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(54) Glazing system

(57) The invention relates to a glazing system for mounting in front of a window or the like comprising a glazing panel surrounded by a frame having frame parts (1) extending along the edges of the glazing panel (2). Each frame part (1) comprises two elongated profiles (4,5) and each edge of the glazing panel (2) is arranged between a set of two profiles (4,5). Each of said profiles (4,5) has a substantially U-shaped cross section with legs (6,7,10,11) extending parallel to the glazing panel (2). A leg (10) of one profile (5) has been situated between the legs (6,7) of the other profile (4), whilst the leg (7) of the other profile (4) situated between the legs (10,11) of said one profile (5) has been provided with a thickening (9) at its distal end. Said thickening (9) corresponds with the thickness of said glazing panel (2). Means have been provided for shifting said profiles (4,5) with respect to each other in a direction parallel to said glazing panel and perpendicular to their longitudinal extension.

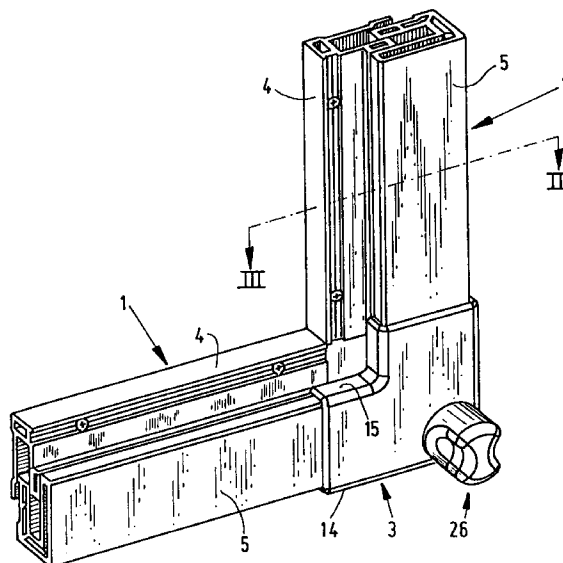


FIG.1

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Description

The invention relates to a glazing system for mounting in front of a window or the like comprising a glazing panel surrounded by a frame having frame parts extending along the edges of the glazing panel, whereby each frame part comprises two elongated profiles and each edge of the glazing panel is arranged between a set of two profiles.

In known glazing systems of the kind set forth the frame is fixed as a unit to a window frame or the like and the frame has to be mounted or removed together with the glazing panel; so the mounting and/or removing of the glazing system is difficult and time consuming.

According to the invention each of said profiles has a substantially U-shaped cross section with legs extending parallel to each other and to the glazing panel, whereby a leg of one profile has been situated between the legs of the other profile, whilst the leg of the other profile situated between the legs of said one profile has been provided with a thickening at its distal end, that thickening corresponding with the thickness of said glazing panel from which an edge is situated between the legs of said one profile in the normal use of the glazing system, and means have been provided for shifting said profiles with respect to each other in a direction parallel to said glazing panel en perpendicular to their longitudinal extension.

By using the structure according the invention the frame can be mounted to a window frame or the like of a building, whereafter the U-shaped profiles can be arranged in a first position with respect to each other for placing the glazing panel in the frame, and thereafter the U-shaped profiles can be shifted with respect to each other into a second position, wherein the edges of the glazing panel have been clamped between the profiles.

So by using the structure according the invention there is obtained a glazing system, whereby the frame can be mounted in a desired position on a window frame or the like, whilst only thereafter the glazing panel has to be mounted into the frame. Thereby said glazing panel can be removed easily from the frame e.g. in view of service and cleaning.

The invention will be explained in more detail hereafter with reference to an embodiment of the glazing system according the invention, diagrammatically shown in the accompanying figures.

Figure 1 shows in a perspective view, a corner part of a frame of a glazing system according the invention, wherein the profiles are shown in a first position with respect to each other.

Figure 2 shows a view corresponding with figure 1, wherein the profiles have been shown in a second position with respect to each other.

Figure 3 shows on a greater scale a cross section of figure 1, seen according line III-III in figure 1, whereby the frame has been fixed to a window frame, whilst also the glazing panel is shown.

Figure 4 shows a cross section corresponding with figure 3, wherein the profiles are shown in a second position as also shown in figure 2.

Figure 5 shows in perspective a corner piece, partly cutt away, and the ends of some profiles accommodated in said corner piece.

Figure 6 shows an exploded view in perspective of parts used for shifting the profiles with respect to each other.

Figure 7 shows a cross section over a corner piece with means for adjusting the profiles with respect to each other.

Figure 8 shows a cross section of two interconnected profiles.

As schematically shown in figures 1 and 2 the frame of a glazing system comprises frame parts 1, whereby each frame part 1 extends along an edge of a glazing panel 2 (figures 3, 4). In the edges of the frame the frame parts 1 are connected by means of corner pieces 3.

Each frame part 1 comprises two longitudinal profiles 4 and 5. The profile 4 has a U-shaped cross-section and comprises two legs 6, 7 extending parallel to each other and near one end being connected to each other by cross pieces 8. At its free end the leg 7 has been provided with a thickening 9.

The profile 5 has also a U-shaped cross section and comprises two double-walled legs 10 and 11 interconnected by a double-walled cross piece 12.

Leg 10 of profile 5, which is shorter as leg 11 of profile 5, is situated between the legs 6 and 7 of the profile 4. Leg 7 of profile 4 is situated between the legs 10 and 11 of profile 5, whereby the leg 7 with thickening 9 snugly fits between said legs 10 and 11 of profile 5. Thereby the arrangement is such, that the profiles 4 and 5 can be shifted with respect to each other parallel to the legs of the profiles as indicated with the arrow A. Thereby in use the profiles 4 of the various frame parts 1 will be fixed to a window frame 13 or the like, whilst the profiles 5 can be shifted with respect to said profiles 4 from the position shown in figure 3 to the position shown in figure 4 and vice versa.

When the profiles 5 are in the position shown in figure 3 there could be placed a glazing panel 2 against the sides of the profiles 4 remote from the window frame 13, as shown in figure 3. Thereafter the profiles 5 could be shifted to the position in figure 4 for locking the edges of the glazing panel 2 between the legs 7 and 11 of the profiles 4 and 5. From figures 3 and 4 it will be clear, that the thickness of the glazing panel 2 corresponds substantially with the thickness of the thickening 9.

As shown in figures 1, 2 and 5 the ends of the profiles 4 and 5 are accommodated in corner pieces 3. Thereby the legs 11 of the profiles 5 are arranged between an outer L-shaped wall portion 14 of the corner piece and an inner L-shaped wall portion 15 of said corner piece. Further the arrangement is such, that the corner piece 3 can shift on both profiles 5 from which the ends are inserted in said corner piece 3 in the longitudi-

nal direction of said profiles 5.

In only one of the corner pieces there has been journalled a spool 16 (figures 6, 7). At one end said spool has been provided with a flange 17, which in use will abutt against the window frame 13.

Near said flange 17 there have been made two incisions 18 in the wall of the hollow spool 16, said incisions 18 extending in the longitudinal direction of the spool and defining a tongue 19. The end 20 of said tongue 19 has been chamfered and said tongue is used to fix a cord 21 to said spool 16. The use of said cord 21 will be explained further below.

Between its ends the spool 16 has been provided with a collar 22. At the side of the collar 22 remote from the flange 17 the collar has been provided with a serration 23. Besides the collar 22, at the side of said collar opposite the flange 17 there have been made holes 24 in the wall of the spool 16. Further in the end of the spool 16 remote from the flange 17 there have been made recesses 25. The spool 16 has been coupled with a handle knob 26 by means of two fingers 27 fixed to said handle knob. The ends of the fingers 27 remote from the handle knob extend through the spool 16 over a part of the length of the spool and cams 28 provided on the distal ends of said fingers 27 extend in the holes 24 behind the collar 22 as shown in figure 7.

The fingers 27 are situated between two further fingers 29, which form also a part of the handle knob 26. The free ends of the fingers 29 are step shaped and abutt the end of the spool 16, whilst parts of the fingers 29 are situated in the recesses 25. Further the spool 16 is surrounded by a washer 30 abutting on the corner piece 3 as shown in figure 7. Between the washer 30 and the handle knob 26 there has been arranged a spring 31 accommodated in the interior of the handle knob 26 and surrounding the end of the spool 16 and the fingers 27 and 29.

In the position shown in figure 7 the serration 23 on the collar 22 of the spool 16 engages a serration 32 provided on a wall of the corner piece 3 (figure 5), so that a rotation of the spool 16 about its longitudinal axis is prevented. In this position shown in figure 7 the end 33 of the handle knob 26 directed towards the corner piece 3 is situated at a distance a from said corner piece, so that the handle knob 26 together with the spool 16, seen in figure 7, can be shifted over the distance a towards the left in order to bring the serration 23 into a position wherein said serration is not in engagement with serration 32, so that the spool 16 can be rotated by means of the handle knob 26 about its longitudinal axis. When the handle knob is released the spring 31 will return the handle knob 26 and the spool 16 to the position shown in figure 7.

As shown in figures 3 and 4 and figure 5 the cord 21 extends through the interior of the profiles 5 and through the various corner pieces 3, whereby the cord 21 passes through holes 34 and 34', which are made in wall portions 35 and 36 of the corner pieces which extends perpendicularly to each other.

When the spool 16 is rotated about its longitudinal axis by means of the handle knob 26 the cord 21 will be wound around said spool 16 and thereby the corner pieces will be shifted further on the profiles 5 from which the ends are inserted in said corner pieces. It will be clear, that thereby by means of said corner pieces 3 the profiles 5 will be shifted from the position shown in figure 3 towards the position shown in figure 4.

When the spool 16 is rotated in an opposite direction by means of the handle knob 26 the cord 21 will be unwound from the spool and by means of springs 37 arranged in each corner piece 3 between the ends of the profiles 5 accommodated in said corner piece and wall portions 35 and 36 of said corner piece the corner pieces will be shifted with respect to said profiles 5 in a direction opposite to the direction wherein said corner pieces are shifted when the cord 21 is wound around the spool 16. Due to said movement of the corner pieces the profiles 5 will be shifted from the position shown in figure 4 towards the position shown in figure 3.

So from the above it will be clear, that by using the structure according the invention there is obtained a glazing system having a frame with profiles which could be mounted on a window frame 13 in an easy way, whilst only after mounting said frame the glazing panel 2 has to be mounted. Thereby the glazing panel 2 can be removed also easily from the frame by shifting the profiles 5 with respect to the profiles 4 if necessary e.g. for cleaning or maintenance.

Preferably the profiles are extruded from e.g. plastic or aluminium. Thereby the two profiles 4 and 5 could be extruded as a single piece as shown in figure 8. After extrusion the profiles could be separated from each other along line 38.

Claims

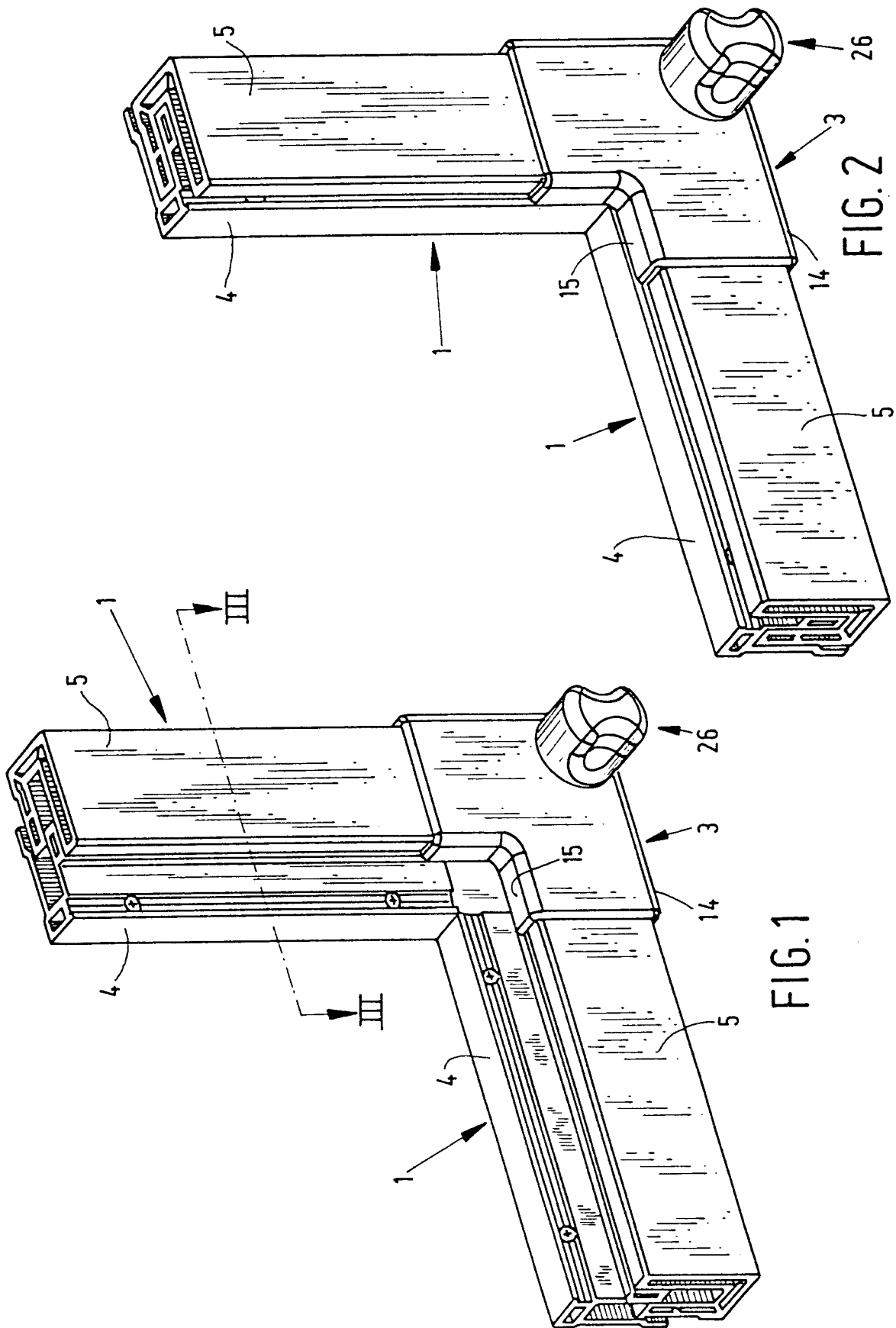
1. Glazing system for mounting in front of a window or the like comprising a glazing panel (2) surrounded by a frame having frame parts (1) extending along the edges of the glazing panel (2), whereby each frame part (1) comprises two elongated profiles (4, 5) and each edge of the glazing panel (2) is arranged between a set of two profiles (4, 5), characterised in, that each of said profiles (4, 5) has a substantially U-shaped cross section with legs (6, 7; 10, 11) extending parallel to each other and to the glazing panel (2), whereby a leg (10) of one profile (5) has been situated between the legs (6, 7) of the other profile (4), whilst the leg (7) of the other profile (4) situated between the legs (10, 11) of said one profile (5) has been provided with a thickening (9) at its distal end, said thickening (9) corresponding with the thickness of said glazing panel (2) from which an edge is situated between the legs of said one profile (5) in the normal use of the glazing system, and means (16, 21, 26) have been provided for shifting said profiles (4, 5) with respect to each other in a direction parallel to said glazing panel

and perpendicular to their longitudinal extension.

2. Glazing system according claim 1, characterised in, that the frame parts (1) extending along the edges of the glazing panel (2) are interconnected by means of corner pieces (3) accommodating the ends of the profiles (4, 5) in such a way, that the corner pieces (3) are shiftable with respect to said profiles (4, 5) in the longitudinal direction of said profiles (4, 5).
3. Glazing system according claim 2, characterised in that an end of said one profile (5) has been accommodated in a corner piece (3) in such a way, that said one profile (5) can not shift with respect to said corner piece (3) in a direction transverse to its longitudinal extension, whilst between the corner piece (3) and the end of said one profile (5) there has been arranged a spring (37) tending to shift the corner piece (3) from said one profile (5).
4. Glazing system according claim 2 or 3, characterised in that a cord (21) has been passed through said corner pieces (3) and said one profile (5) and means have been provided for tightening and releasing said cord.
5. Glazing system according claim 4, characterised in that in one of said corner pieces (3) there has been journaled a spool (16) which is rotatable for winding said cord (21) on the spool (16) and for unwinding said cord (21) from said spool (16) respectively.
6. Glazing system according claim 5, characterised in that the spool (16) has been coupled with a handle knob (26) which has been arranged outside the corner piece (3).
7. Glazing system according claim 5 and 6, characterised in that the spool (16) and the corner piece (3) have been provided with co-operating serrations (23, 32) which can be displaced to a position wherein said serrations are not in engagement by displacing the spool (16) in its longitudinal direction against the force at spring means (31).

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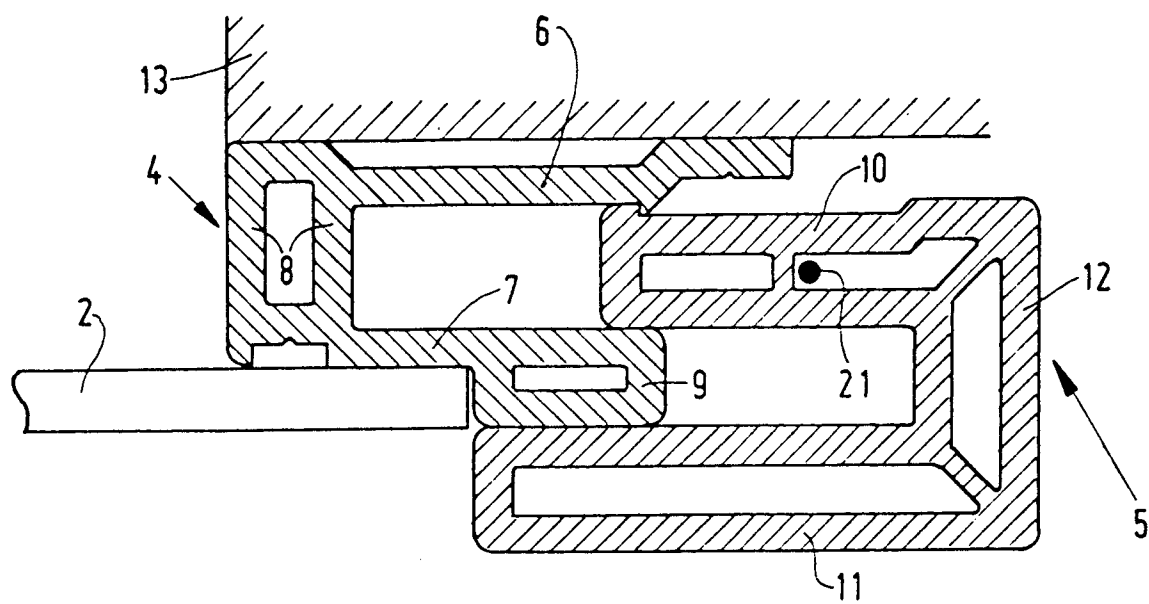


FIG. 3

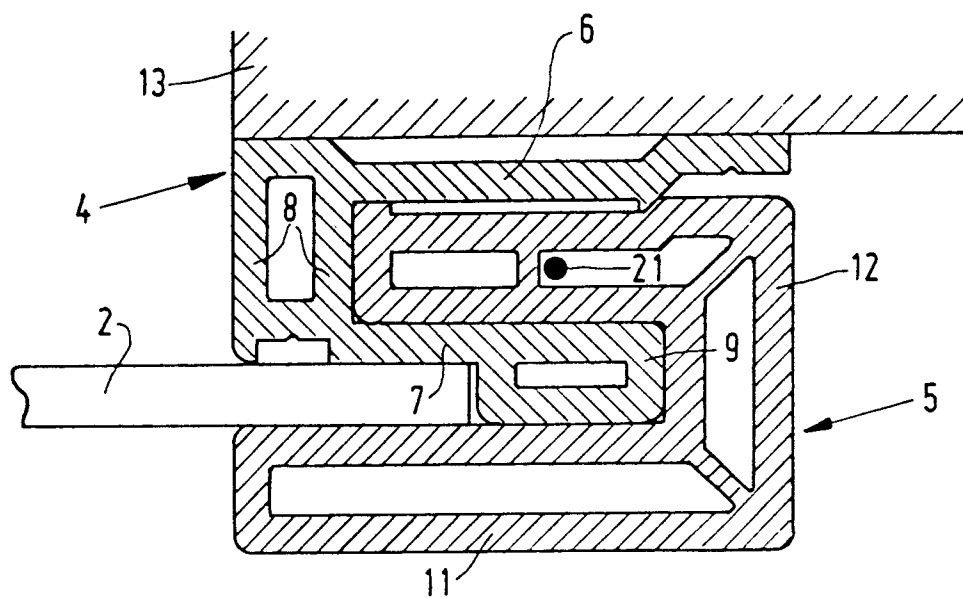
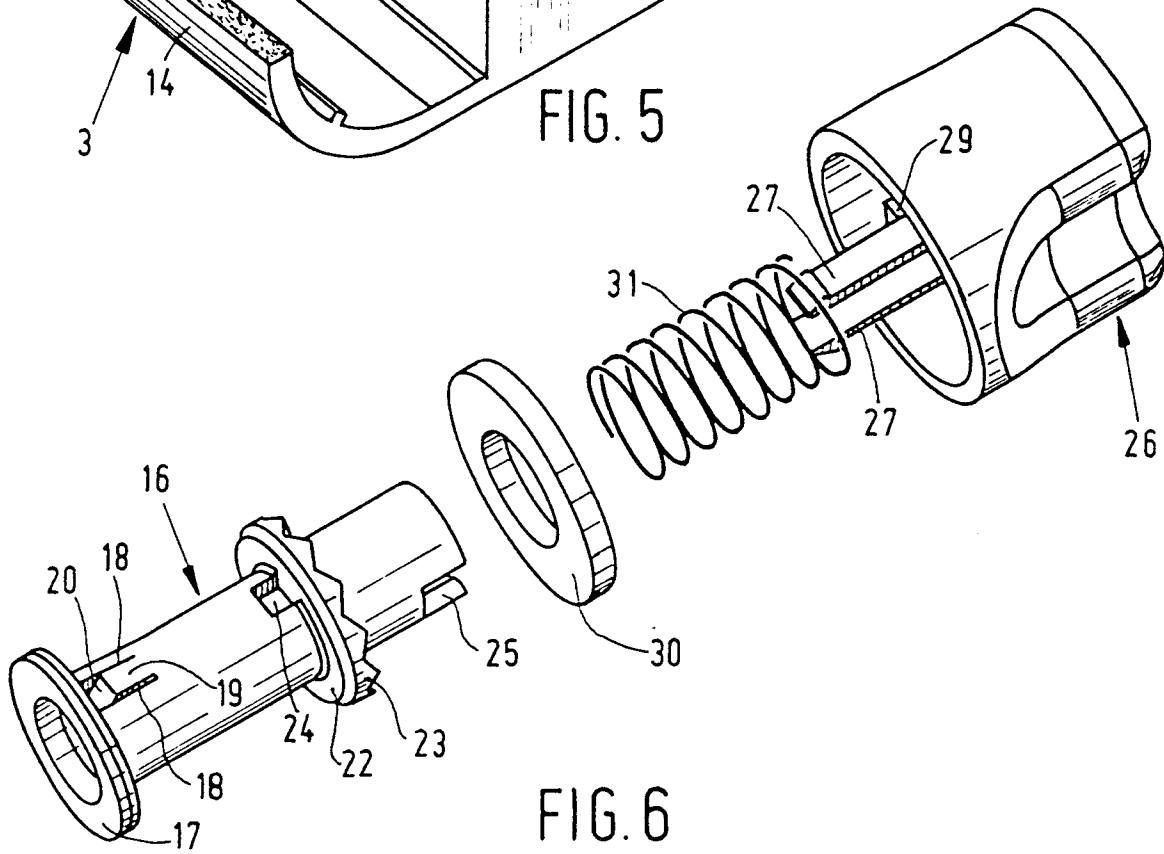
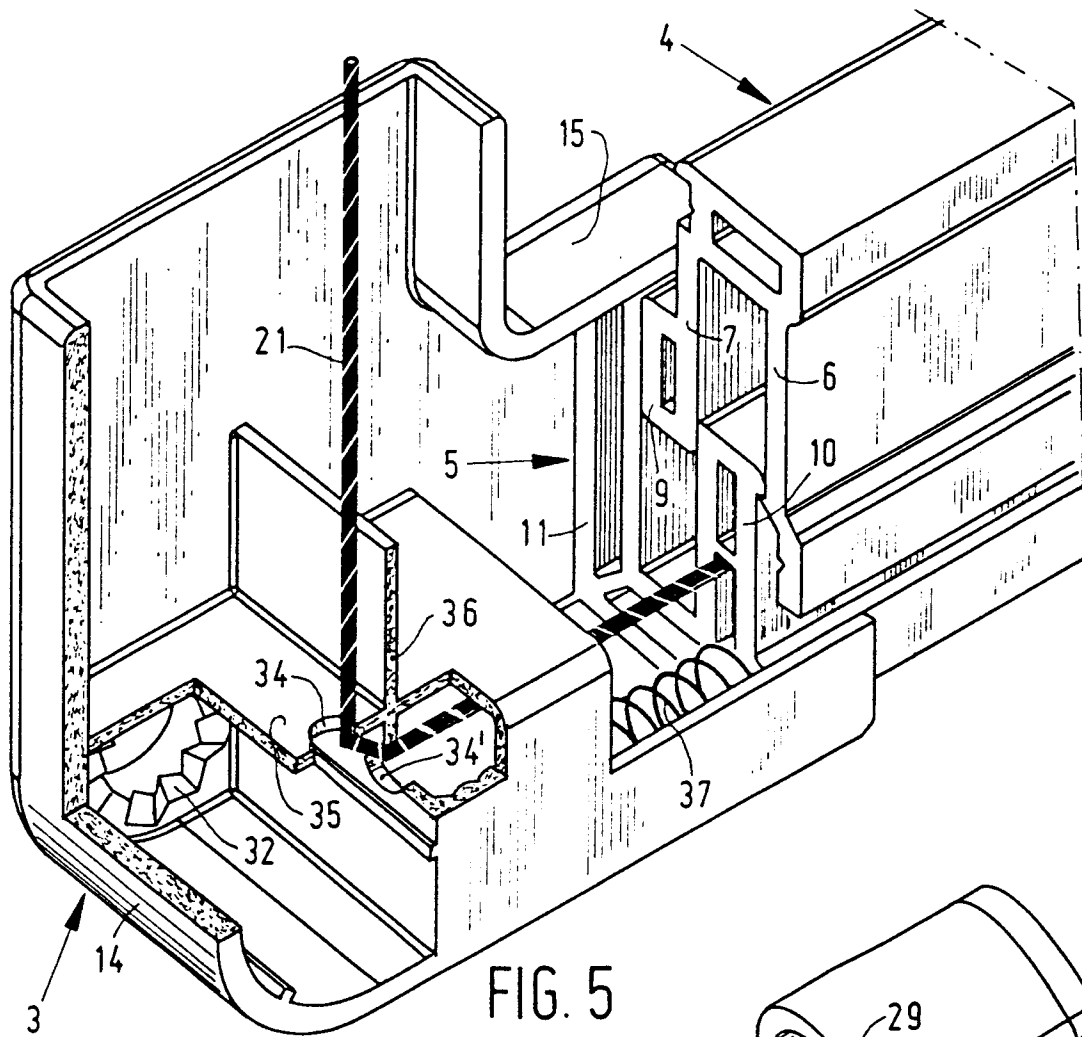
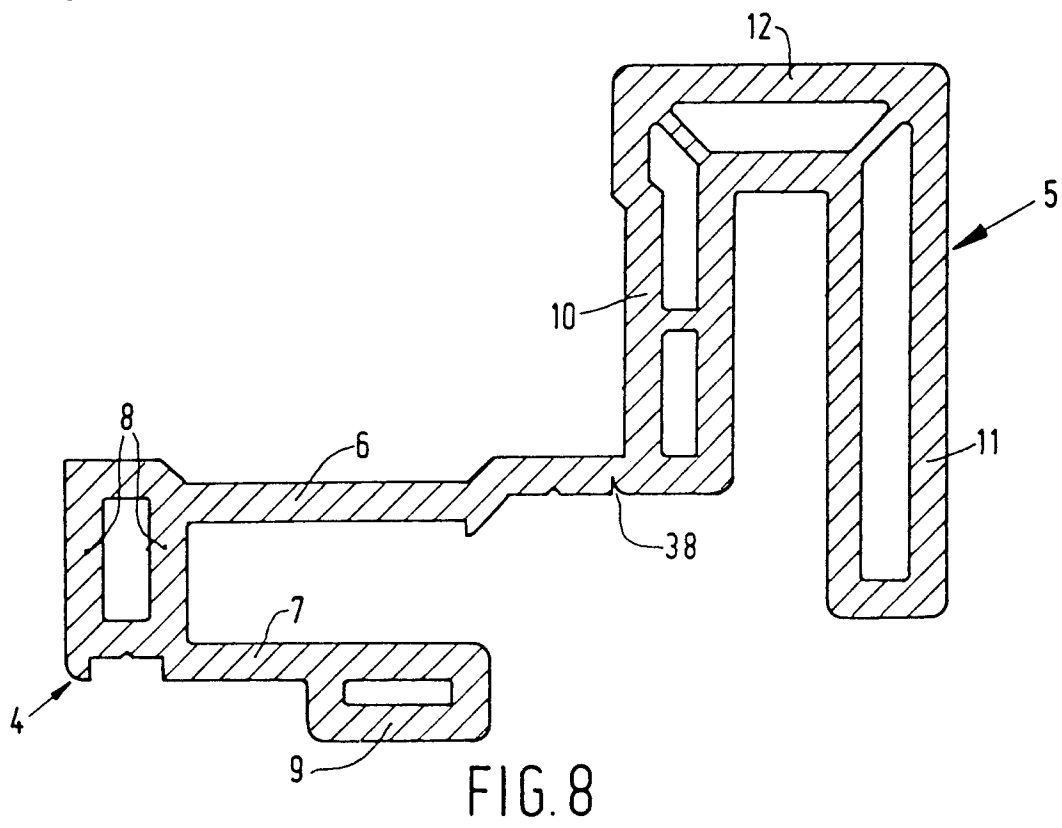
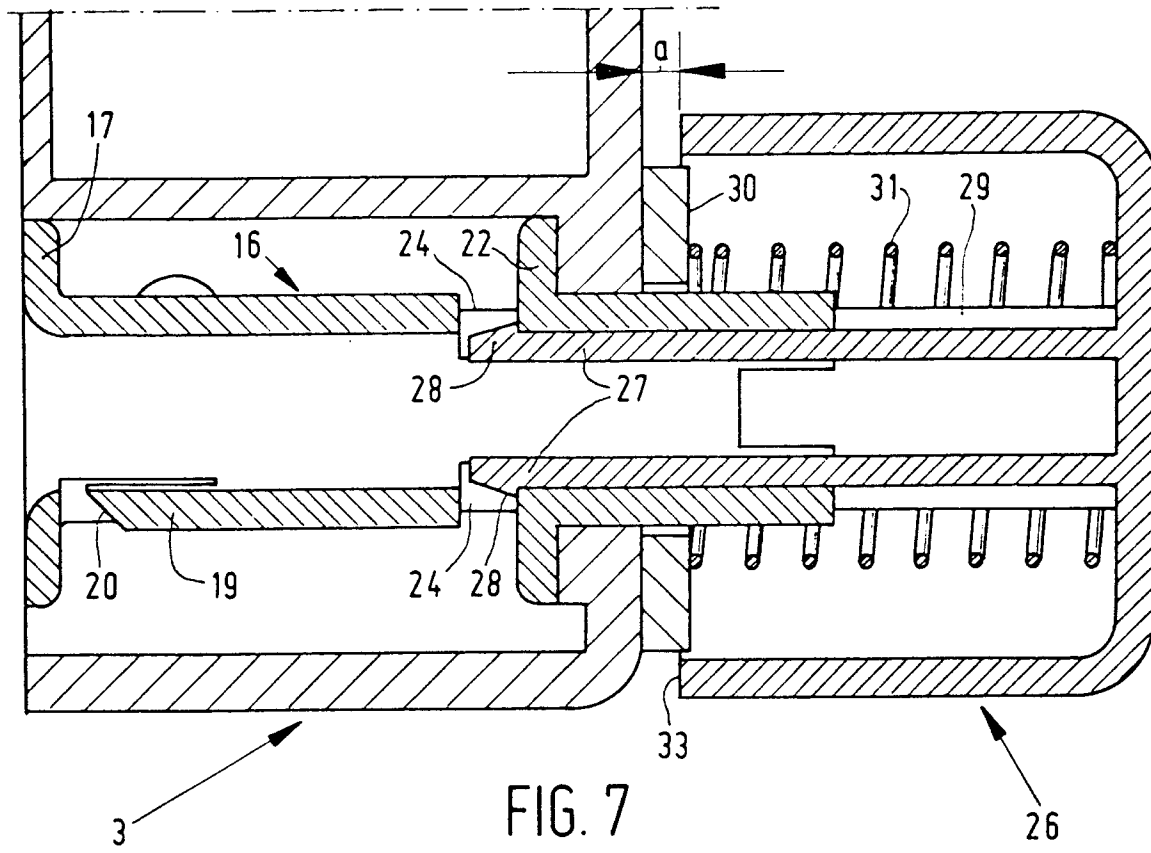


FIG. 4







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EUROPEAN SEARCH REPORT

Application Number
EP 95 11 3447

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	WO-A-91 19877 (TEMA FÖNSTER) * page 7, paragraph 2 - page 9; figures * ---	1	E06B3/00 E06B3/28 E06B3/58
A	US-A-2 814 078 (DURR) * column 2, line 28 - column 4, line 34; figures * ---	1-3	
A	FR-A-2 020 622 (GROOM) ---		
A	US-A-4 850 141 (PACCA) ---		
A	GB-A-1 539 724 (THE BRITISH ALUMINIUM CY.) ---		
A	EP-A-0 095 820 (ICI HOLLAND) -----		
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			E06B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 24 January 1996	Examiner Vijverman, W
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