



(11) Publication number : **0 659 369 A1**

(12)

EUROPEAN PATENT APPLICATION

(21) Application number : **94120085.9**

(51) Int. Cl.⁶ : **A47C 7/66, A47C 1/14**

(22) Date of filing : **19.12.94**

(30) Priority : **21.12.93 IT MI930985 U**

(43) Date of publication of application :
28.06.95 Bulletin 95/26

(84) Designated Contracting States :
ES FR IT

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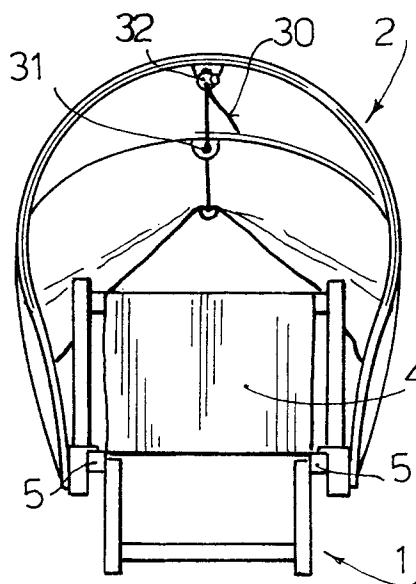
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(54) **Adjustable folding cover for sun beds.**

(57) An adjustable folding cover for sun beds is described comprising a canvas (6) and a supporting frame (7), that can be removably fixed to the side rods (5) of the sun bed, by means of connection devices (12), said frame (7) consisting of a plurality of rods (8, 9; 71), hinged at said connecting devices (12) and fixable in different angular positions.

FIG. 1



The present invention relates to an adjustable folding cover for sun beds,

The users of sun beds often need to shelter part of their body from the wind and/or sun.

This is currently done with makeshift shelters, which obviously cannot fulfil the user's needs.

Attempts have also been made to provide sun beds with special hood-like covers that shelter the user's head.

However, these known covering systems present considerable drawbacks.

A first drawback is due to the fact that these covers require a specially designed bed and therefore are not suitable for the various types of sun beds existing on the market.

Besides, these covers can be defined as being of the fixed type, in that once they are mounted on the bed the operations are required to dismantle them are so lengthy that they are normally carried out - if at all - only at the end of the bathing season. Another drawback is that opening of these covers is not normally adjustable.

The object of the invention is to eliminate the drawbacks described above, providing a cover for sun beds that adapts to the various types of beds existing on the market, that can be adjusted through an arc of about 180° longitudinally to the bed, that can easily be assembled and dismantled, that can easily be partially opened and that occupies the minimum space during storage and transport.

Another object of the invention is to provide such a cover that can be applied to a pair of beds placed side by side and that can be closed in its dismantled state. These aims are achieved by the cover for sun beds according to the invention having the characteristics listed in the attached claim 1.

Preferred embodiments of the invention are described in the dependent claims.

The cover for sun beds according to the invention is of the folding hood or bellows type and comprises a frame with a plurality of supporting rods for a canvas, the front one preferably being rigid and the others flexible and articulated at the ends, so that their degree of opening can be adjusted.

The cover thus structured is fixed to the bed by means of quick connections provided on the two sides of the bed.

According to one embodiment, such a connection consists of a rigid block that is fixed to a corresponding longitudinal bar of the sun-bed frame, by means of an inner counter-plate and a threaded pin or bolt that protrudes externally from the rigid block and is inserted in a hole in the frame of the cover, which is then blocked by means of an outer knob.

The supporting frame of the cover can thus rotate around the threaded suspension pin so as to obtain an adjustment of the angular position of the cover and/or partial opening of the cover. The cover is fixed

in the selected position by means of a pin that passes through the frame itself and is inserted into one of a plurality of holes provided in the rigid supporting block.

Alternatively, the cover can be stopped in the desired position by means of a ball carried on the frame of the cover, which is pressed elastically against a special seat provided on the block or vice versa.

According to a further alternative, friction locking can be provided that can be operated by means of said external knob.

In order to make operations for assembly and dismantling of the cover even easier, provision can be made for the cover frame to terminate at the bottom in a bayonet joint that enters a corresponding slot provided on the supporting block.

Provision can also be made for the supporting block to be fixed to the bed by other means, for example through a spring lock.

The cover according to the invention can also be fitted to a pair of beds placed side by side that are joined together beforehand by means of an intermediate joining element serving as a table.

The cover is fixed to the beds substantially in the same way as described above, but in this case the rods of the cover frame are provided with articulations at intermediate points so that it occupies the minimum space when dismantled.

Further characteristics of the invention will be made clearer by the more detailed description that follows, referring to a purely exemplary and therefore not limiting embodiment, illustrated in the attached drawings, in which:

Figure 1 is a schematic front view of a sun bed equipped with a cover according to the invention, partially open at the back;

Figure 2 is an axonometric side view of the bed in Figure 1;

Figure 3 is a similar view to that in Figure 2, also showing the use of side windscreens;

Figure 3a is a schematic side view illustrating the cover in some different angular positions on the longitudinal axis of the sun bed;

Figure 4 is an exploded axonometric view of a connection of the cover frame to the structure of the sun bed;

Figure 5 is a sectional view of the connection in Figure 4;

Figure 6 is an axonometric exploded view of the connection in Figure 4 in an alternative embodiment;

Figures 7a, 7b and 7c are respectively an inner side view, a sectional view and a plan view from above of an alternative embodiment of the connection of the cover frame to the bed;

Figure 8 schematically illustrates fitting of a cover according to the invention to a pair of sun beds; Figures 9a and 9b show, respectively, sectional

and plan views of the detail concerning joining of the two beds in Figure 8;

Figure 10 is a side view of the frame of the "double" cover in Figure 8;

Figure 11 is a front view of said frame;

Figures 12a and 12b are respectively a side view and a front view of the corner articulation enclosed in the circle A in Figure 11;

Figure 13 is a side view of the connection of the frame of the cover in figures 8 to 12 to the sun-bed frame;

Figure 14 is a cross section of the connection in Figure 13;

In figures 1 to 3, 1 indicates a sun bed as whole and 2 indicates the folding cover according to the invention.

It is clear that the bed 1 has been shown only by way of example and that it can therefore take on different forms to that shown in the figures. It comprises a horizontal lounging surface 3, defined by two bars that are square in section 5, and a reclining backrest 4 that can be adjusted to various inclined positions.

The folding hood or bellows cover 2 consists of a canvas in any sort of flexible material, supported by a frame 7, consisting of a plurality of horseshoe shaped rods.

In the embodiments according to Figures 4 and 6, a substantially rigid or semi-rigid front rod 8 and two flexible rods or bands 9 are provided, the ends of which can rotate around a pin 10 and are connected by means of a plate 11 to said front rod 8.

The frame 7 is removably fixed to the bed 1 by means of a pair of connections indicated as a whole by reference number 12. Each connection 12 comprises in particular a supporting block 13 that can be fixed externally to a respective longitudinal bar 5 of the sun bed by means of an inner counter plate 14.

In particular the block 13 is substantially parallelepiped in shape, the top wall having an inner projection 15 that comes to rest on top of the respective bar 5. Fixing of the block 13 takes place by means of a pin 16 that is at least partially threaded and has an intermediate raised ring. One end of the threaded pin 16 is inserted from the inside into a hole 18 in the block 13, while the other end passes through a counter plate 14, provided with a through hole 19 for this purpose. In this way, by screwing a nut 20 onto the threaded pin 16 from the inside, the block 13 is securely locked onto the bar 5, as shown in Figure 5.

With reference to the embodiment in Figure 4, the frame 7 is mounted on the end of the threaded pin 16 projecting externally from the block 13, a through hole 21 being provided in the vicinity of the lower end of the rod 8. The frame 7 is prevented from accidentally leaving the pin 16 by means of an outer knob 22 which screws onto the threaded end of the pin 16, nevertheless without locking the frame 7, so as to allow it to rotate, for adjustment of the angular position of the

cover 2 and/or to allow it to be open partially as will now be seen.

A through hole 23 is made in the rod 8 that can be brought into alignment with any one of a plurality of holes 24 provided on the outer face of the block 13, locking of the frame in the desired position being effected by means of a respective pin 25 that is inserted from the outside into holes 23 and 24.

In this way, depending on the hole chosen, the angular position of the cover 2 can be adjusted on an arc of about 180° longitudinally to the bed (see figure 3a) and/or the partial opening or degree of "front" opening the cover itself can be regulated.

With the cover according to the invention it is also possible to adjust the degree of "rear" opening of the cover 2.

For this purpose a manoeuvring cord 30 (see figures 1, 2 and 3) is provided, fixed at the back to the cover 2, for example to the outermost band 9, and passing through the eyelets 31 provided on the intermediate bands 9 and on the front rod 8. In this manner, pulling the cord 30 from the front and blocking it by means of a slider 32 causes the rear part of the cover 2 to be raised and consequently locked in the desired position, as shown schematically in Figures 1 and 2. This can be useful, for example, to create an air passage over the sun bed.

Again for the greater comfort of the user, as shown in Figure 3, respective pockets 40 are provided on the inner sides of the canvas 6 of the cover, from which respective bands 41 can be extracted and fixed for example to the front ends of the bars 5, acting as side windscreens.

According to the embodiment shown in Figure 4, removal of the cover 2 from the sun bed 1 takes place simply by unscrewing the knobs 22 and moving the front rod slightly outwards until it disengages from the threaded pins 16, and the blocks 13 can remain fixed to the sun bed 1, causing a minimal increase in its overall size. However, if it is wished to remove these, it will be sufficient to unscrew the inner nuts 20 which could also be replaced with knobs for easier unscrewing.

In order to make removal of the cover 2 easier, the embodiment in Figure 6 provides for a supporting rod 50 to be fixed to the block 13 with an upper housing 51 designed to accommodate a respective bottom end 52 of the rod 8.

In this way the cover can be removed from the sun bed 1 by simply extracting the frame 7 from the supporting rods 50. Adjustment of the slope of the front rod 8, and thus of the degree of opening of the cover 2, takes place in the same way described with reference to Figures 1 to 5.

As an alternative to locking in position of the frame 7 by means of pins 25, a ball acting in contrast with a spring, disposed on the rod 8 or respectively on the support 50, in place of the hole 23, which is press-

ed against one of the holes 24, may be provided.

According to a further alternative, friction discs can be provided at the connections that can be tightened by means of said external knobs 22.

Figures 7a and 7c show an alternative embodiment of the means of fixing the block 13 to the bar 5 of the sun bed 1.

In this case the counter-plate 14 is pressed against the inner face of the bar 15 by means of a spring mechanism 60. In order to assemble the frame 7, a threaded pin 16' can be provided on the outer face of the block 13, so that assembly takes place as described previously.

Figure 8 shows the use of a cover according to the invention for two sun beds side by side 1.

The two beds are first fixed together by means of a central block 13' whose upper surface 70 acts as a table top (Figs 9a, 9b). The block 13' has projections 15' from both sides that come to rest on the corresponding bars 5 of the sun beds, and can be fixed to said bars with the same means illustrated with reference to the preceding figures, and which therefore will not be further described.

The cover 2 again consists of a canvas that is indicated by the same reference number 6, supported by a frame, also again indicated as a whole with reference number 7. In this case the frame 7 consists of a plurality of substantially rigid or semi-rigid U-shaped rods 71. The rods 71 are all hinged on the same plate 75 that can be restrained to a supporting block 13, which is fixed to a bar 5 of the sun bed 1 in the same way as that illustrated with reference to the preceding figures.

In this case, the fulcrum points 72 of the rods 71 are distinct from each other and preferably arranged along the same horizontal line.

Locking of the rods 71 in the desired position is carried out by means of a pair of pins 73 which enter a corresponding pair of a plurality of holes 74 made in the plate 75.

In order to fix the plate 75 to the block 13, besides the hole 21 in the plate, for locking by means of the knob 22, appropriate locators 76 will be provided to avoid any oscillations of the plate 75.

The peculiarity of this embodiment of the cover for double sun beds lies in the fact that the rods 71 have articulations 80 at the joining points between the vertical portions and the horizontal portion of the U, so that the cover can be folded and thus occupy a minimal space when removed from the beds 1.

From what is described the advantages of the invention are obvious.

Claims

1. A folding cover for sun beds comprising a canvas (6) and a supporting frame (7) that can be fixed

to a bed (1) characterised in that said frame (7) is mounted in removable manner by means of connections (12) to the side bars (5) of the sun bed (1), and consists of a plurality of rods (8, 9; 71), the ends of which are hinged at said connections (12) and can be locked in different angular positions, to adjust the position of the cover (2) on an arc longitudinally to the bed (1) and/or to adjust the degree of opening of the cover itself.

2. A cover for sun beds according to claim 1, characterised in that said connections (12) comprise a block (13) being disposed on the outside of a respective bar (5) with an upper projection (15) on said rod, and an inner locking counter-plate (14).
3. A cover according to claim 2, characterised in that said block (13) and said counter-plate (14) are locked by means of a threaded pin (16) and an inner nut (20).
4. A cover according to claim 2, characterised in that said block (13) and said counter-plate (14) are locked by means of a spring device (60).
5. A cover according to any one of the preceding claims, characterised in that said frame (7) has, at its two ends, a respective hole (21) for engagement of a corresponding threaded pin (16; 16') projecting laterally from each block (13), with external fixing by means of a knob (22).
6. A cover according to any one of claims 1 to 4, characterised in that said frame (7) has a pair of side projections (52) at the bottom that can slide in and out of the respective housings (51) borne by supporting rods (50) that are fixed at an adjustable angle to said blocks (13).
7. A cover according to any one of the preceding claims, characterised in that said frame (7) is angularly blocked by means of at least a pin (25; 73) engaging in corresponding holes (24) of said block (13), or (74) of a support plate (75) of the rods (71) of the frame.
8. A cover according to any one of claims 1 to 6, characterised in that said frame (7) is angularly blocked by means of a ball mounted on the frame, pressed elastically against one of a plurality of holes (24) provided on said block (13).
9. A cover according to any one of claims 1 to 6, characterised in that friction discs that can be tightened by means of said knob (22) are provided at said block (13) to lock the cover (2) at an angle.

10. A cover according to any one of the preceding claims, that can be fitted to a single sun bed, characterised in that said frame (7) comprises a substantially rigid horseshoe-shaped front rod (8) and flexible rods (9). 5
11. A cover according to any one of the claims 1 to 9, that can be fitted to a pair of sun beds placed side by side, characterised in that said frame (7) comprises a plurality of rods (71), all substantially rigid and U-shaped, having articulations (80) at the joints between the vertical sections and the horizontal section of the U. 10
12. A cover according to any one of the preceding claims, characterised in that a cord (30) with a slider (32) is provided to raise the rear part of the cover. 15
13. A cover according to any one of the preceding claims, characterised in that it has pockets (40) on the two inner sides from which respective bands (41) are extracted that can be fixed frontally to the bed (1), acting as side windscreens. 20

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FIG. 2

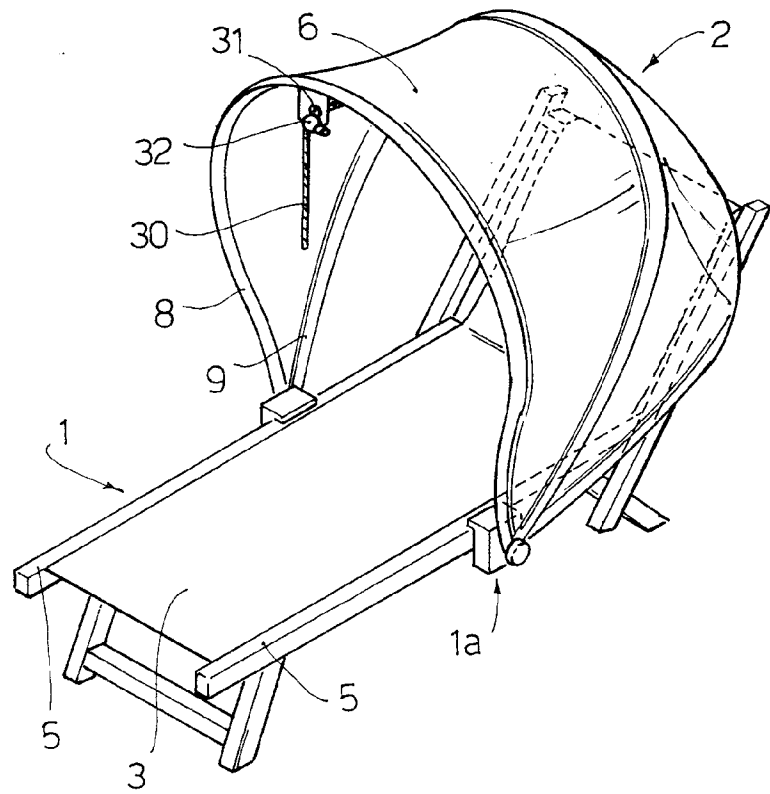


FIG. 1

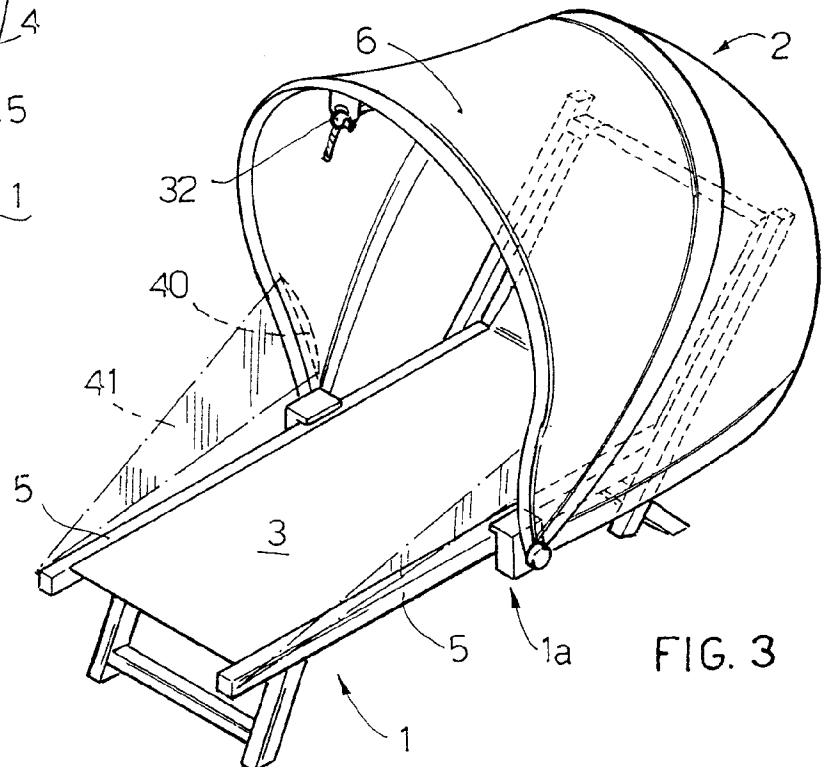
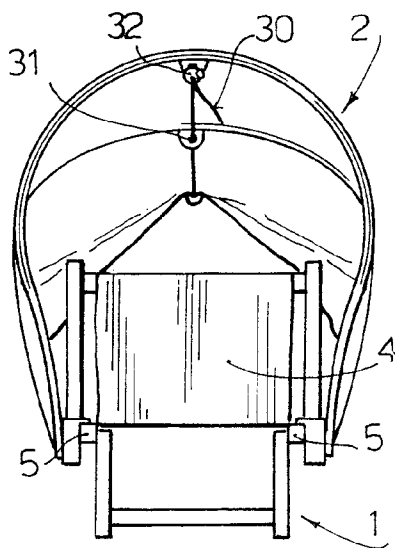
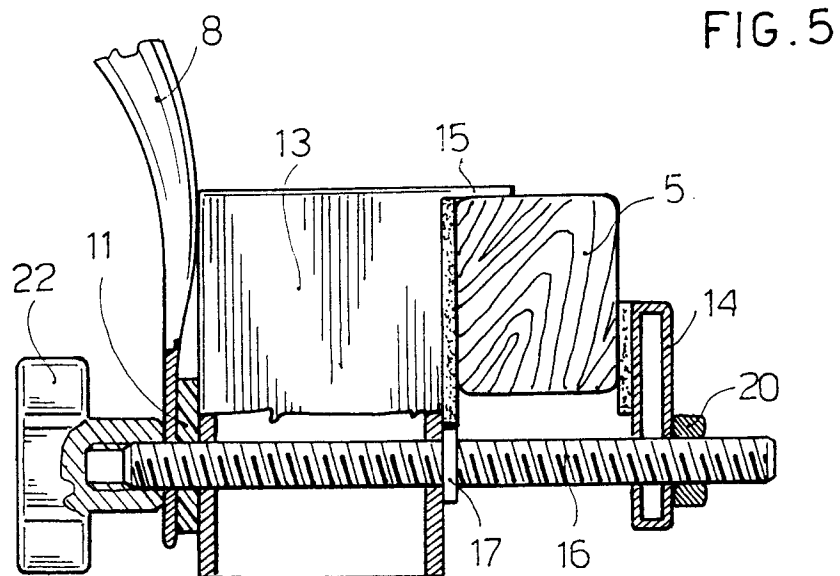
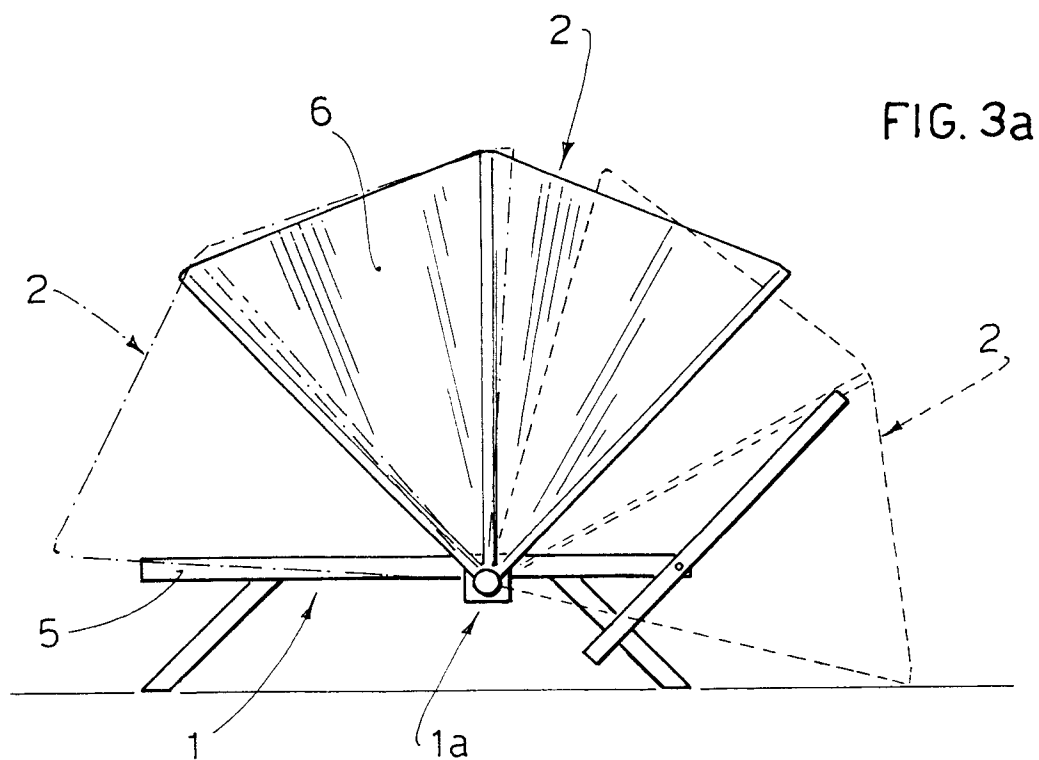


FIG. 3



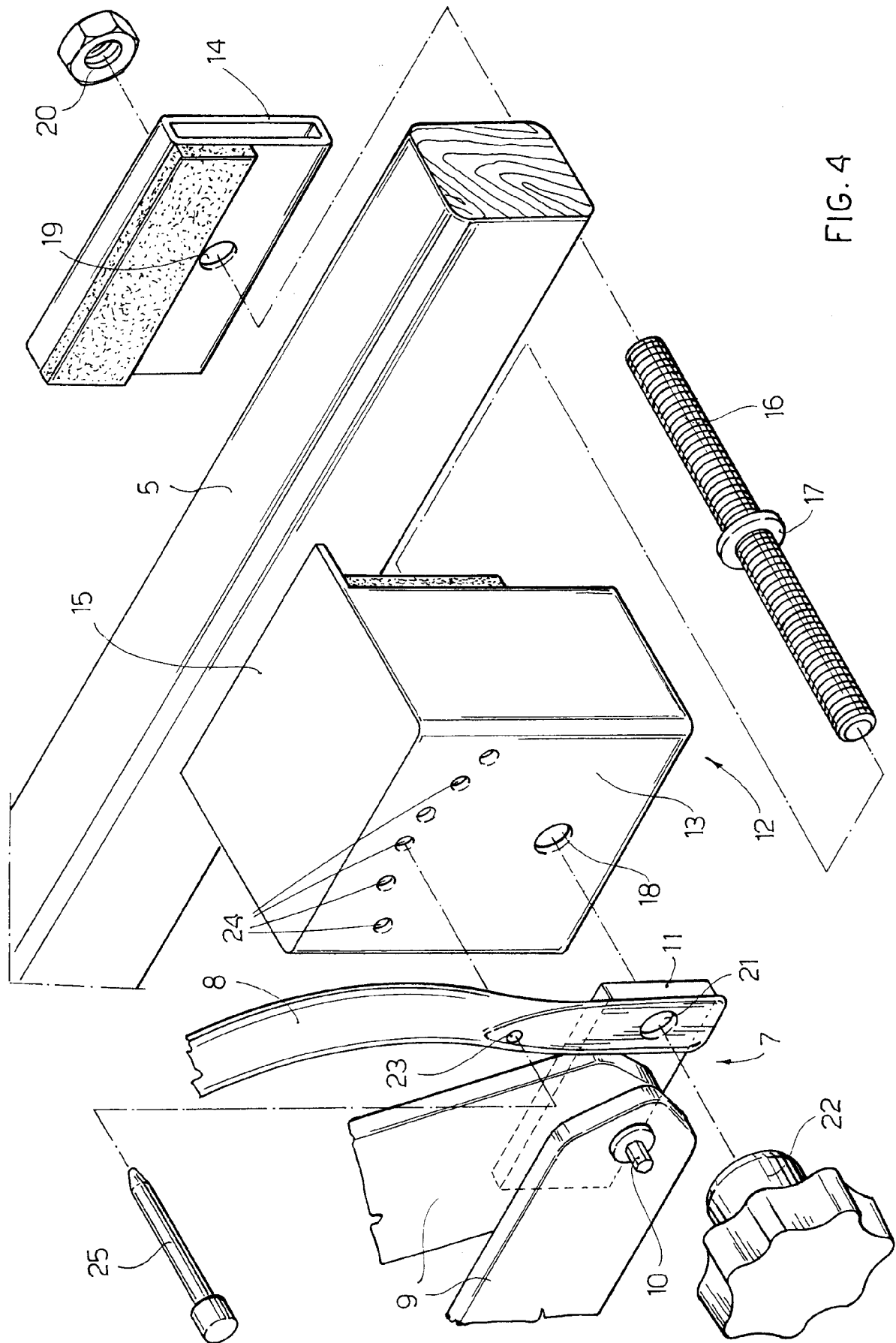


FIG. 4

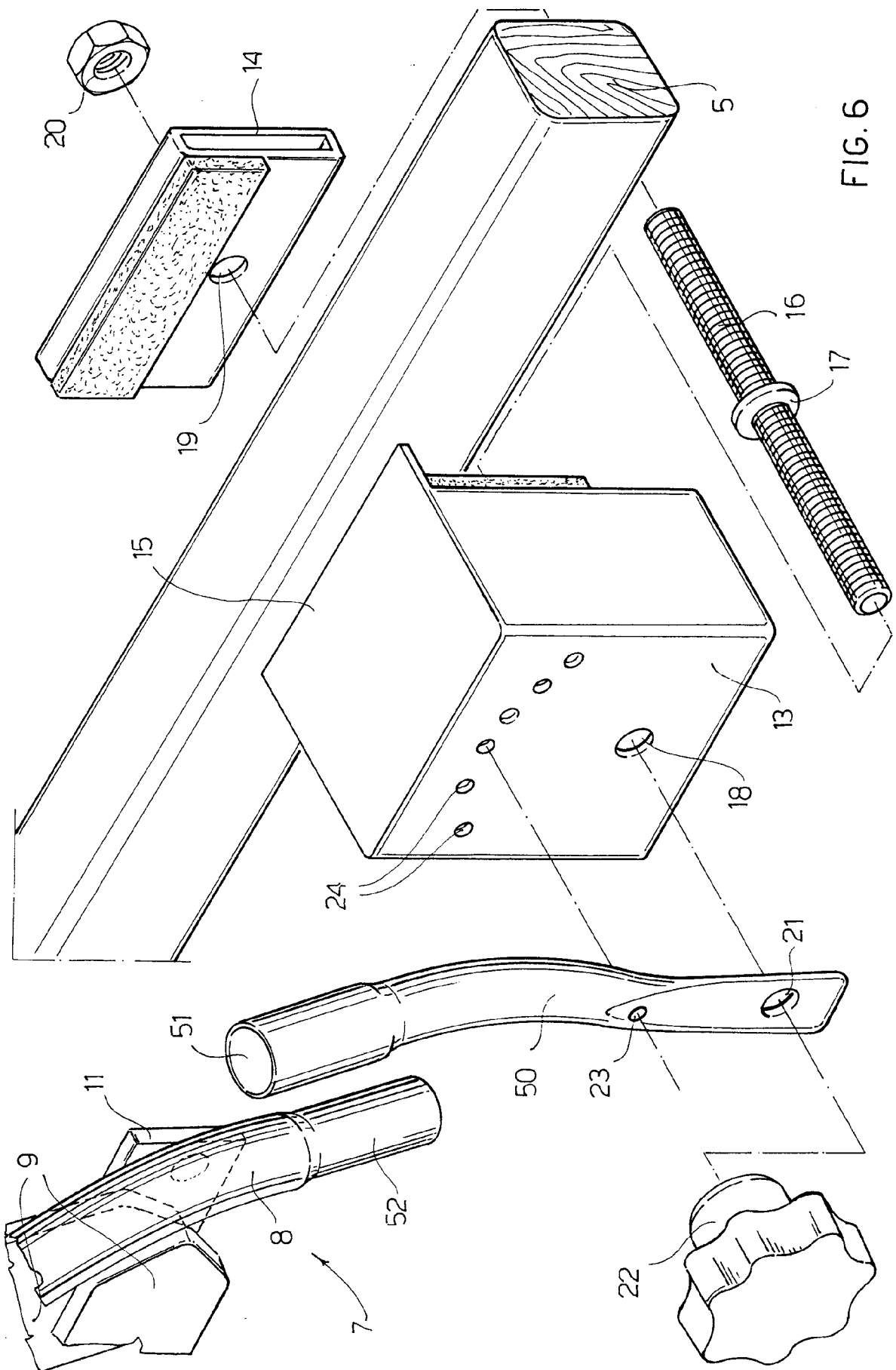
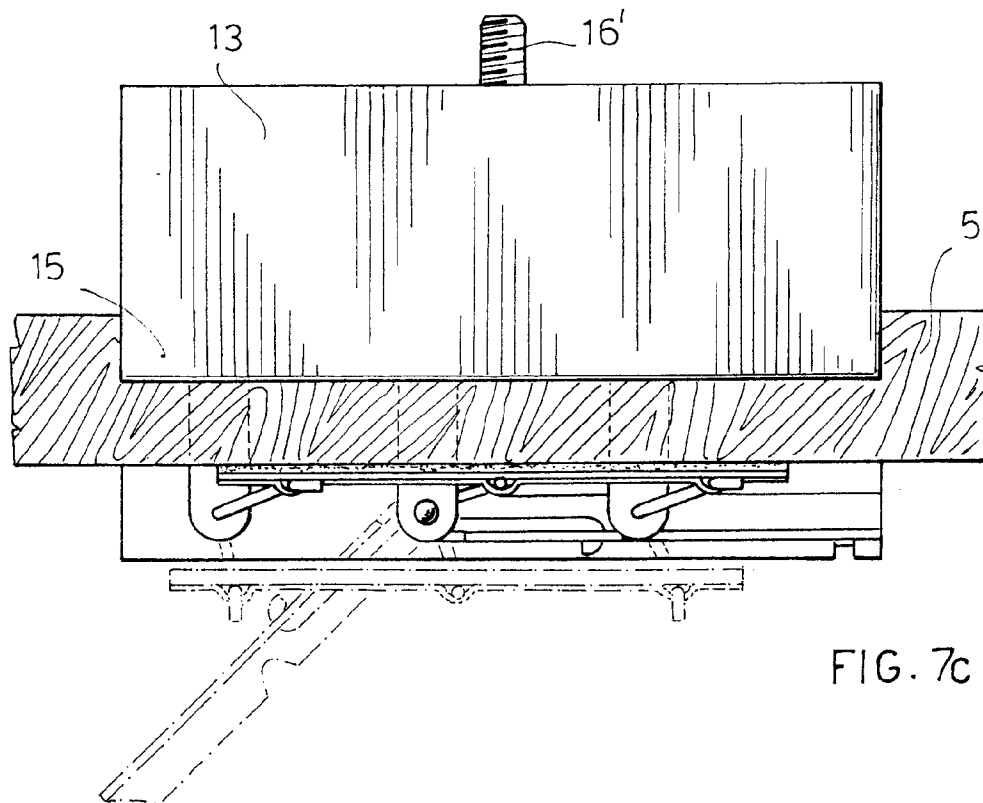
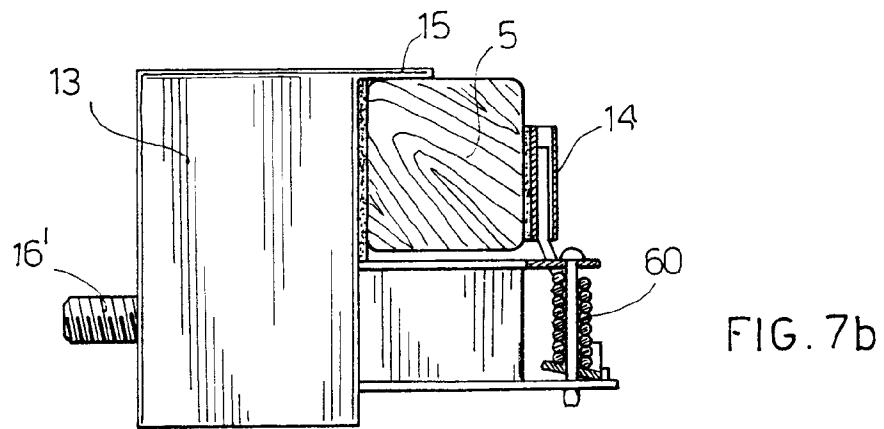
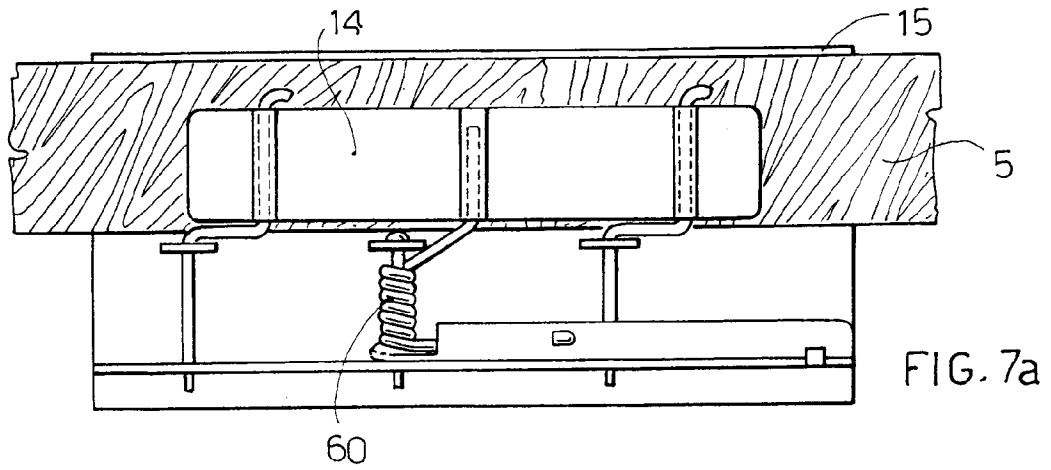
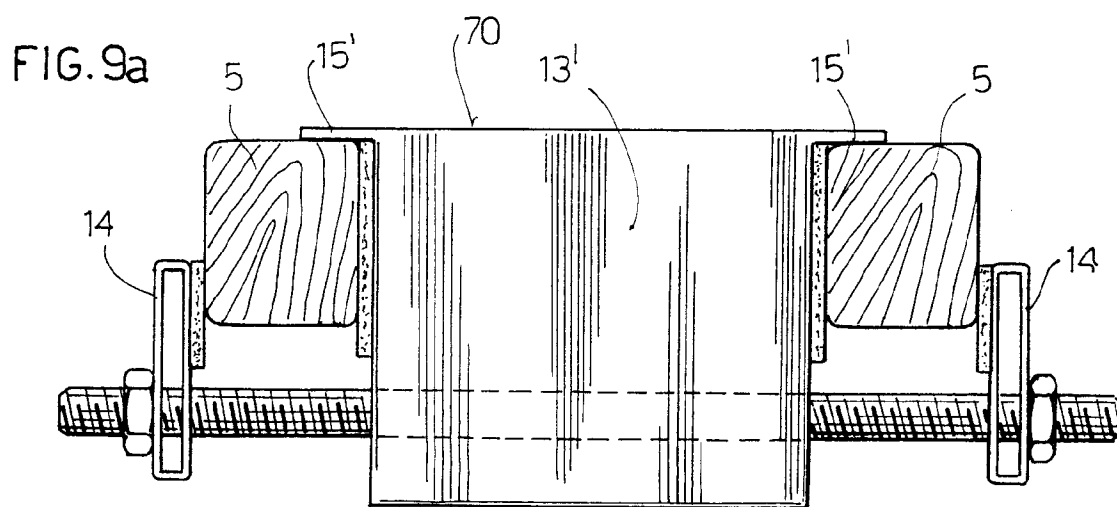
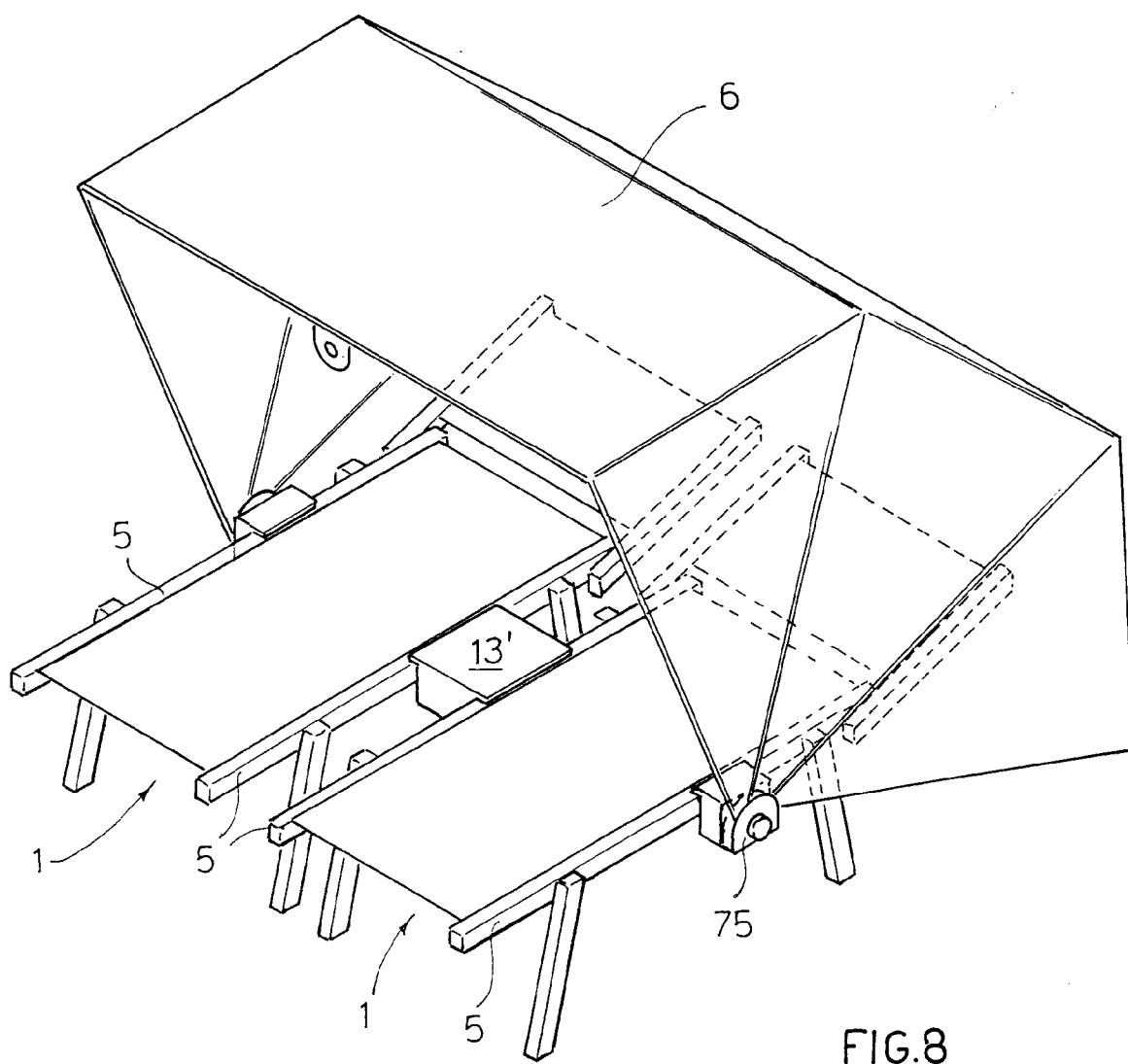
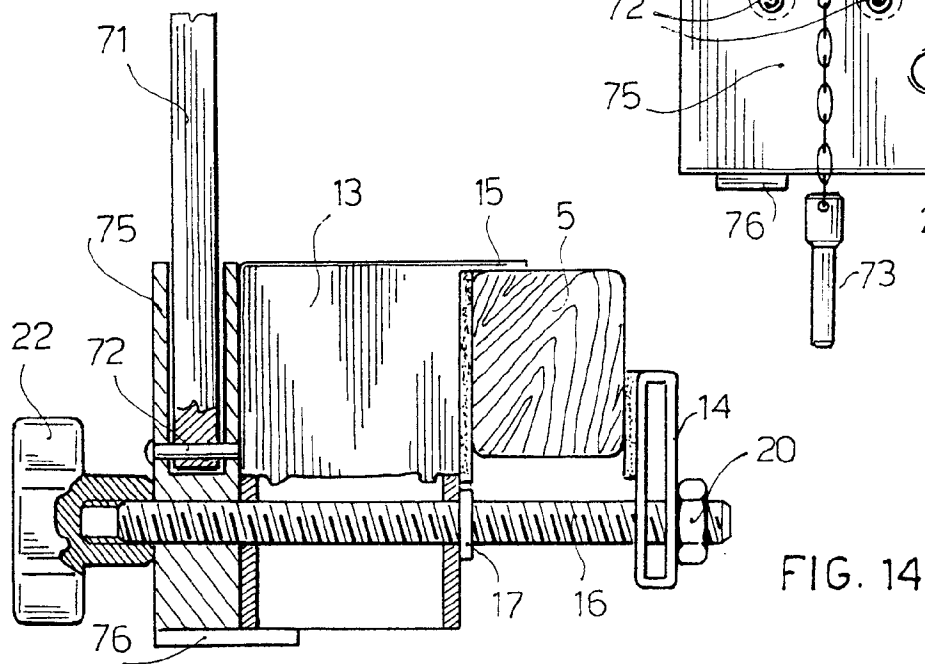
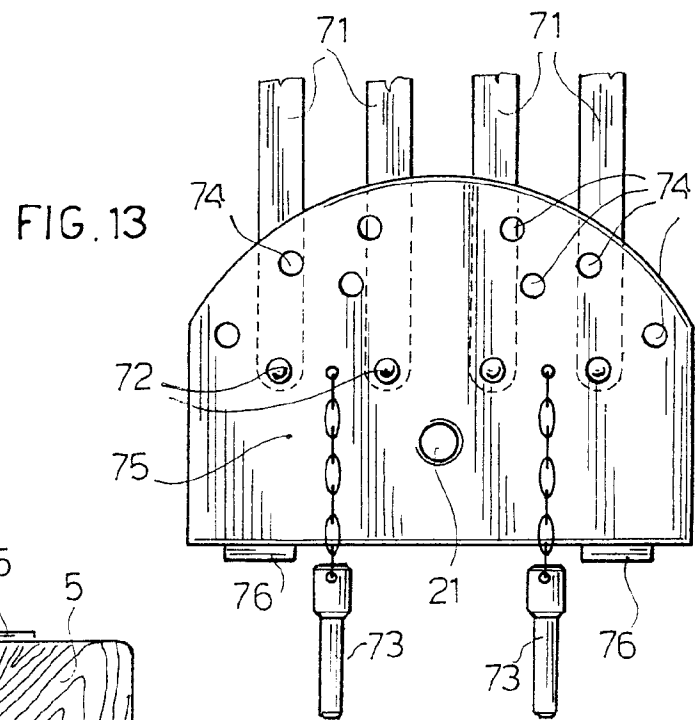
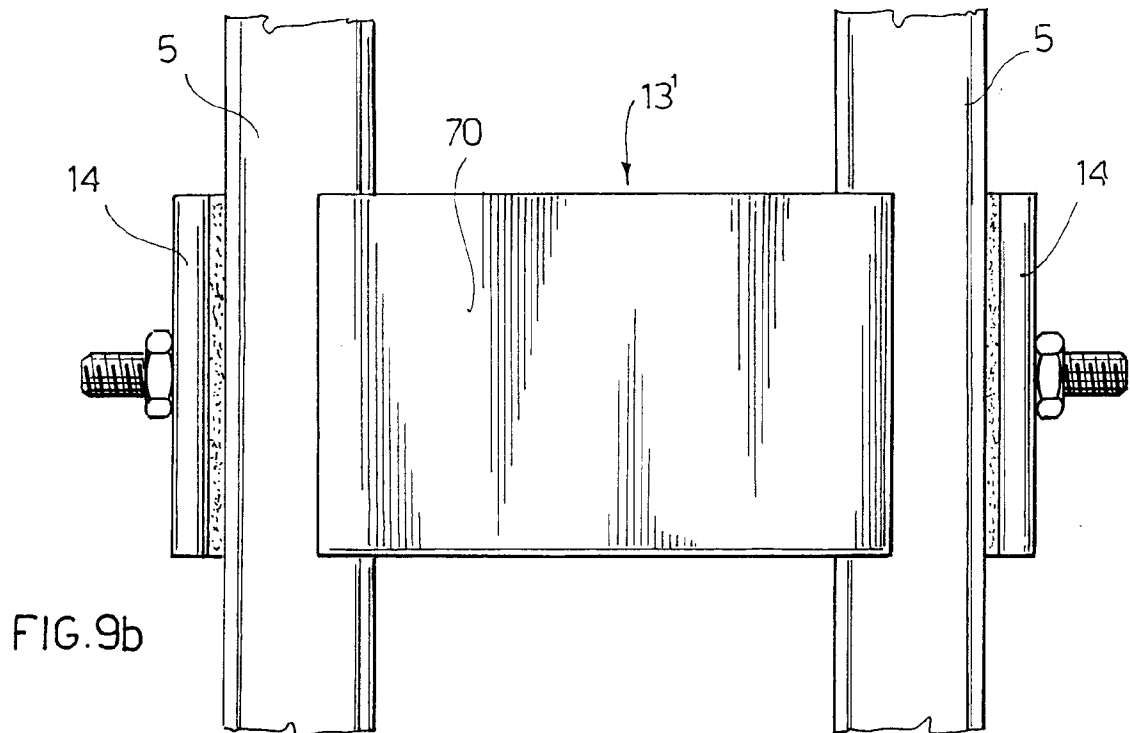
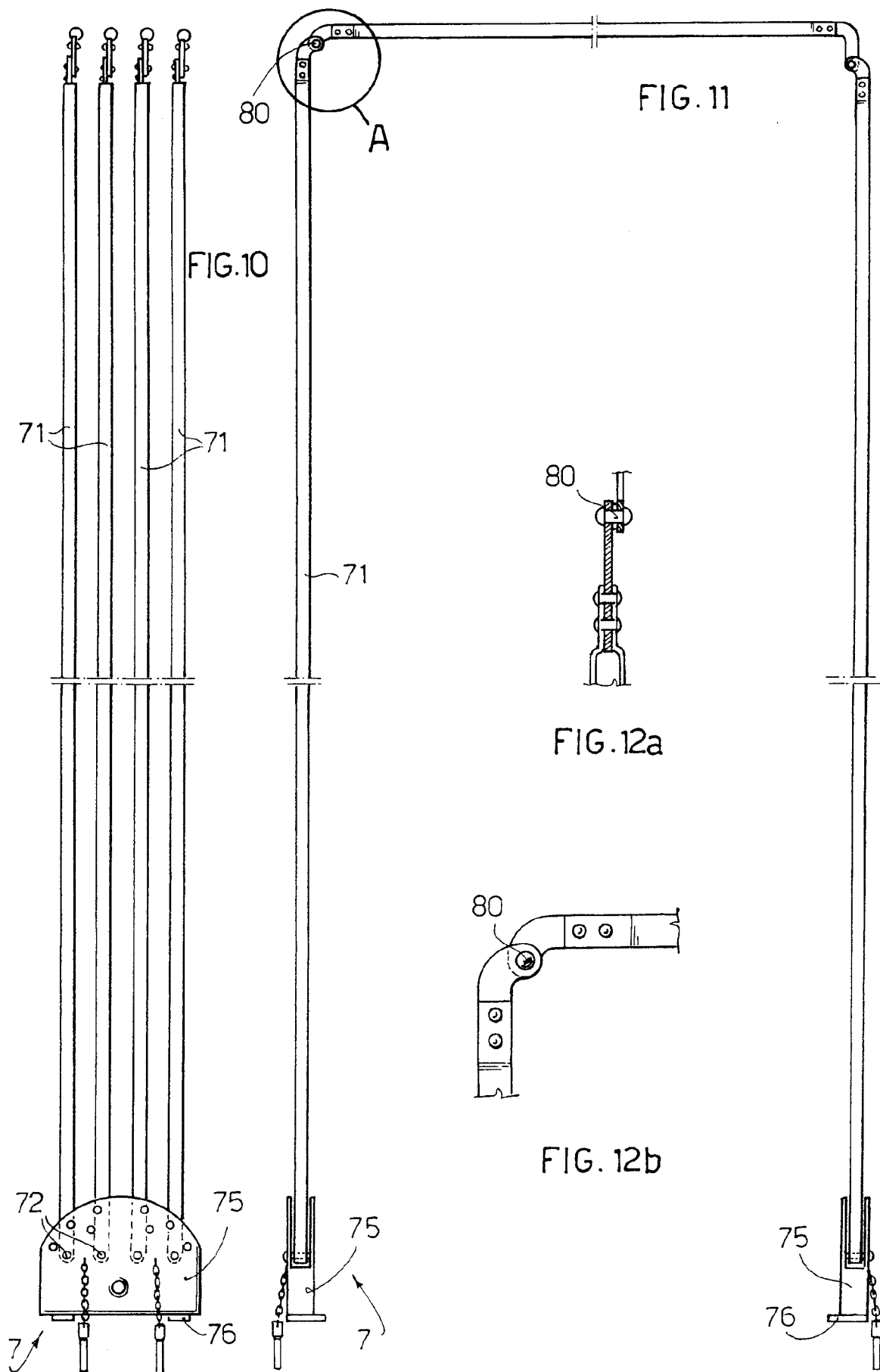


FIG. 6











European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 94 12 0085

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)
X	US-A-4 506 689 (FIDDLER) * column 1, line 52 - column 3, line 32; figures *	1	A47C7/66 A47C1/14
A	---	2,4-6,9, 10,12,13	
A	FR-A-2 534 124 (WATERLOT) * the whole document *	1,7,8	
A	---		
A	US-A-4 030 748 (BROCK) * figures *	3,5	
A	---		
A	DE-A-34 36 423 (THIEME) * page 6, line 32 - line 37; figures *	11	

The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			A47C
Place of search		Date of completion of the search	Examiner
THE HAGUE		23 March 1995	VandeVondele, J
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