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(71) Applicant: REYNAERS ALUMINIUM, NAAMLOZE VENNOTSCHAP [BE/BE]; Oude Liersebaan 266, B-2570 Duffel (BE).

(72) Inventor; and
(71) Applicant : VANDERVELDEN, Stefan [BE/BE]; Grotesteenweg 161, B-2600 Berchem (BE).

(74) Agents: VAN VARENBERG, P. et al.; Bureau M.F.J. Bockstael nv., Arenbergstraat 13, B-2000 Antwerpen (BE).

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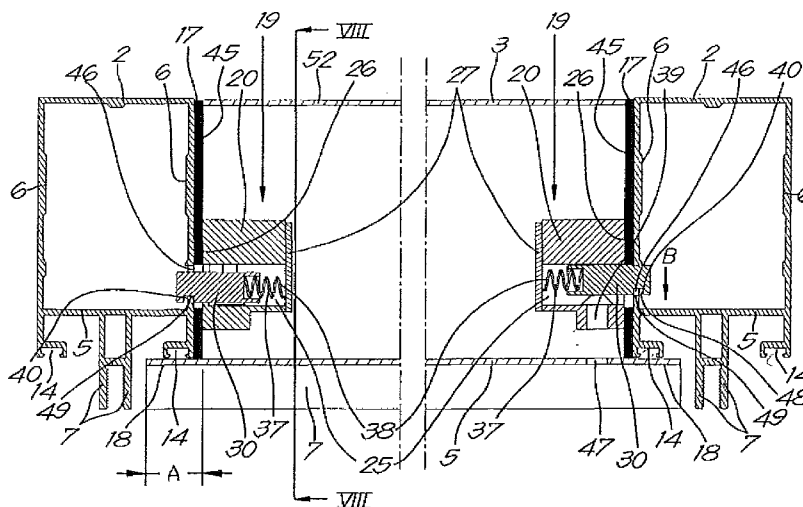
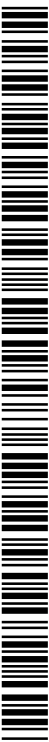


Fig. 7

(57) Abstract: T-connector for connecting two hollow profiles (2 and 3) together, and this T-connector (19) is provided with a housing (20) and a peg (30) that protrudes by a certain length, characterised in that the peg (30) as a whole can move sideways in a direction (Y-Y') perpendicular to the longitudinal direction (X-X') of the peg (30) with respect to the housing (20), and that the T-connector (19) is provided with or can be provided with drive means to move the peg (30) over a distance in the aforementioned direction (Y-Y') perpendicular to the longitudinal direction (X-X').



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T-connector and T-connection realised with it.

The present invention relates to an improved T-connector.

5

More specifically the invention relates to a T-connector of the type intended for connecting two profiles together perpendicularly or at an angle, more specifically hollow profiles of aluminium for example.

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More specifically such T-connectors are used in the construction of glass facades consisting of a frame construction of vertical posts and horizontal beams in the form of hollow profiles that are connected together by means of such T-connectors, whereby the construction acts as a supporting structure for the glass panels.

15

To this end the profiles are provided with a protruding part oriented towards the front of the facade in the form of a lip, which together form a frame in which the glass panels are affixed with the necessary sealants, hereby resting on glass supports that are fastened to the underlying rail and/or the adjacent post of the frame concerned.

25

The glass panels are clamped along their periphery by means of clamping profiles that are screwed against the protruding parts, after which these clamping profiles are covered by means of a covering profile.

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A first type of T-connection is known from EP 0.334.080 from EP 1.020.575, whereby the T-connection can be made between a post and a beam by partially milling away the end side of the beam in such a way that the beam can be mounted
5 against the front of the post with an overlapping part of the front wall and screwed to it by means of two screws in order to support the weight of the overlying glass panel and transmit it in a vertical direction on the post.

10 In order to prevent the rotation of the beam around its own axis a T-connector is used that is fastened in the hollow space of this end side of the beam and which is provided with a peg that is oriented horizontally in the direction of the post and which is intended to be affixed in a pre-
15 provided peg passage in the wall of the post, and which, in the case of EP 0.334.080 helps support the weight of the overlying glass panel.

This peg is provided with a groove that enables the edge of
20 the groove of the peg to catch behind the edge of the aforementioned peg passage, whereby the edge of the peg passage fits in the groove so that the peg cannot be unintentionally pulled out of the peg passage.

25 A disadvantage of these known T-connectors is that during assembly on site screws are needed to permanently connect the beams and the posts together.

This can also create inconveniences as screws can be lost
30 or forgotten.

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The screwing of screws into a metal profile also requires a certain dexterity and expertise.

5 In addition, with heavy glass weights the screws are often the weak point. Due to deformation of the facade the top screw is pulled out of the profile, such that the clamping of the rail to the post is no longer assured and the waterproofing is no longer assured.

10

In order to be able to accommodate expansion when using screws, the holes in the beam currently have to be slot-shaped. This gives an increased risk of air and water infiltration.

15

Moreover the screwing of a screw into a profile inevitably causes a local weakening of the profile and this can also give rise to the occurrence of corrosion around the screw hole and water infiltration.

20

The assembly of a glass facade with traditional T-connectors is also relatively complex and labour-intensive because the T-connectors are always used in combination with connecting screws for fastening to the post, and the
25 fact that with heavy glass panels other more complex types of T-connectors are used.

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In a second known type of T-connection there is no overlap between the beam and the post. This type provides the advantage that no material has to be removed to realise the

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overlapping section, but with this type of connection a leak-free seal between the post and the beam is much more difficult to realise.

5 The T-connectors used with this type of connection are generally complex and often cause local deformations where they are connected to the post.

The purpose of the present invention is to provide a
10 solution to one or more of the aforementioned and other disadvantages.

To this end the present invention concerns a T-connector for realising a T-connection, whereby the T-connector is
15 provided with a housing with side walls and an end wall from which a peg protrudes by a certain length perpendicular to this end wall, characterised in that the peg as a whole can move sideways in a direction perpendicular to the longitudinal direction of the peg with
20 respect to the housing, and that the T-connector is provided with or can be provided with drive means to move the peg over a distance in the aforementioned direction and can be held in a position, whereby these drive means are such that they can be accessed from the outside along an
25 aforementioned sidewall of the housing.

For connecting a post and a beam together according to the first type of T-connection, the T-connector according to the invention is fastened to the end side of the beam and
30 the beam is affixed against the post with an overlapping

- 5 -

wall part, whereby the peg of the T-connector is affixed in a peg passage in the post, after which the peg is moved by means of the drive means to the overlapping wall part, such that the post is clamped between this overlapping wall part
5 and the peg concerned.

This provides the advantage that no screws are needed to clamp the beam to the post as the movement of the peg ensures clamping.

10

The disadvantages of the use of screws are thereby resolved.

A T-connector according to the invention can moreover
15 accommodate expansion without holes having to be provided, in particular no slot-shaped holes.

Preferably the peg forms part of a peg body that is affixed movably in a cavity in the housing in the aforementioned
20 movement direction of the peg, whereby the peg protrudes by a length via a passage in the aforementioned end wall.

This embodiment enables a simple realisation.

25 According to a preferred embodiment the drive means for the movement of the peg is formed by a screw that is screwed in the peg body along a direction that extends parallel to the aforementioned direction of movement of the peg and which is provided with a screw head, which, in order to screw it
30 in, is accessible from the outside via a screwing access in

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a sidewall of the housing.

In this way the screw can be accessed via an opening that is provided to this end opposite the screwing access in the beam and the peg can hereby be turned with a screwdriver or
5 other suitable tool to fasten the beam to the post.

Such drive means are simple to implement and require no special tools or precautions and also enable a relatively
10 high clamping force to be developed.

It is preferable that the groove of the peg is oriented towards the sidewall with the screwing access.

15 This provides the advantage that when moving the peg in the direction of the overlapping wall part, not only does the clamping take place, but the edge of the peg passage is also held in the post in the groove of the peg.

20 This secures the peg in the post axially.

According to a practical embodiment the peg body is provided with two pegs that ensure that the rotation of the beam as a result of the weight of an overlying glass panel
25 can be prevented without a second T-connector having to be provided at the back of the beam.

Alternatively to accommodate the aforementioned rotation, a non-cylindrical peg, for example a beam-shaped peg, is
30 applied instead of two pegs.

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Additionally a T-connector according to the invention can be used in combination with a known elastic T-connector when the torsional forces on the beam are very high and the profiles are very wide.
5

With a T-connector according to the invention in combination with a second T-connector, according to the invention or otherwise, the beam can also be clamped to the post without an overlapping wall part being required between the beam and the post, and the beam is thus sawn off straight at its end side to be connected.
10

In summary a new T-connector according to the invention combines the following functions:
15

- The tightening of the beam on the post, instead of traditionally with screws;
- The accommodation of the weight of the glass panels, instead of traditionally by means of screws;
- 20 • The counteraction of the rotation of the beam around its own axis instead of traditionally by means of screws in combination with a conventional elastic T-connector.

Additionally it can accommodate expansion of the beam and also saves time and enhances ease of use on the site.
25

The invention also relates to a T-connection between two hollow profiles, respectively a post and a beam which together form a part of a frame of a glass facade, whereby the beam with an end side is affixed perpendicularly or at
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an angle to an inside wall of the post, characterised in that the profiles are connected together by means of a T-connector as described above, whereby the T-connector is clamped by its housing in the beam and its peg is inserted
5 in a peg passage of the post, whereby the peg is moved in the direction of the front wall of the post such that the post is clamped by a part between the peg of the T-connector concerned and either a protruding front wall part at the end side concerned of the beam with which the beam
10 is affixed overlapping against the post, or a peg of a second T-connector with which the beam is affixed to the post by its end side concerned.

With the intention of better showing the characteristics of
15 the invention, a preferred embodiment of a T-connector according to the invention and a T-connection realised with it are described hereinafter by way of an example, without any limiting nature, with reference to the accompanying drawings, wherein:

20

Figure 1 schematically shows a perspective and partially exploded view of a construction of a glass facade with T-connectors according to the invention;
figure 2 shows a T-connection in a mounted form and in a situation still to be mounted respectively;
25 figure 3 shows the T-connector indicated by F3 in figure 2 on a larger scale;
figure 4 shows the T-connector of figure 3 in a partially exploded form;
30 figure 5 shows the T-connector of figure 3 along the

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back and in a partially exploded form;
figures 6 and 7 show a cross-section according to line
VI-VI and line VII-VII respectively of figure 2;
figure 8 shows a cross-section according to line VIII-
5 VIII in figure 7.

Figures 1 and 2 show a part of a facade construction of a
glass facade 1, and this facade construction is made up of
vertical posts 2 between which beams 3 are affixed, which
10 together form frames in which glass panels 4 can be
fastened.

The posts 2 and beams 3 are constructed as hollow
rectangular profiles with a front wall 5 oriented towards
15 the front of the facade and, connected to them, inside
walls 6 oriented towards the inside of the frames.

The profiles of the posts 2 and beams 3 have a protruding
part on their front walls in the form of a double lip,
20 whereby the glass panels 4 rest on an underlying protruding
part 7 via a glass support 8.

The glass panels 4 are secured to the facade construction
of posts 2 and beams 3 by means of clamping profiles 9 that
25 are screwed to the protruding parts 7 with screws 10,
whereby on the one hand seals 11 are provided all around
along the edges of the glass panels 4 between the glass
panels 8 and the front wall 5 of the posts 2 and beams 3,
and on the other hand seals 12 between the glass panels 8
30 and clamping profiles 9.

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The glass facade 1 is finished with covering profiles 13 that cover the clamping profiles.

5 For the fitting of the seals 11 to the front walls 5 of the posts 2 and beams 3, the front walls 5 are provided with mouldings 14 on either side of the protruding part 7 in a known way, in which or on which the seals 11 can be wedged with a suitable base.

10

Analogously the clamping profiles are provided with mouldings 15 for fastening the seals 12.

15 The beams are affixed with an end side 16 against an inside wall 6 of a post 2 of fixed with an intermediate seal 17.

The material of the beam 3 at this end side 16 is partially removed over a short distance A by milling or by another technique, and this in such a way that over this distance A
20 only the front wall 5 of the beam 3 remains, whereby this remaining front wall is mounted as an overlapping wall part 18 against the front wall 5 of the post 2.

25 The beam 3 is fastened to the post 2 by means of a T-connector 19 according to the invention that is shown in more detail in figures 3 to 5.

30 The T-connector 19 contains a housing 20 with two opposite profiled sidewalls 21 and 22 that are connected together by two other opposite sidewalls 23 and 24.

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The housing defines an internal cavity 25 that is covered by a fixed end wall 26 and an end wall 27 in the form of a detachable cover that is screwed down, for example.

5

In the cavity 25 there is a movable beam-shaped peg body 28 that is provided on one side 29 with two fixed, in this case identical, pegs 30 that are at a distance from one another and which extend in their longitudinal direction with their axes X-X' parallel to one another.

10

In the example shown the peg body 28 is provided with two threaded passages 31 that extend transversely through the peg body 28 in a direction Y-Y' transverse to the plane formed by the longitudinal direction X-X' of the pegs 30 and the line Z-Z' that connects the centres of the pegs 30.

15

The threaded passages 31 are at the same distance with respect to the pegs 30.

20

The peg body 28 is symmetrical with respect to a plane perpendicular to the plane X-X'/Z-Z' in the middle between the axes X-X' of the pegs 30.

25

In one of the two threaded passages 31 a screw 32 is screwed in with a conical head 33 with a star shaped recess 34 for screwing with a suitable tool.

30

The entrance of the threaded passages 31 is provided with a conical seat 35 in which the conical head 33 of the screw

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32 can be screwed in a countersunk way.

At the start before fitting, the screw 32 is not fully
screwed in and part at the head 33 protrudes out of the peg
5 body 28.

The end wall 26 is provided with two passages 36 for the
pegs 30 that are constructed in the form of clearance holes
that extend parallel to the direction Y-Y' of the threaded
10 passages 31 and which are located at the same distance from
the sidewalls 21 and 22.

Between the cover 27 and the peg body 28 an elastic element
37 in the form of a compression spring 38 is affixed that
15 presses the peg body 28 against the inside of the end wall
26 and thus forms an end stop, whereby the pegs 30 are
inserted through the passages 36 and come outside the end
wall 26 by a length, as illustrated in figure 3.

20 In the side wall 23 in the extension of the screw 32
opposite the screw head 33 of the screw 32, screwing
accesses 39 are provided to be able to screw in the screw
32 from the outside in order to be able to move the peg
body 28 together with the pegs 30 in the direction Y-Y' of
25 the threaded passages 31 perpendicular to the longitudinal
direction X-X' of the pegs 30.

In the mounted situation of the T-connector 19, the screw
32 is held in the axial direction Y-Y' in the cavity 25 of
30 the housing, for example by the screw 32 being held in the

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axial direction Y-Y' between the sidewalls 23 and 24 that define the cavity 25.

Before the T-connector 19 is used the screw 32 is screwed
5 in such that the peg body 28 and the pegs 30 are moved in a premounted situation as far as possible away from the sidewall 23.

The pegs 30 are preferably provided with a groove 40 that
10 extends perpendicular to the longitudinal direction of the peg up to a certain depth and which is oriented with its opening towards the sidewall 23 with screwing accesses 39.

The housing 20 is optionally provided with means 41 to
15 clamp the housing 20 in a profile 2-3 to be connected, whereby these clamping means can consist of two parts 42 and 43 that can move with respect and one another and which can be driven apart by means of a screw 44.

20 The use of a T-connector 19 according to the invention for connecting a post 2 to an end side of a beam 3 is very simple and as follows.

The end side of the beam 3 is provided with an overlapping
25 wall part 18 prior to production.

In the end side a T-connector 19 according to the invention is affixed with the pegs 30 oriented towards the outside and the screwing accesses 39 oriented towards the front
30 wall 5 of the beam 3 and with the screw 32 in the bottom

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threaded passage 31.

The profiled sidewalls 21 and 22 are such that the T-connector 19 fits and can slide in the profile of the beam 3, as illustrated in figure 6.

The T-connector 19 is positioned in the beam 3 such that the end wall 26 of the housing 20 draws level with the edge 45 of the end side of the beam 3, as shown in figure 7, whereby the bottom screwing access 39 is positioned opposite a passage 47 that has been affixed beforehand in a suitable place in the front wall 5 of the beam 3 below the level of the protruding part 7 of the beam 3 on this front wall 5.

In this position the T-connector 19 is fastened to the beam 3, for example by clamping the T-connector 19 in the profile by screwing the screw 44.

Then the beam 3, together with an intermediate seal 17 or otherwise, is placed with the edge 45 against an inside wall 6 of the post 2, whereby peg passages 46 are made in this inside wall 6 beforehand in which the pegs 30 of the T-connector 19 fit in their aforementioned premounted state when the beam 3 is held by its overlapping wall part 18 against the front wall 5 of the post 2.

In this position the screw 32 is screwed in by means of a suitable tool via the passage 47 in the front wall 5 of the beam 3 so that the peg body 28 with the pegs 30 is moved in

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the direction of the aforementioned front wall 5 of the beam 3, as indicated by arrow B in figure 7.

As a result the pegs 30 hook onto an edge 48 of the groove 40 behind the edge 49 of a peg passage 46, whereby the edge 49 of the peg passage 46 is held in the groove 40, and hereby the peg 30 can no longer be pulled out of the peg passage 46.

10 The width of the groove 40 is adjusted to the thickness of the inside wall 6 of the post 2, if necessary including the thickness of the seal 17 and so that expansion of the beam 3 is possible.

15 The speed of movement of the pegs 30 is thereby sufficient to enable the base 50 of the groove 40 to be screwed with force against the edge 49 of the peg passage 46, as shown in the left T-connection of figure 7, so that the part of the inside wall 6 of the post 2 that is located between the overlapping wall part 18 of the beam 3 and the peg passages 20 46 is clamped to the post 2 between this overlapping wall part 18 and the pegs 30.

Thus separate screws are not necessarily needed to fasten 25 and permanently retain the profiles 2 and 3 with respect to one another.

As the T-connection comes into being by clamping it is not strictly necessary, although desirable, that the pegs 30 30 are provided with a groove 40.

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When the other end side of the beam 3 has to be fastened in a subsequent post 2, then a second T-connector 19 is affixed at this end, but in a position as shown in figure 8 that is rotated 180° around an axis X-X' with respect to the position of the first T-connector 19 already present, as shown in figure 6, so that the pegs 30 of the second T-connector 19 point away from the first T-connector 19.

Prior to the mounting of the second T-connector 19 in the end side of the beam 3, the screw 32 is moved to the other of the two threaded passages 31 so that the screw 32 is also located in front of the second T-connector 19 in the bottom screw passage 31, as shown in figure 8.

Instead of this, the screw 33 is fitted beforehand and axially immobilised in the cavity 25 of the housing 20, it is not excluded that upon mounting of the beam 3 on the post 2, the screw 33 is mounted and screwed in through the passage 47 in the front wall 5 of the beam 3 and through the screwing access 39 in the threaded passage 31 in the peg body, whereby in this case the head of the screw is larger than the passage 47 in the front wall 5 and hereby the screw 33 pulls the peg body 28 forwards.

In figure 8, in addition to the T-connector 19 according to the invention, a conventional T-connector 51 is affixed against the back wall 52 of the beam 3, and this in order to accommodate the torsional forces that are due to the weight of the glass panels 4 that rest on the protruding

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part 7 of the beam 3, whereby the T-connector 19 is mounted further towards the front of the beam 3 and is primarily intended to take up the weight of the glass panels 4.

5 An additional conventional T-connector 51 can be especially useful for wide profiles 2 and 3.

It is clear that the conventional T-connector 51 can also be replaced by a T-connector 19 according to the invention.

10

It is also clear that in this combination of T-connector 19 with a conventional T-connector 51, or in a combination of two T-connectors 19 according to the invention, the clamping of the post 2 between the pegs of the two T-connectors is also possible without an overlapping wall part 18 being needed for this, and in other words such a combination enables a beam 3 with straight sawn off end sides to be fastened to the post 2.

20 It is also clear that the T-connector 19 according to the invention does not necessarily have to have two pegs 30, but alternatively that a T-connector 19 with only one single peg and/or a peg of a non-cylindrical shape and/or with a single threaded passage 31 is also possible.

25

If the posts 2 are already mounted beforehand against the construction of the building and the beams 3 have to be mounted and fastened between the posts 2, then the pegs are pushed in against the force of the elastic element 37. When positioning the beam 3 in the correct place against the

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post 2, the pegs 30 are automatically pushed in the peg passages 46 under the effect of the elasticity of the elastic element 37.

5 Although identical profiles are used in the drawings for the posts 2 and beams 3, it is not excluded that different profiles are used for the beams 3 and for the posts 2, for example profiles of a smaller width.

10 The present invention is by no means limited to the embodiment described as an example and shown in the drawings, but a T-connector according to the invention and a T-connection realised with it can be realised in all kinds of variants, without departing from the scope of the
15 invention.

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Claims.

1.- T-connector for connecting two hollow profiles (2 and
5 3) together perpendicularly or at an angle, whereby the T-
connector (19) is provided with a housing (20) with side
walls (21 and 22) and an end wall (26) from which a peg
(30) protrudes by a certain length perpendicular to this
10 end wall (26), characterised in that the peg (30) as a
whole can move sideways in a direction (Y-Y') perpendicular
to the longitudinal direction (X-X') of the peg (30) with
respect to the housing (20), and that the T-connector (19)
is provided with or can be provided with drive means to
15 move the peg (30) over a distance in the aforementioned
direction (Y-Y') perpendicular to the longitudinal
direction (X-X') and can be held in a position, whereby
these drive means are such that they can be accessed from
the outside along an aforementioned sidewall (23) of the
housing (20).

20

2.- T-connector according to claim 1, characterised in that
the peg (30) forms part of a peg body (28) that is affixed
movably in a cavity (25) in the housing (20) in the
25 aforementioned direction of movement (Y-Y') of the peg
(30), whereby the peg (30) protrudes by a length via a
passage (36) in the aforementioned end wall (26).

3.- T-connector according to claim 1 or 2, characterised in
that the passage (36) in the end wall (26) is a clearance
30 hole in which the peg (30) can move over a distance and

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which extends in the aforementioned direction of movement (Y-Y') of the peg (30).

4.- T-connector according to claim 2 or 3, characterised in that it is provided with an elastic element (37) that pushes the peg body (28) in the direction of the end wall (26), and that this end wall (26) forms an end stop for the peg body (28).

5.- T-connector according to claim 4, characterised in that the housing (20) has a second end wall (27) and the aforementioned elastic element (37) is affixed between the peg body (28) and this second end wall (27).

6.- T-connector according to claim 5, characterised in that the second end wall (27) is constructed as a removable cover.

7.- T-connector according to any one of the previous claims, characterised in that the drive means for moving the peg (30) is formed by a screw (32) that is screwed or can be screwed into the peg body (28) in a direction that extends parallel to the aforementioned direction of movement (Y-Y') of the peg (30), and which is provided with a screw head (33) that is accessible from the outside for screwing.

8.- T-connector according to claim 7, characterised in that the screw (32) is immobilised in an axial direction (Y-Y') in the cavity (25) of the housing (20).

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9.- T-connector according to claim 8, characterised in that the screw (32) extends through a threaded passage (31) transversely through the peg body (28), whereby the threaded passage is accessible from the outside via a screwing access (39) in a side wall (23) of the housing (20).

10.- T-connector according to claim 9, characterised in that the screw (32) is immobilised in the axial direction (Y-Y') by being held in this direction between two walls (23-24) that define the cavity (25) of the housing.

11.- T-connector according to any one of the previous claims, characterised in that the peg (30) is provided with a groove (40) that extends perpendicularly to the longitudinal direction (X-X') of the peg (30).

12.- T-connector according to claim 11, characterised in that the groove (40) of the peg (30) is oriented towards the side wall (23) with the screwing access (39).

13.- T-connector according to any one of the claims 2 to 12, characterised in that the peg body (28) is provided with two parallel pegs (30) that protrude at a distance from one another by a length from the end wall (26) via an aforementioned passage (36).

14.- T-connector according to claims 13, characterised in that the housing (20) is provided with two opposite side

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walls (21 and 22) that are connected together by the
aforementioned side wall (23) with screwing access (39) and
that the pegs (30) are at the same distance from these two
opposite side walls (21 and 22) and which have their
5 centres on a line (Z-Z') that extends perpendicularly to
the direction of movement (Y-Y') of the pegs (30).

15.- T-connector according to claims 13 or 14,
characterised in that the peg body (28) is provided with
10 two threaded passages (31) and that a screwing access (39)
is provided in the housing (20) opposite each threaded
passage (31).

16.- The T-connector according to claim 13 or 14,
15 characterised in that it is constructed with a left and
right piece, each with one screwing access (39).

17.- T-connector according to claim 16, characterised in
that it is provided with only one single screw (32) in one
20 of the threaded passages (31) of the peg body (28).

18.- T-connector according to claim 16 or 17, characterised
in that the two threaded passages (31) are at the same
distance with respect to the pegs (30).

25

19.- T-connector according to any one of the previous
claims, characterised in that it is provided with means
(41) to clamp the housing (20) in a profile (3) to be
connected.

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20.- T-connection between two hollow profiles, respectively a post (2) and a beam (3) which together form a part of a frame of a glass facade (1), whereby the beam (3) with an end side (16) is affixed perpendicularly or at an angle to an inside wall (6) of the post (2), characterised in that the profiles (2-3) are connected together by means of a T-connector (19) according to any one of the previous claims, whereby the T-connector (19) is clamped by its housing (20) in the beam (3) and its peg (30) is inserted in a peg passage (46) of the post (2), whereby the peg (30) is moved in the direction of the front wall (5) of the post (2) such that the post (2) is clamped by a part between the peg (30) of the T-connector (19) concerned and either a protruding front wall part (18) at the end side concerned of the beam (3) with which the beam (3) is affixed overlapping against the post (2), or a peg (30) of a second T-connector (19 or 51) with which the beam (2) is affixed to the post (3) by its end side (16) concerned.

21.- T-connection according to claim 20, characterised in that the T-connector (19) is oriented with its screwing access (39) towards the front wall (5) with the overlapping wall part (18) of the beam (3), and that a passage (47) is provided in this front wall (5) opposite the screwing access (39) of the T-connector (19).

22.- T-connection according to claim 21, characterised in that the post and the beam are provided on their front wall (5) with a protruding part (7) in the form of a lip on which a glass panel (4) can rest and that the

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aforementioned passage (47) in the beam (3) opposite the screwing access (39) of the T-connector (19) is below the level of this protruding part (7) of the beam (3) concerned.

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23.- T-connection according to any one of the claims 20 to 22, characterised in that between the end side (16) of the beam (3) and the inside wall (6) of the post (2) there is a seal (17).

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24.- T-connection according to any one of the claims 20 to 23, characterised in that the post (2) and the beam (3) are connected together by means of a T-connector whose peg (30) is provided with a groove (40) that is inserted in the peg passage (46) of the post (2) with the groove (40) oriented towards the front wall (5) of the beam (3), and with the edge (48) of the groove (40) hooked behind the edge (49) of the peg passage (46).

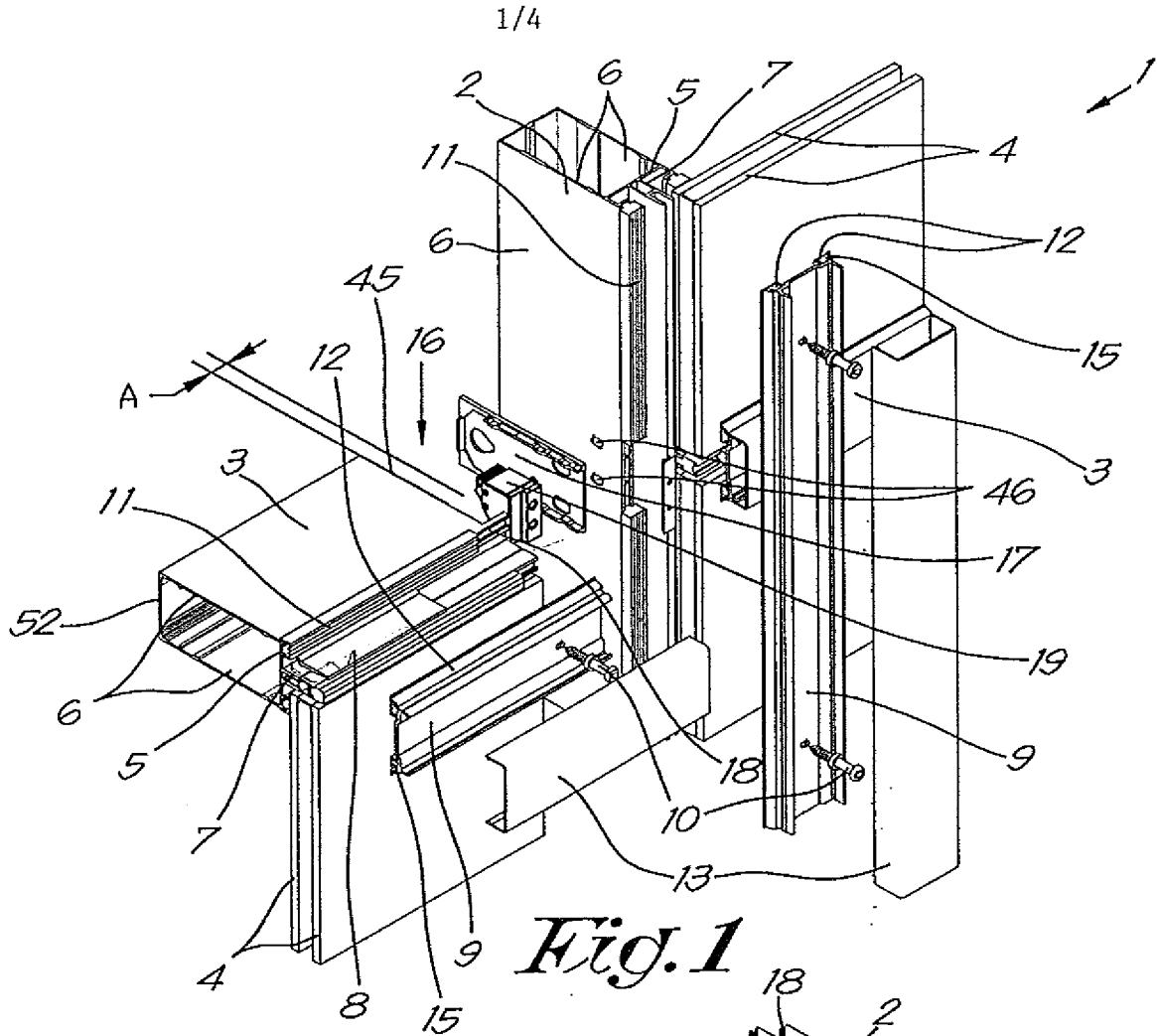


Fig. 1

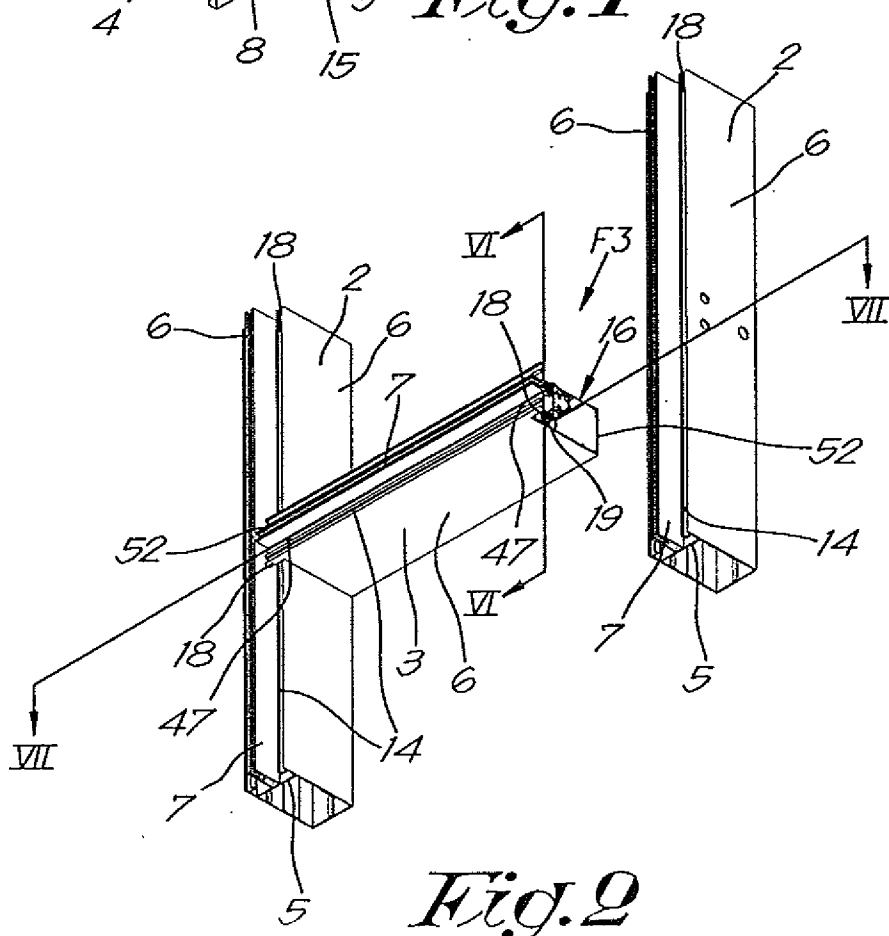


Fig. 2

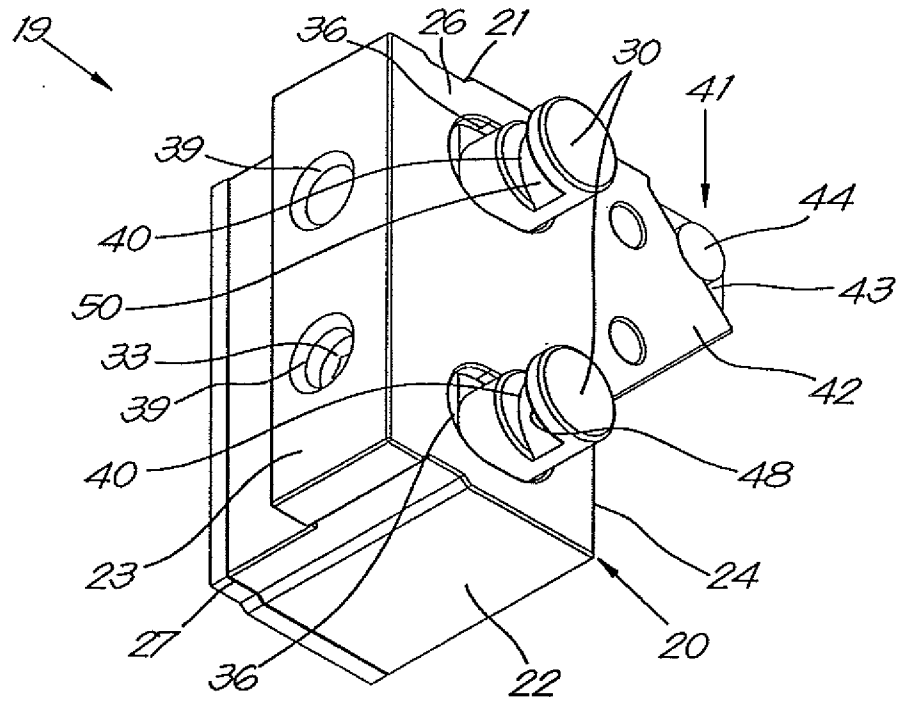


Fig. 3

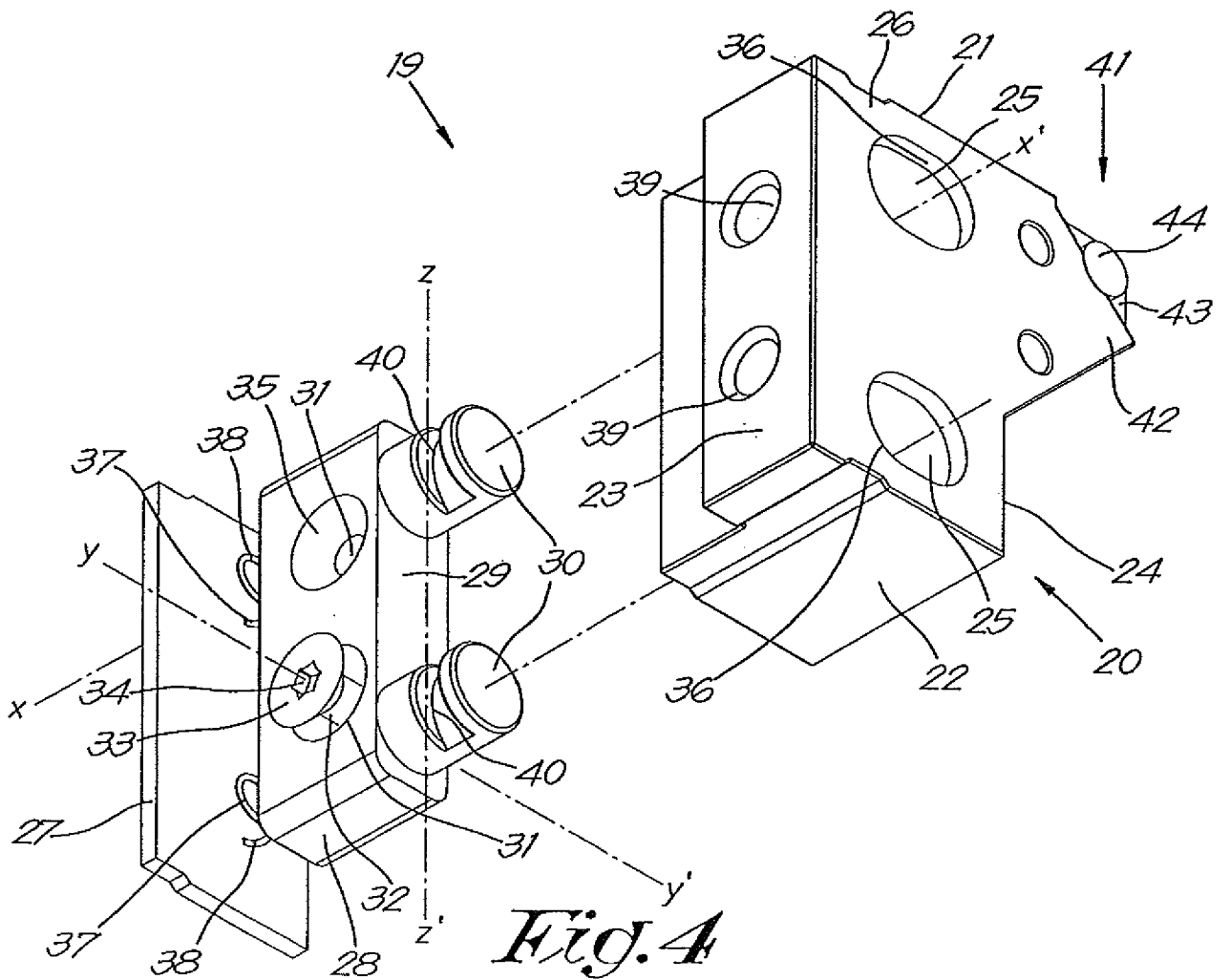


Fig. 4

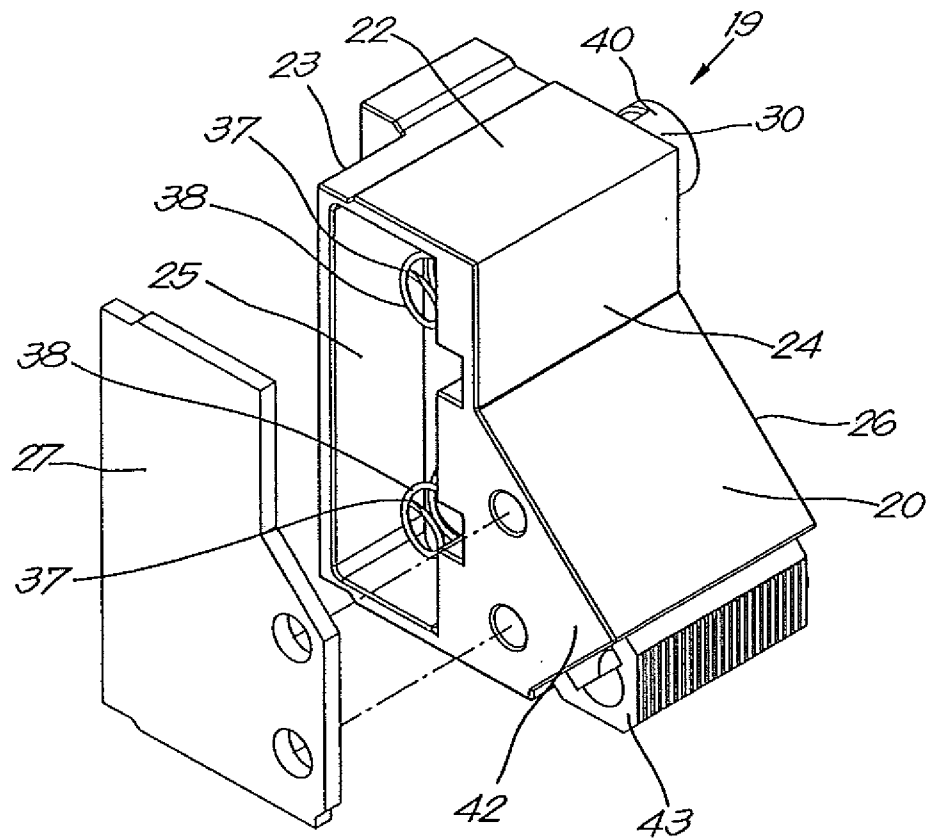


Fig. 5

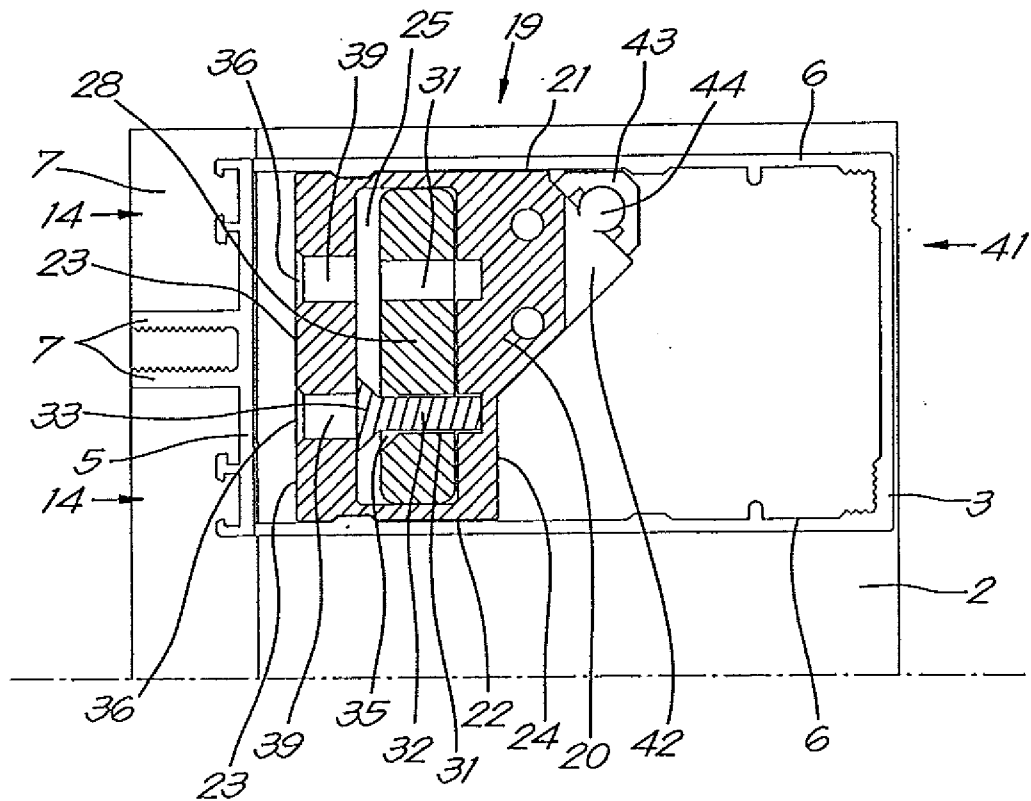


Fig. 6

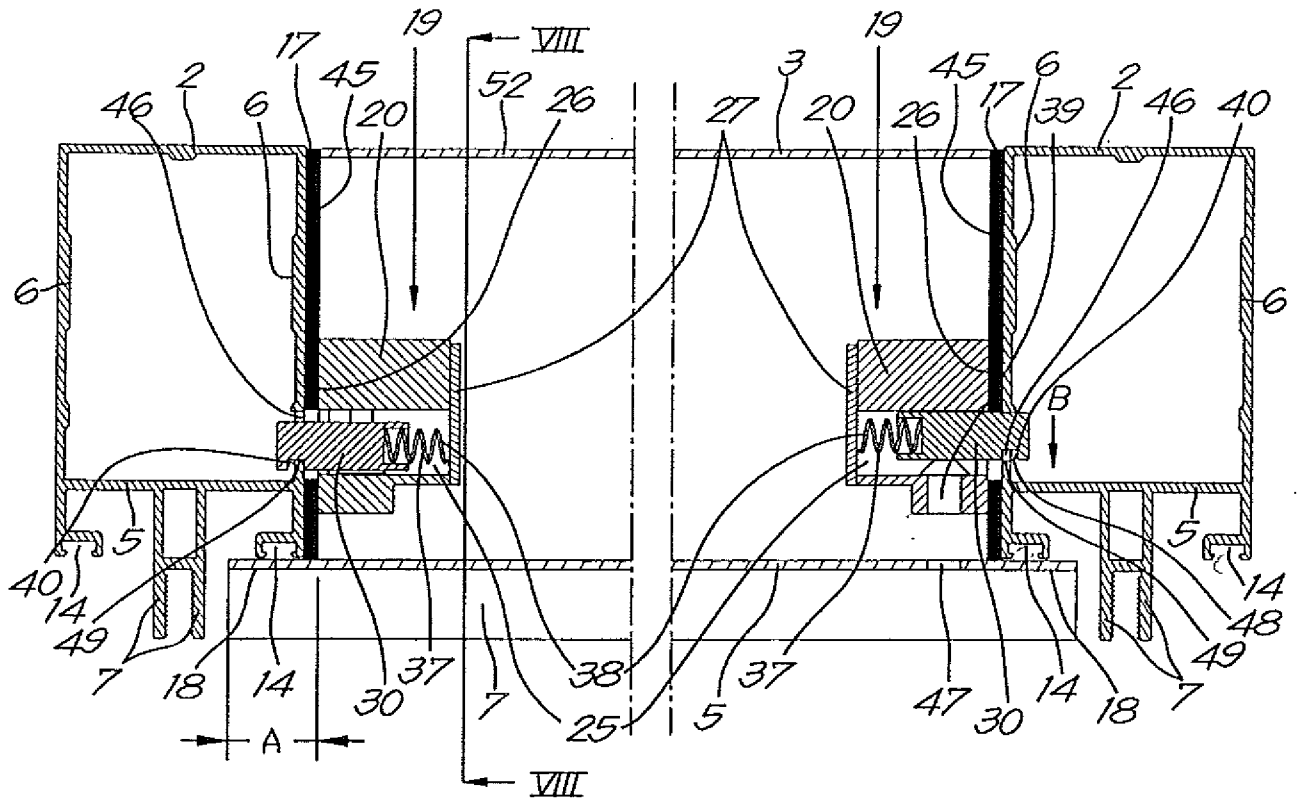


Fig. 7

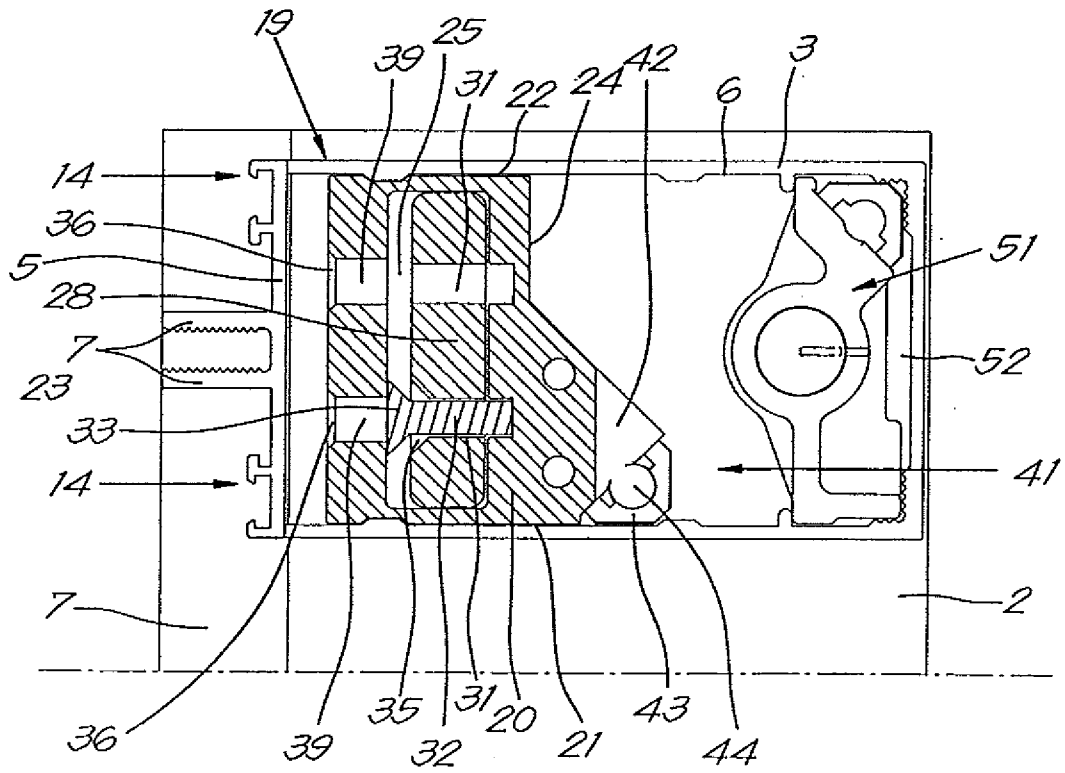


Fig. 8

INTERNATIONAL SEARCH REPORT

International application No
PCT/BE2013/000017

A. CLASSIFICATION OF SUBJECT MATTER
INV. E04B2/96
ADD.
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
E04B F16B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 574 367 A (JANKOWSKI JOHANNES) 13 April 1971 (1971-04-13) column 3, line 33 - column 7, line 40; figures 2,3 -----	1-24
X	SU 838 110 A1 (MUSYAKIN VYACHESLAV E [SU]) 15 June 1981 (1981-06-15) figures 1-3 -----	1
A	EP 0 334 080 A1 (SCHUECO INT GMBH & CO [DE]) 27 September 1989 (1989-09-27) cited in the application the whole document -----	1,5,6, 11,12

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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- "&" document member of the same patent family

Date of the actual completion of the international search 12 July 2013	Date of mailing of the international search report 22/07/2013
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Zuurveld, Gerben
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/BE2013/000017

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3574367	A	13-04-1971	AT 293111 B
			CH 503171 A
			DE 1650975 A1
			FR 2000838 A1
			GB 1254723 A
			US 3574367 A

SU 838110	A1	15-06-1981	NONE

EP 0334080	A1	27-09-1989	CA 1295591 C
			DE 3809951 A1
			DK 136789 A
			EP 0334080 A1
			ES 2025824 T3
			FI 891422 A
			GR 3003423 T3
			JP 2880179 B2
			JP H0224434 A
			NO 891242 A
			US 4948290 A
