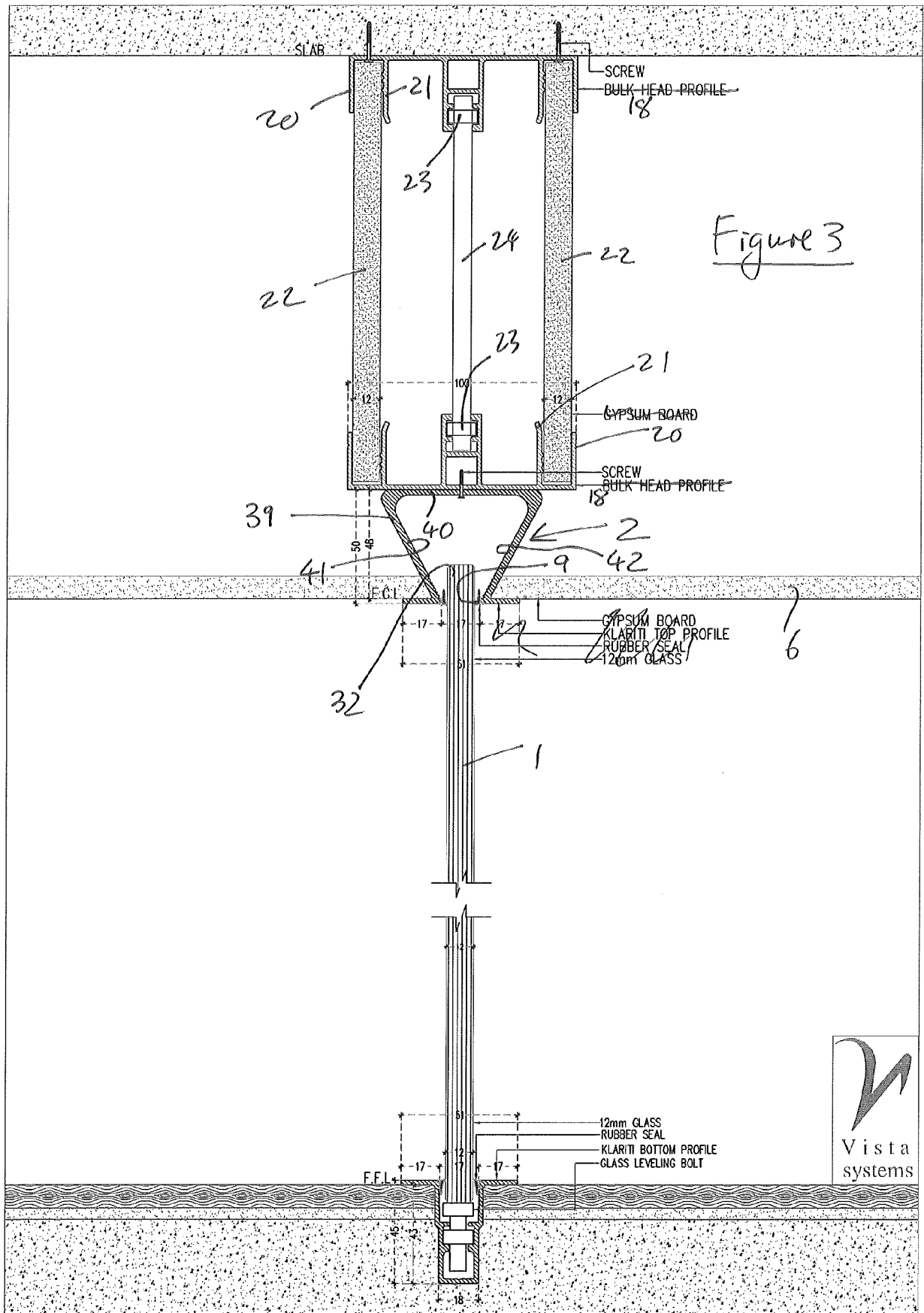
13. A mounting system according to any of Claims 10, 11 or 12, further **characterised in that**, within the open lower channel (4), there are mounted at least two internally threaded sockets (27) at spaced positions along the length of the channel, and corresponding headed threaded members (28) are threadedly engaged with respective said sockets; and **in that** the lower edge portion (33) of the panel is adapted to rest on the respective heads of the threaded members when dropped into the lower channel.

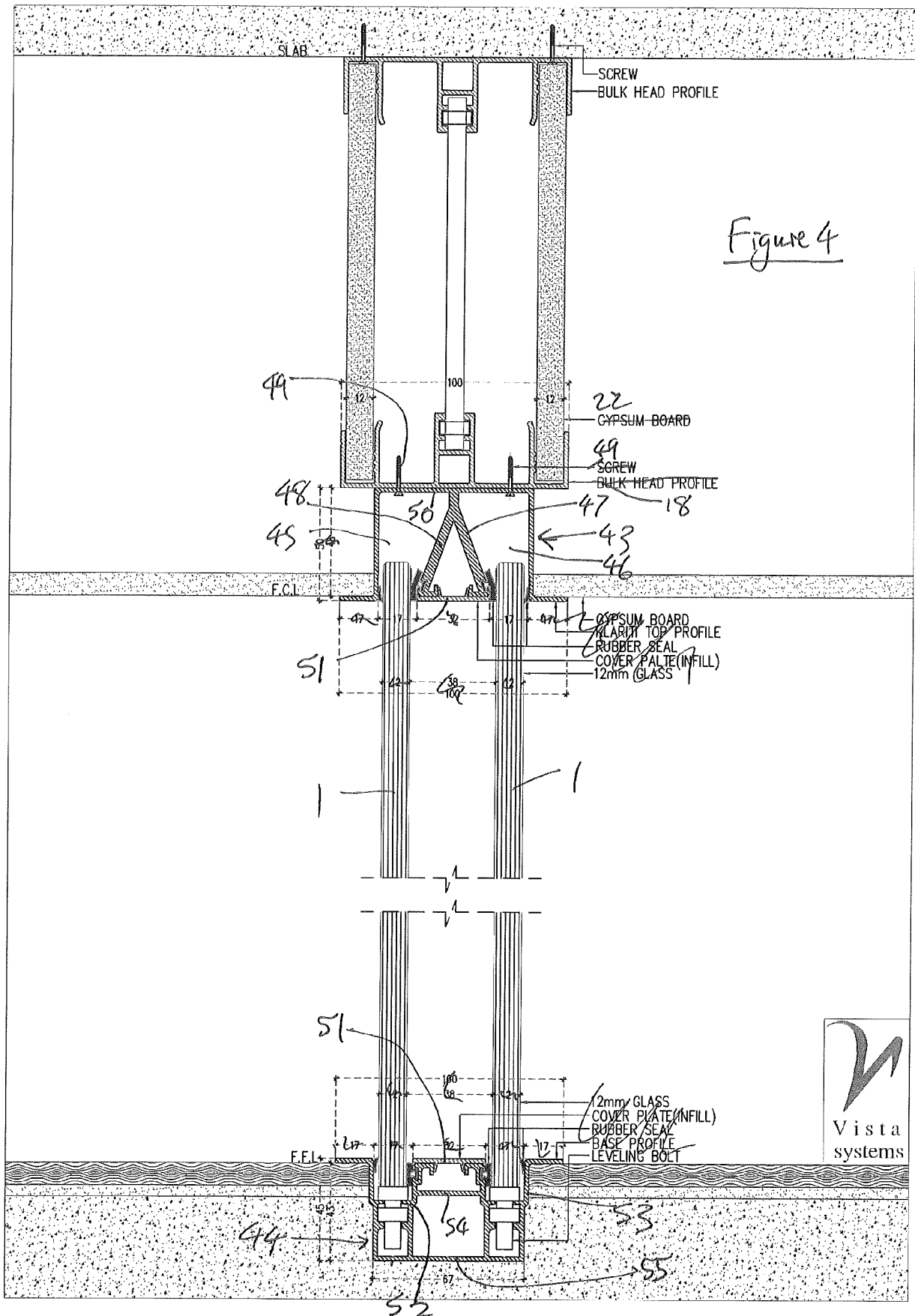
14. A mounting system according to any of Claims 10 to 13, further **characterised in that** respective edges of the channel openings are provided with elastomeric sealing strips (13, 14; 29, 30).

15. A building provided with a partitioning panel (1) mounted in first (2, 45, 46) and second (4, 52, 53) channels defined in respective first (3, 39, 43) and second (5, 35, 44) elongate extrusions, **characterised in that**: the first extrusion (3, 39, 43) is mounted in ceiling space located above a suspended ceiling (6) of the building with the first channel (2, 45, 46) defining an opening formed in the ceiling, and **in that** the second extrusion (5, 35, 44) is mounted in flooring (25) of the building in space defined below a visible upper surface of the flooring with the second channel (4, 52, 53) defining an opening with substantially the same cross-sectional width as the first channel opening; and the partitioning panel (1) having a vertical extent greater than the vertical separation between the first and second extrusions.











EUROPEAN SEARCH REPORT

Application Number
EP 18 02 0246

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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	WO 02/14616 A1 (ISOLAMIN AB [SE]; JOHANSSON ANDERS [SE]) 21 February 2002 (2002-02-21) * page 2, line 20 - page 6, line 9 * * figures *	1-15	INV. E06B3/54 E06B3/64 E04B9/00 E04B2/74 E04B2/72
Y	US 3 309 816 A (MALONE JR BENJAMIN D) 21 March 1967 (1967-03-21) * column 2, line 36 - column 6, line 40 * * figures *	1-15	
A	DE 20 2009 009548 U1 (DORMA GMBH & CO KG [DE]) 10 September 2009 (2009-09-10) * paragraph [0029] - paragraph [0040] * * figures *	2,11	
A	US 4 286 419 A (TREFFERS WILLEM M) 1 September 1981 (1981-09-01) * column 2, line 9 - column 5, line 14 * * figures *	3,12	
A	WO 2015/075586 A1 (TECNO SPA) 28 May 2015 (2015-05-28) * paragraph [0050] - paragraph [0186] * * figures *	7,8,13	TECHNICAL FIELDS SEARCHED (IPC) E06B E04B
A	WO 2009/153674 A1 (GEMINO S R L [IT]; GRANDI RUGGERO [IT]) 23 December 2009 (2009-12-23) * page 6, line 1 - page 14, line 12 * * figures *	1	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 24 September 2018	Examiner López-García, G
CATEGORY OF CITED DOCUMENTS 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 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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 18 02 0246

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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24-09-2018

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0214616 A1	21-02-2002	AU 8036901 A SE 515364 C2 WO 0214616 A1	25-02-2002 23-07-2001 21-02-2002
US 3309816 A	21-03-1967	NONE	
DE 202009009548 U1	10-09-2009	AU 2010268806 A1 DE 202009009548 U1 EP 2452026 A2 SG 176577 A1 US 2012117756 A1 WO 2011003578 A2	08-12-2011 10-09-2009 16-05-2012 30-01-2012 17-05-2012 13-01-2011
US 4286419 A	01-09-1981	BE 841678 A CA 1033139 A DE 2620429 A1 ES 447870 A1 FR 2311147 A1 GB 1530213 A IT 1071271 B JP S51140312 A NL 7505763 A US 4286419 A	12-11-1976 20-06-1978 25-11-1976 16-07-1977 10-12-1976 25-10-1978 02-04-1985 03-12-1976 17-11-1976 01-09-1981
WO 2015075586 A1	28-05-2015	EP 3074577 A1 US 2016356039 A1 WO 2015075586 A1	05-10-2016 08-12-2016 28-05-2015
WO 2009153674 A1	23-12-2009	AT 544916 T DK 2313572 T3 EP 2313572 A1 ES 2379325 T3 HR P20120169 T1 IT 1391041 B1 PL 2313572 T3 PT 2313572 E SI 2313572 T1 US 2011131900 A1 WO 2009153674 A1	15-02-2012 19-03-2012 27-04-2011 25-04-2012 30-04-2012 27-10-2011 31-07-2012 23-03-2012 31-07-2012 09-06-2011 23-12-2009