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(54) Support base for fixed column and rotating platform winding apparatus

(57) The present invention refers to a support base for fixed column and rotating platform winding apparatus. The support base comprises a pair of horizontal side frames (2), on which are positioned a support plate (6) of the fixed column (7), a support plate (12) of the rotating platform (13) and a closing plate (26) of the space between said support plates (6, 12). Said support and closing plates (6, 12, 26) are fastened to the side frames

(2) by fastening means applied during the mounting phase, in particular by means of fastening bolts. The support plate (12) of the rotating platform (13) is in turn produced in the form of separate parts (22-24), that can be combined and fastened to each other and to the above-mentioned side frames (2) by similar fastening means applied during the mounting phase, in particular by means of fastening bolts.

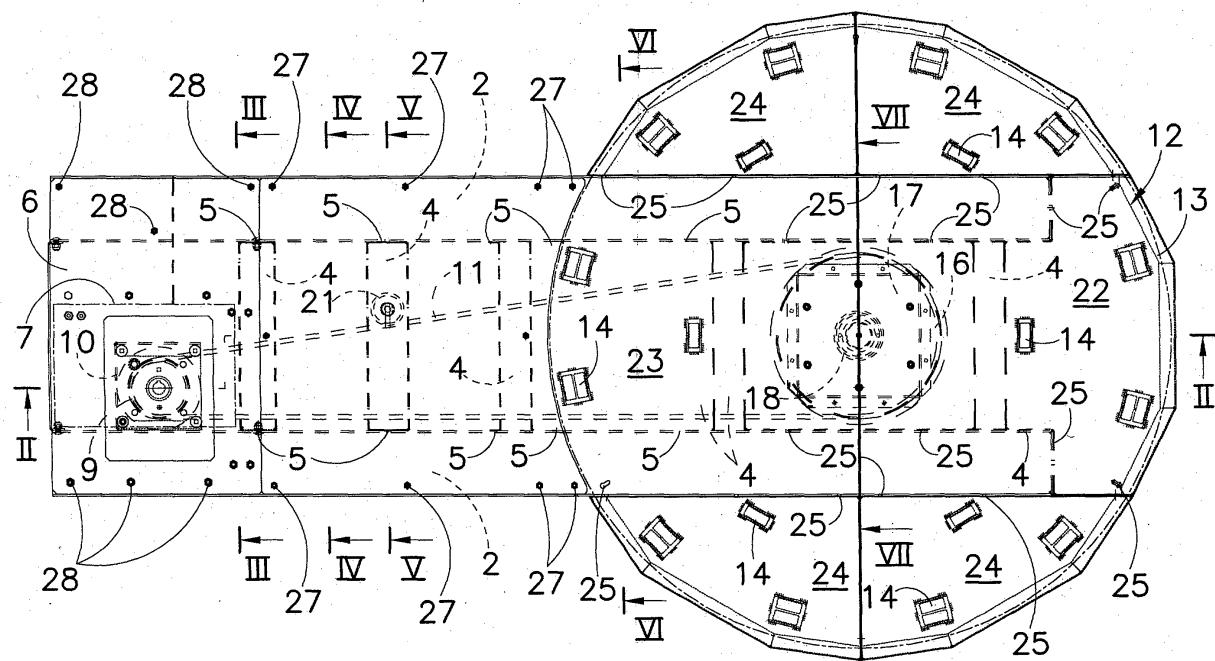


FIG. 1

Description

[0001] The present invention refers to a support base for fixed column and rotating platform winding apparatus.

[0002] For winding film or similar tape around an article or group of articles piled on a pallet or other suitable support, winding equipments that are made up of a support base including a motorized rotating platform and of a fixed column for a reel of windable film that rises and descends along the column are generally used.

[0003] In the known equipments of that type the support base of the reel is made up of a plurality of parts welded together. This creates evident operating and storing problems.

[0004] The object of the present invention is to produce a support base for fixed column and rotating platform winding apparatus that entails less operating and storing problems.

[0005] In accordance with the invention said object is achieved with a support base characterized in that it comprises a pair of horizontal side frames on which a support plate for the fixed column, a support plate for the rotating platform and a closing plate for the space between said support plates are positioned, said support and closing plates being fastened to said side frames by fastening means applied during the mounting phase, in particular by means of fastening bolts.

[0006] In addition the support plate of the rotating platform is preferably produced in the form of separate parts, that can be combined and fastened to each other and to the above-mentioned side frames of similar fastening means applied during the mounting phase, in particular by means of fastening bolts.

[0007] It is evident that the production of the support base in parts that can be stored separately and fastened to each other during the mounting phase by means of fastening bolts simplifies considerably the operations to be carried out and permits significant saving of warehouse space. In addition it is possible to provide the support base with platforms of variable dimensions.

[0008] The characteristics of the present invention will appear evident from the following detailed description of an embodiment thereof represented in the enclosed drawings in which:

Figure 1 shows a top plan view of a support base according to the present invention;

Figure 2 shows said support base in longitudinal section according to line II-II of Figure 1;

Figure 3 shows said support base in transversal section according to line III-III of Figure 1;

Figure 4 shows said support base in transversal section according to line IV-IV of Figure 1;

Figure 5 shows said support base in transversal section according to line V-V of Figure 1;

Figure 6 shows said support base in transversal section according to line VI-VI of Figure 1;

Figure 7 shows said support base in transversal section according to line VII-VII of Figure 1.

[0009] The support base shown in the drawings, 5 where it is indicated in its whole with the numerical reference 1, comprises a pair of side frames 2 with U-section turned downward, periodically closed by U-shaped section bars 3 turned upward (Figures 5-7). The side frames 2 extend almost for the entire length of the support base (Fig. 1) and are connected to each other by stiffening crossties 4 fastened to them by means of fastening bolts in correspondence with holes 5.

[0010] The side frames 2 support at one end a support plate 6 for a fixed column 7 (Fig. 2), which in turn supports a reel-holder trolley (not shown) which slides vertically. An electric motor 8 (Figures 1-3) is also mounted on the plate 6, which puts in motion a pulley 9 contained in a housing 10 placed below the plate 6 and open in the direction of the other end of the base 1 to let the belt 10 pass 11 wound on the pulley 9. Plate 6 is fastened to the side frames 2 by means of fastening bolts in correspondence with holes 28.

[0011] The other end of the side frames 2 supports in turn a support plate 12 for a rotating platform 13 designated for the support of the articles to be wound (Figures 1, 2 and 7). The platform 13 rests on the plate 12 by means of idle rolls 14 and receives the motion from the electric motor 8 by means of a motion transmission that comprises the pulley 10, the belt 11 (duly made to pass 20 through windows 15 of the crossties 4, as can be seen in the figures 3-6) and a pulley 16 fastened to the platform 13 by means of a plate 17 and rotatably supported by a hub 18 fastened to an underlying plate 19 placed in connection of the side frames 2 and fastened to them 30 by means of fastening bolts in holes 20 (Figures 1 and 7). A belt tightener 21 associated to one of the crossties 4 (Figures 1 and 5) keeps the belt 11 in tension.

[0012] The support plate 12 is divided into six parts placed side-by-side (Figure 1), one of which (22) is 40 placed at the end of the side frames 2, another (23) placed between the side frames 2 in position diametrically opposed to the part 22 and four others (24) placed on the sides of the side frames 2 to complete with parts 22 and 23 a circular shape suitable for supporting the idle 45 rolls 14. The six parts of plate 22-24 are fastened to each other and to the side frames 2 by means of fastening bolts in correspondence with holes 25 (Figure 1).

[0013] Finally, in the space between the two support plates 6 and 12 a closing plate 26 is positioned on the 50 side frames 2, which is fastened to the side frames 2 by means of fastening bolts in correspondence with holes 27.

55 Claims

1. Support base for fixed column and rotating platform winding apparatus, **characterized in that** it com-

prises a pair of horizontal side frames (2) on which a support plate (6) for the fixed column (7), a support plate (12) for the rotating platform (13) and a closing plate (26) for the space between said support plates (6, 12) are positioned, said support and closing plates (6, 12, 26) being fastened to said side frames (2) by fastening means applied during the mounting phase, in particular by means of fastening bolts.

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2. Support base according to claim 1, **characterized in that** the support plate (12) of the rotating platform (13) is produced in the form of separate parts (22-24), that can be combined and fastened with each other and to the above-mentioned side frames (2) by fastening means applied during the mounting phase, in particular by means of fastening bolts.

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3. Support base according to claim 2, **characterized in that** said separate parts (22-24) of the support plate (12) of the rotating platform (13) comprise a first part (22) placed at the end of the side frames (2), a second part (23) placed between the side frames (2) in position diametrically opposed to the first part (22) and four other parts (24) placed at the sides of the side frames (2) to complete a circular shape with said first and second part (22, 23).

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4. Support base according to claim 3, **characterized in that** said rotating platform (13) is supported in its rotating by idle rolls (14) supported by said parts (22-24) of said support plate (12) of the rotating platform.

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5. Support base according to claim 1, **characterized in that** said side frames (2) are connected to each other by stiffening crossties (4) fastened by fastening means applied during the mounting phase, in particular by means of fastening bolts.

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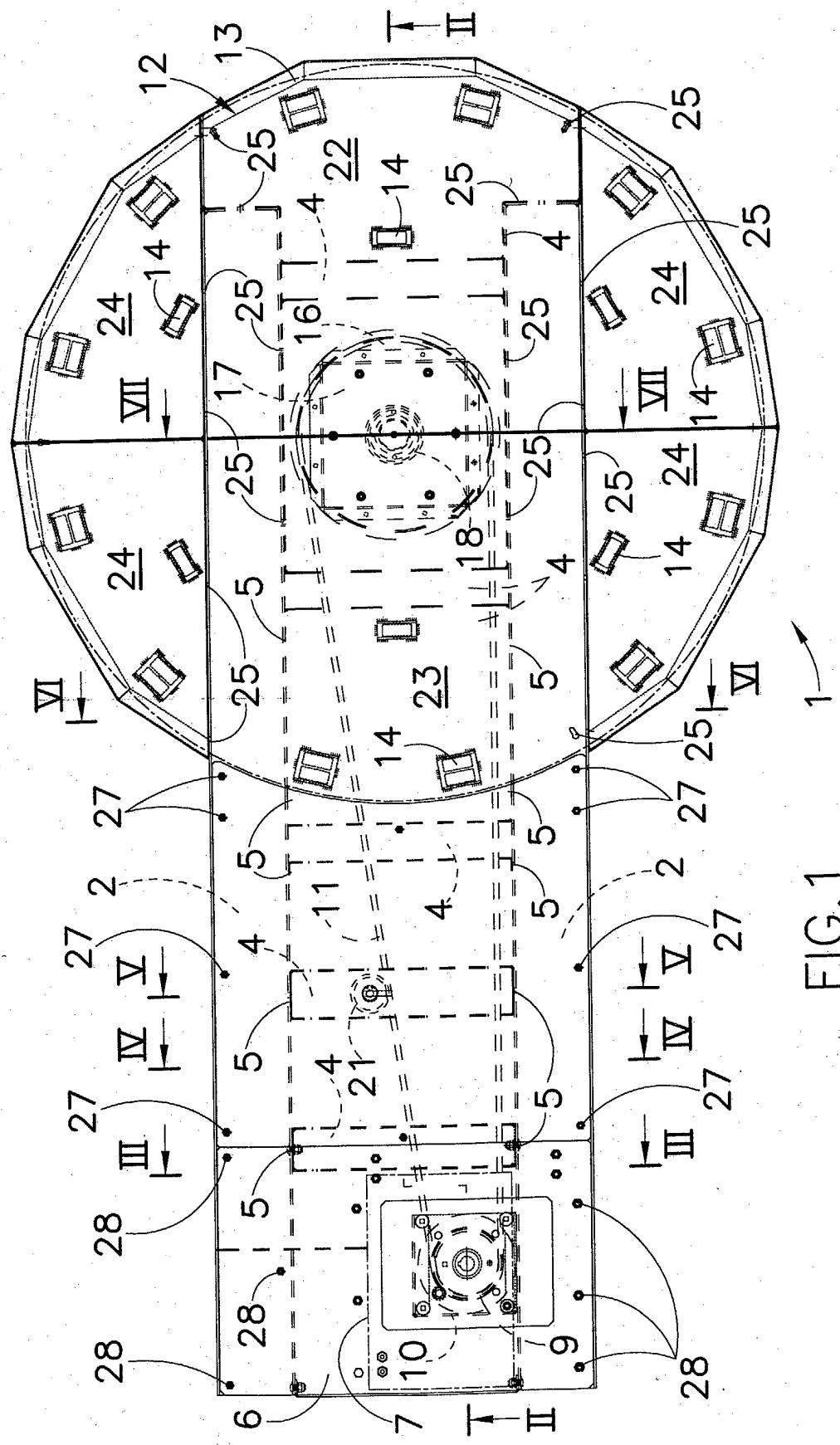


FIG. 1

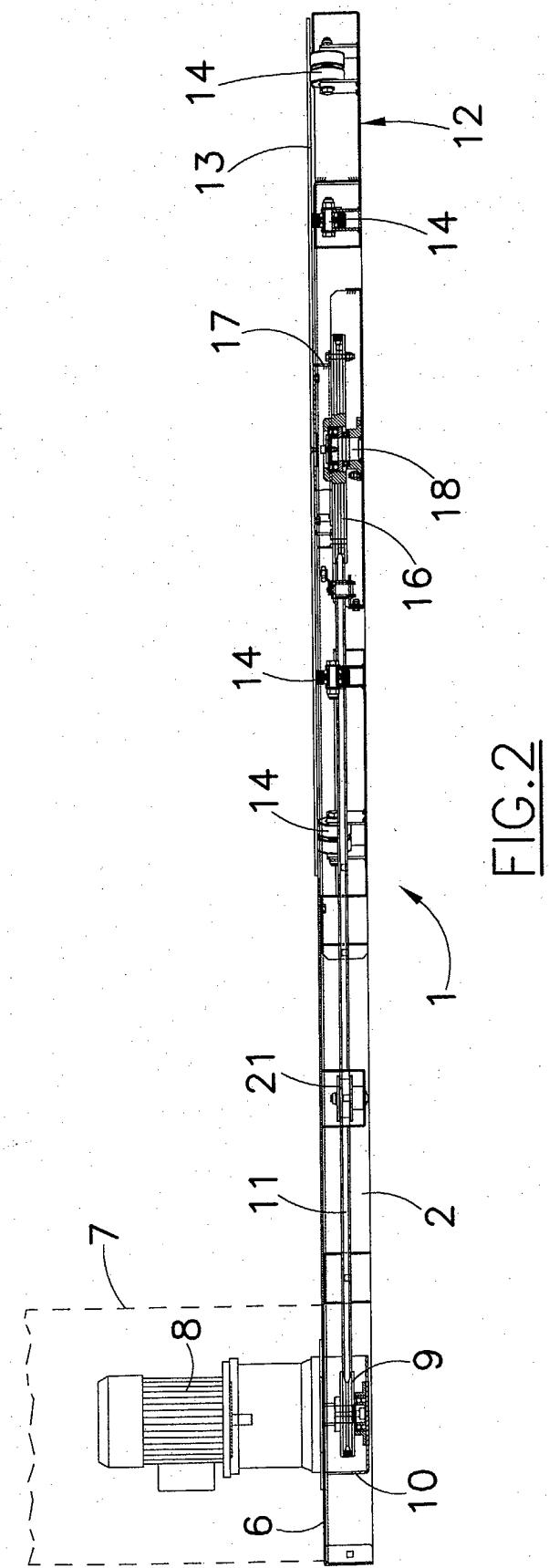
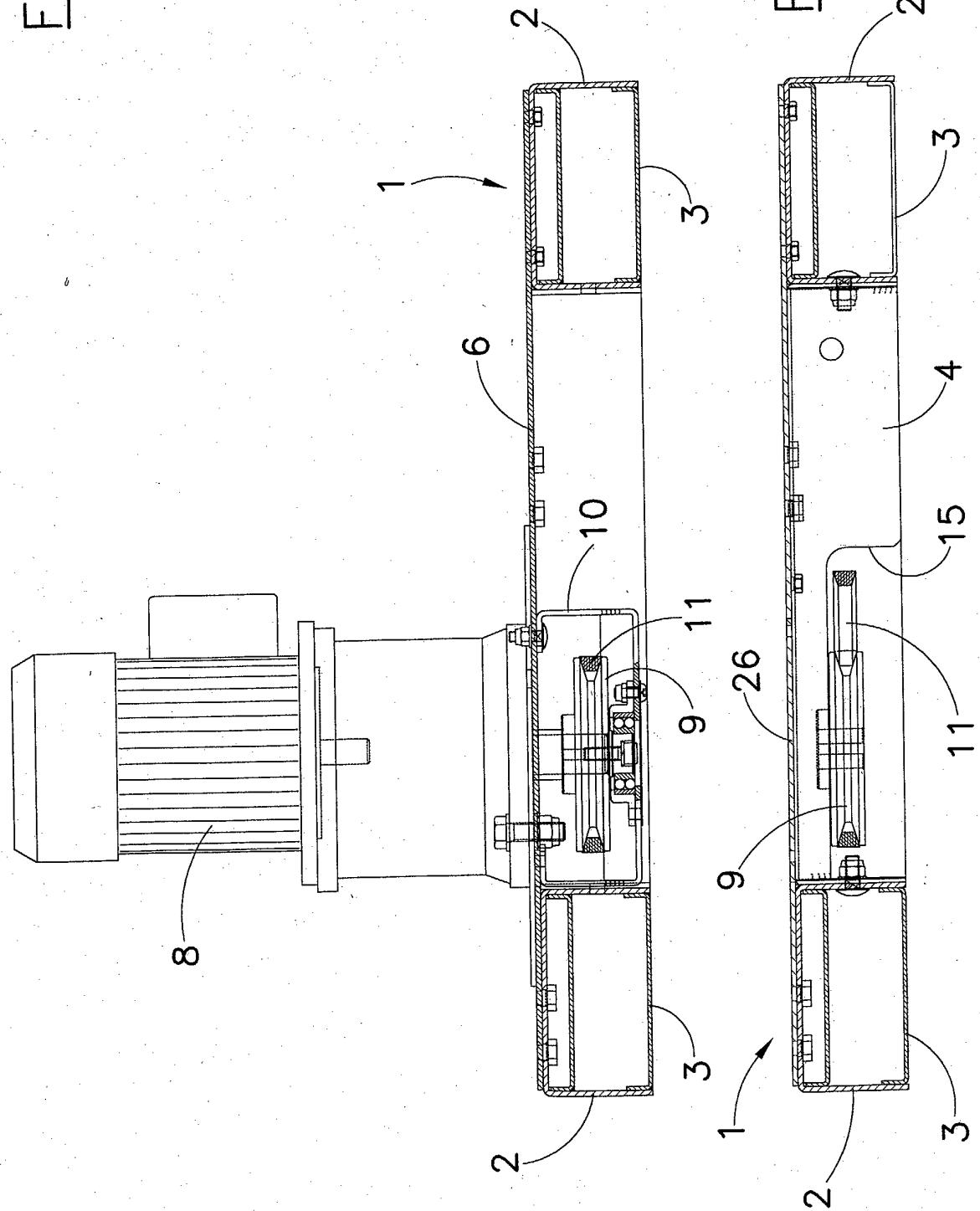
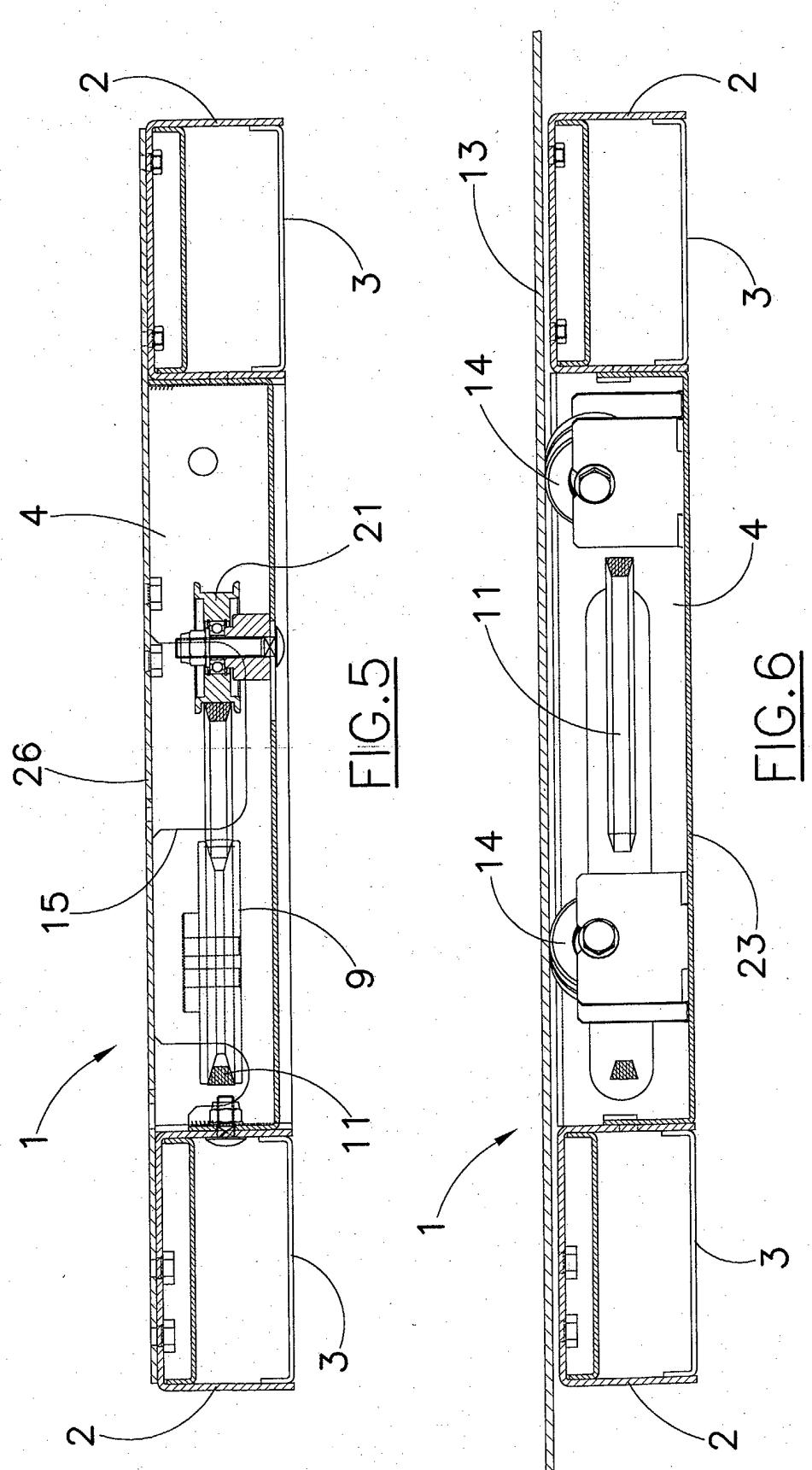


FIG.3FIG.4



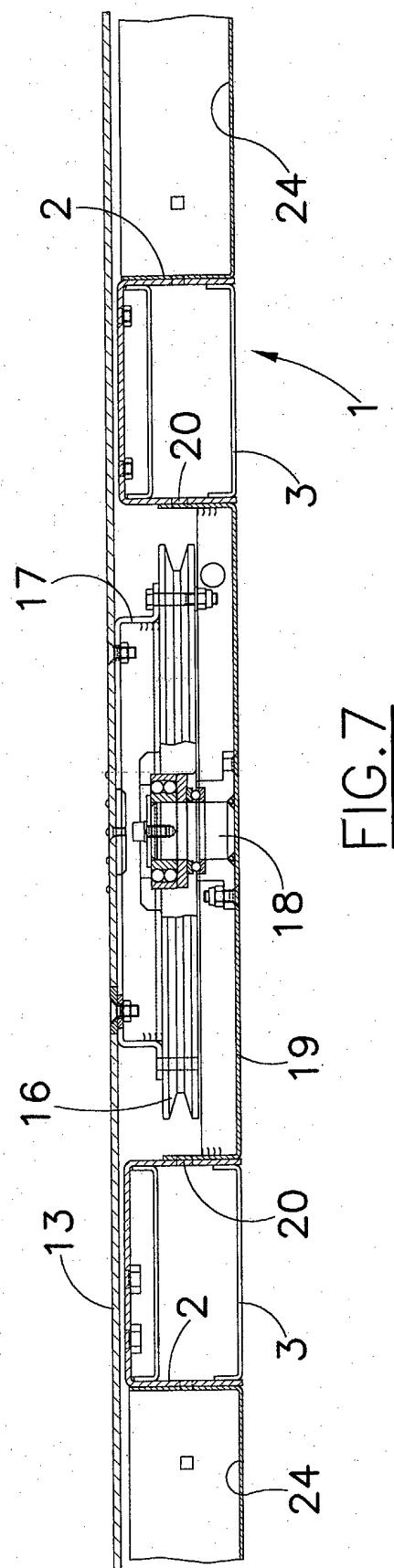


FIG. 7



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)						
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim							
X	EP 1 092 627 A (FROMM HOLDING AG) 18 April 2001 (2001-04-18) * the whole document * ---	1,5	B65B11/04						
X	DE 31 07 713 A (BUETTNER HANS HUGO) 4 November 1982 (1982-11-04) * page 4, line 17 - page 5, line 6; figures 1-3 *	1							
A	GB 2 188 606 A (ACME GERRARD LTD) 7 October 1987 (1987-10-07) * page 1, line 61-63; figures 1-3 * -----	1							
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)						
			B65B						
<p>The present search report has been drawn up for all claims</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Place of search</td> <td style="width: 33%;">Date of completion of the search</td> <td style="width: 34%;">Examiner</td> </tr> <tr> <td>THE HAGUE</td> <td>4 April 2003</td> <td>Grentzius, W</td> </tr> </table>				Place of search	Date of completion of the search	Examiner	THE HAGUE	4 April 2003	Grentzius, W
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THE HAGUE	4 April 2003	Grentzius, W							
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document							
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ANNEX TO THE EUROPEAN SEARCH REPORT
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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. The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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