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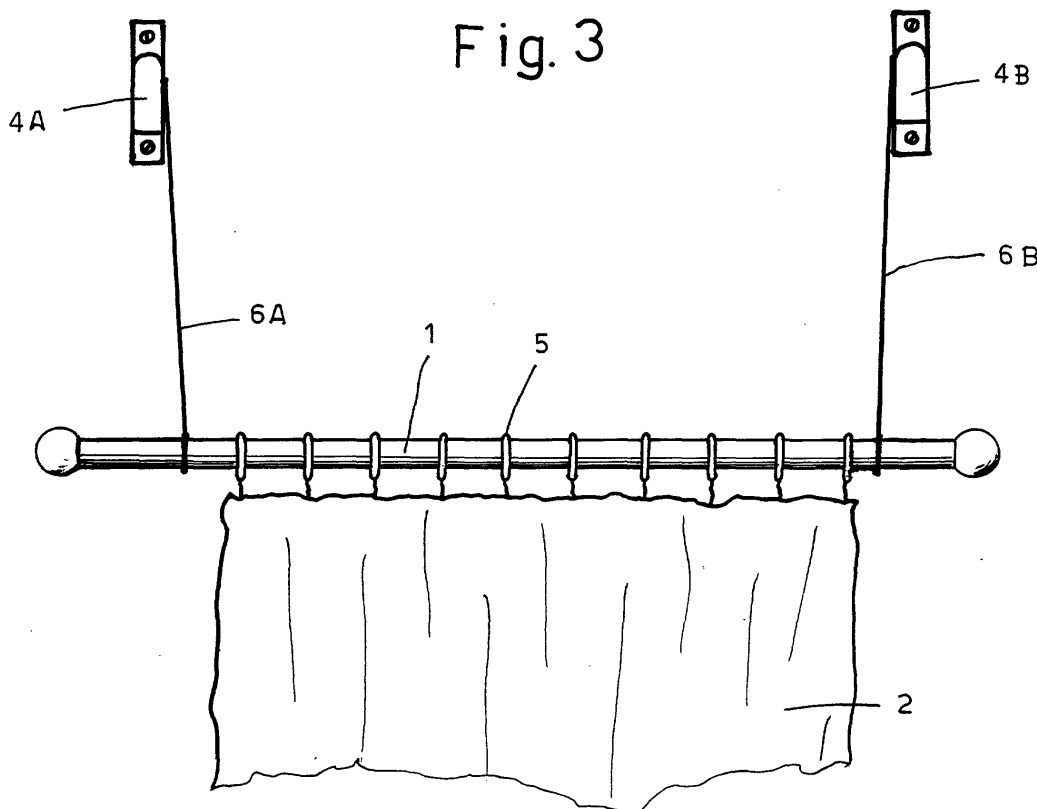
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(54) **Method for lowering horizontal curtain supports to a predetermined level, and means for its implementation**

(57) This method for lowering horizontal curtain supports to a predetermined level has the characteristic of securing the two ends of these supports by means of respective ropes of predetermined length wound about a respective usual automatic rewinding spool fixed to

the wall or rigid with respective brackets, said brackets being provided with upper recesses shaped to enable the two ends of said supports to securely rest thereon, said ends being shaped to enable their supports to engage in a strongly oblique position and to provide gripping surfaces for one end of an operating rod.



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Description

[0001] This invention relates to a method for lowering horizontal curtain supports to a predetermined level; the invention also relates to brackets for implementing the method.

[0002] Most curtains are known to be suspended on a horizontal support which is supported by brackets fixed to the wall. Said horizontal support can consist of a long straight pole on which large rings connected to an upper edge of the suspended curtain are mounted. Alternatively, said support can consist of an open-profile bar of aluminium or steel plate, which acts as a track along which pairs of rollers slide, connected to the upper edge of the curtain by means of their pivoting structure. In both cases the result is a curtain suspended by fixing means positioned at a level (nearly three metres from the floor) not accessible by simply raising the hands. This presents a problem for the housewife during periodical curtain cleaning. For this purpose, such curtains have to be removed from the means by which they are fixed to the horizontal supports, this requiring the means to be accessible to the hands.

[0003] The result is that the housewife has to use a ladder to climb to the level at which said horizontal supports are located.

[0004] This is a tiring operation as the need to remain balanced for a long period on the ladder creates mental tension. In addition, said operation usually involves serious dangers related to a possible fall. An object of the present invention is to define a method by which the hands which are to remove the curtain are given the necessary access without the use of ladders or equivalent means. Another object is to define the means enabling said method to be implemented.

[0005] These and further objects will be seen to have been attained on reading the following detailed description illustrating a method for lowering horizontal curtain supports to a predetermined level having the characteristic of securing the two ends of these supports by means of respective ropes of predetermined length wound about a respective usual automatic rewinding spool rigid with respective brackets, said brackets being provided with upper recesses shaped to enable the two ends of said supports to securely rest thereon, said ends being shaped to enable their supports to engage in a strongly oblique position and to provide gripping surfaces for one end of an operating rod.

[0006] The invention is illustrated by way of non-limiting example in the accompanying drawings, in which:

Figure 1 shows a horizontal curtain support resting on two lateral brackets;

Figure 2 shows a curtain support, of the type shown in the preceding figure, resting on a bracket and held by a rope;

Figure 3 shows a curtain support, of the type shown in the preceding figures, held by two ropes;

Figure 4 is a partly sectional view of a bracket containing in its interior a device for automatically winding a holding rope for a support;

Figure 5 shows one end of a support held by its bracket and engaged with the flexible end of a manoeuvring implement;

Figure 6 shows a curtain support of the type shown in Figure 1, held by ropes of automatic rewinding devices which are independently fixed to the wall.

[0007] With reference to the aforesaid Figure 1, a support 1 is positioned horizontally to hold a curtain 2 and rests with its ends in the base 3 of recesses present in brackets 4A, 4B fixed by screws 23. The curtain 2 is held by usual means; in the illustrated example said means consist of usual rings 5 slidable along a support 1. Said support 1 is secured to its said support brackets 4A, 4B by two ropes 6A, 6B bound and/or tied to them in usual manner, for example by a hook 20 and ring 21.

[0008] The ropes are rewound by a usual automatic rewinding device 10A, 10B housed in a cavity 22 in the supports 4. Said device typically comprises a pulley 7 rotatable within a fixed container 8 and elastically returned, in the sense of rewinding the ropes, by a flat spring 9. The ropes 6A, 6B are of equal length. As a result of this, when an implement raises and extracts the support 1 from the seat by which it rests in the recess 3 of the bracket 4A, said support remains suspended by its rope 6A (Figure 2).

[0009] If this operation is repeated to also extract the support 1 from the other bracket 4B, it can be made to descend until it reacquires a horizontal position at a lower level, suitable to enable the hands (typically of a housewife) to gain access to the rings 5 (or equivalent) in order to unhook the curtain from them. The said operation of lowering the support presupposes that the weight of the support plus curtain is greater than the reactive force exerted by the spring 9; said operation comprises two stages in sequence, involving firstly one bracket and then the other. After extracting one end of the support 1 from its bracket, said support lies obliquely; this gives rise to a force 12 which requires the support 1 to be axially restrained by the bracket 4B. This restraint can be provided by a usual spherical piece 13B rigid with the support 1. This also applies to the spherical piece 13A positioned at the other end. The described operation is effected by an implement 11 having a fork-shaped end 14, to be engaged with the support 1 in the manner shown in Figure 1; the use of said fork involves a slight axial sliding of the support. To operate in a more precise manner and at the same time apply to the support 1 a reaction to the axial component 12, another type of implement 11A could be used. This implement consists of a simple cylindrical helical spring 15 of narrow pitch, the helix ratios being such as to give it the operational rigidity of a rod 16 suitable for supporting the weight of the support plus curtain. At the same time this rod must also be able to bend elastically during the extraction of one

of the two ends 1 D of the support 1 from the respective bracket 4. Said bending is that deriving from the formation of a certain angle between the axis 18 of the implement 11A and the vertical axis 19 of a tubular hole 17 present in each of the two ends 1 E of a suitable support 1C. This type of implement with a "flexible end rod" requires however that the axis 19 be vertical; consequently, either expedients suitable for this purpose must be used on supports 1 of round cross-section, or this type of implement must be considered applicable only to supports 1 of metal rail type, or to supports of typical rectangular cross-section ensuring that said axis 19 is vertical. With reference to Figure 6, this shows a condition similar to that of the already described Figure 3, but with the difference that the fixing and rewinding devices 10A, 10B for the ropes 6A, 6B are fixed directly to a wall 24. Hence in this embodiment the brackets 4A, 4B do not contain said devices 10.

ment (11A) provided with a terminal piece consisting of a narrow-pitch cylindrical helical spring (15) representing a compromise between the rigidity of a rod provided for insertion into an end hole (17) in the support and a flexibility enabling typical manoeuvring misalignment (18-19) to be achieved.

5. Means for implementing the method claimed in claim 1, **characterised in that** the rope support and rewinding devices are independently fixed to the wall.

Claims

1. A method for lowering horizontal supports (1, 1C) for curtains (2) to a predetermined level, **characterised by** securing the two typical ends of said supports by means of respective ropes (6, 6A, 6B) of predetermined length wound about a respective usual automatic rewinding spool (9, 7) of a specific device (10, 10A, 10B) fixed to a wall (24) or rigid with respective brackets (4, 4A, 4B), said brackets being provided with upper recesses (3) shaped to enable the two ends of said supports (1, 1D) to securely rest thereon, and to enable a long manoeuvring implement (11, 11A) to raise said ends and extract them from their respective support brackets (4, 4A, 4B) and to accompany said ends (1, 1D) towards the lower level of engagement of said ropes (Figure 3).
2. Means for implementing the method claimed in the preceding claim, **characterised by** a bracket (4) and implement (11) of such a combination as to enable the implement to be located at each of the two typical ends of the horizontal support (1) and then to extract them from a recess (3) on which they rest and are retained, said operative capacity of the combination (4, 11) deriving from a shape comprising a deep recess for housing each end of the support, and a manoeuvring implement comprising a terminal piece for securely holding said ends.
3. Means for implementing the method claimed in claim 1, **characterised by** comprising an implement provided with a fork-shaped terminal piece (14).
4. Means for implementing the method claimed in claim 1, **characterised by** comprising an imple-

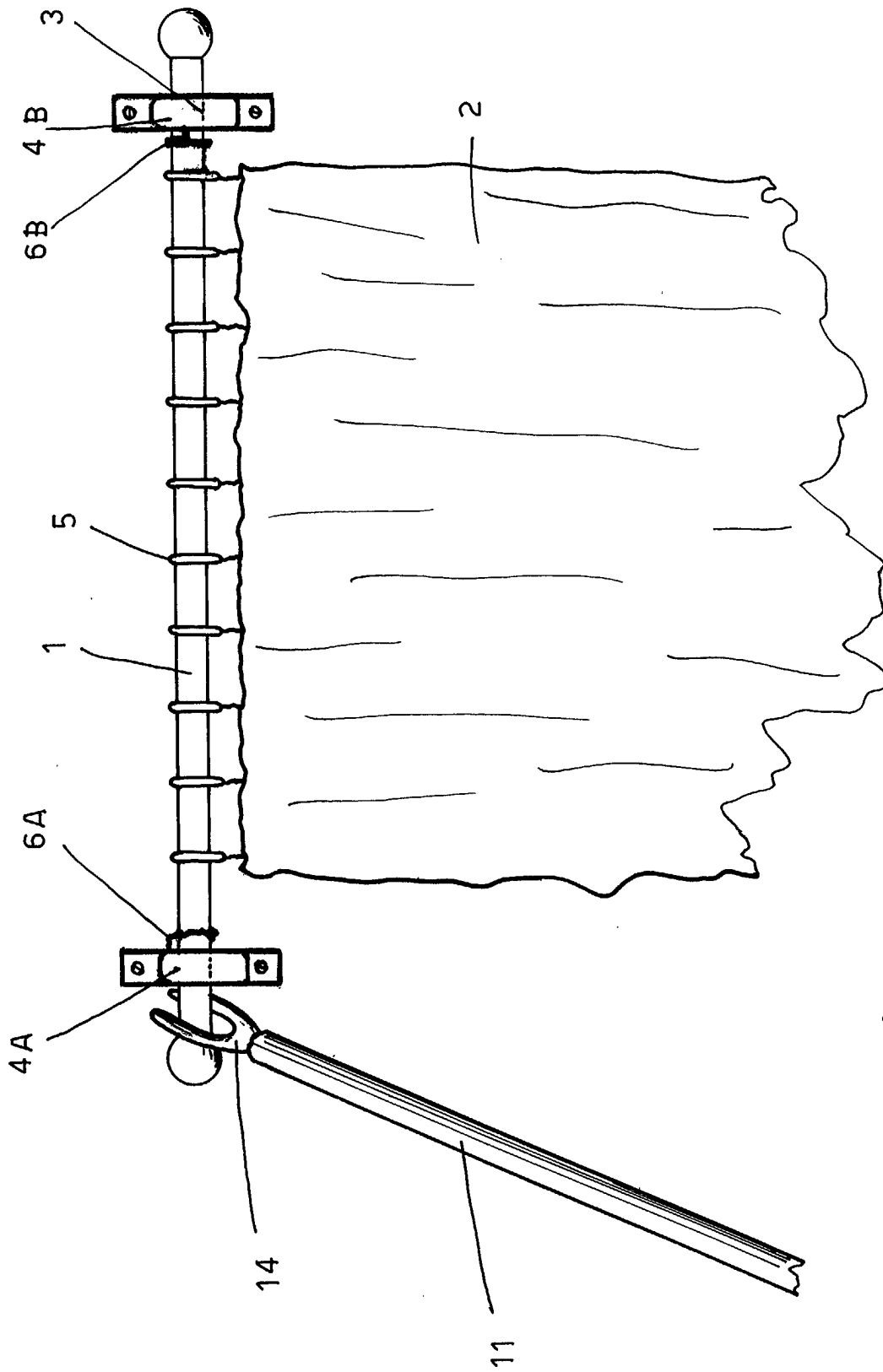


Fig. 1

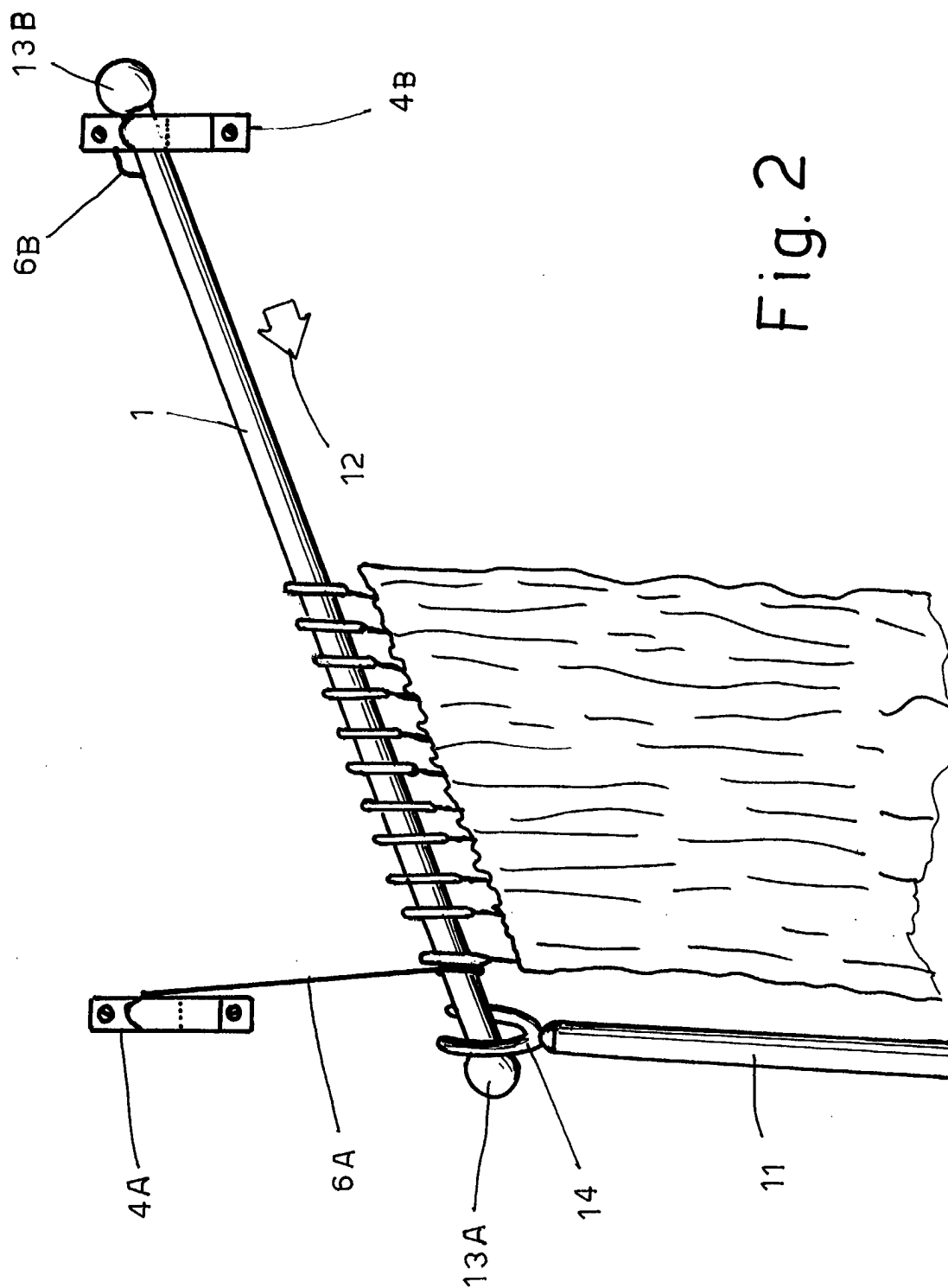
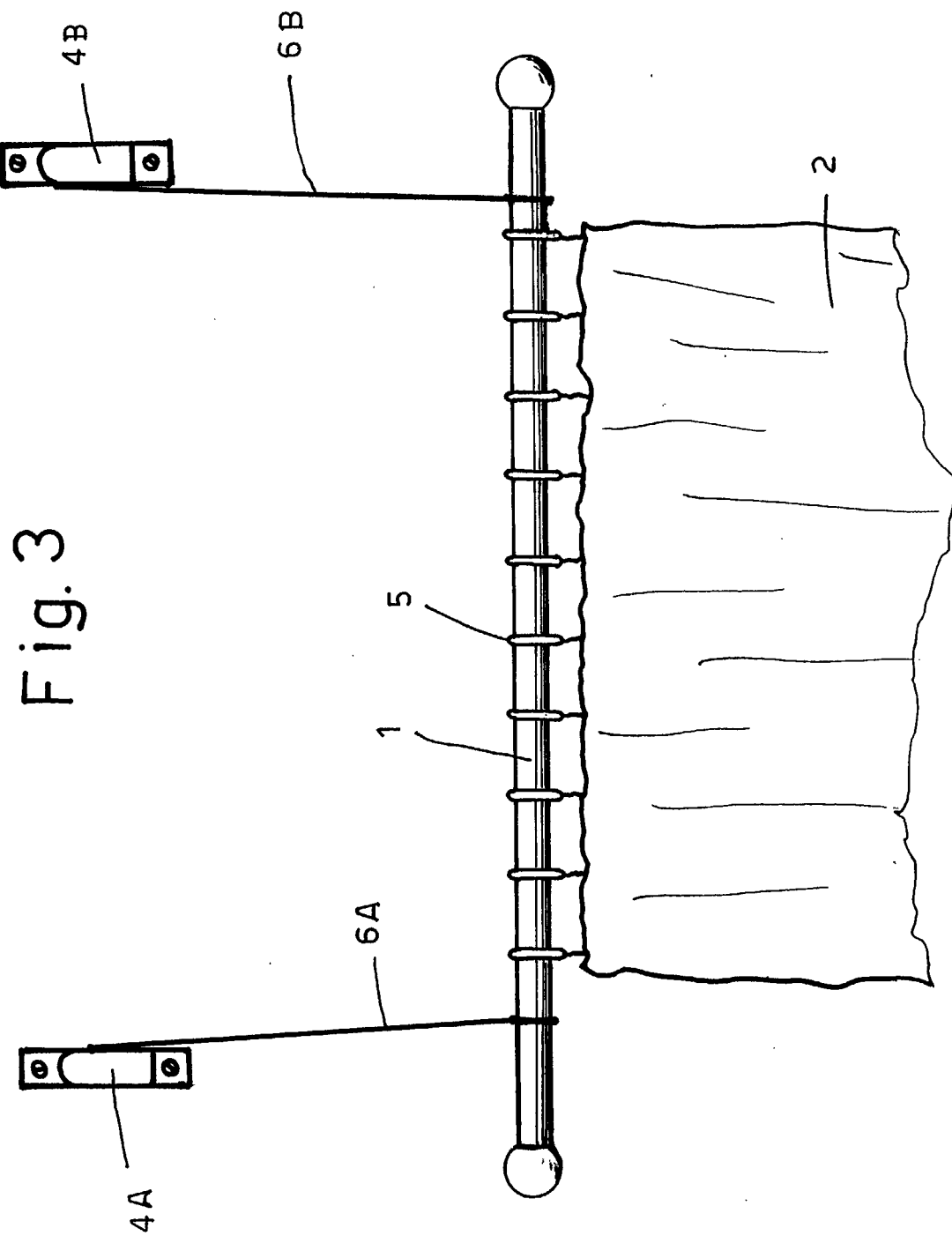
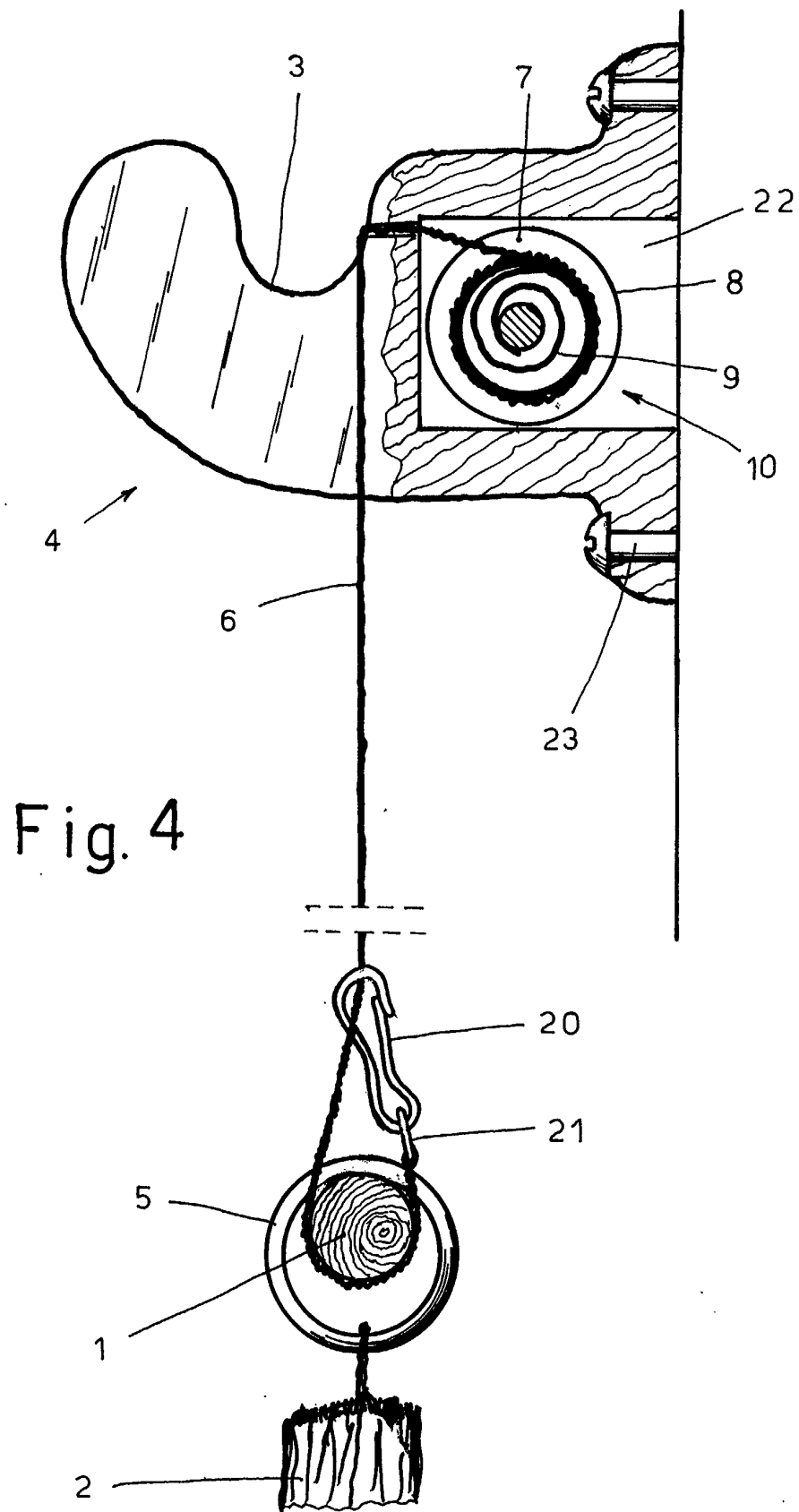


Fig. 2





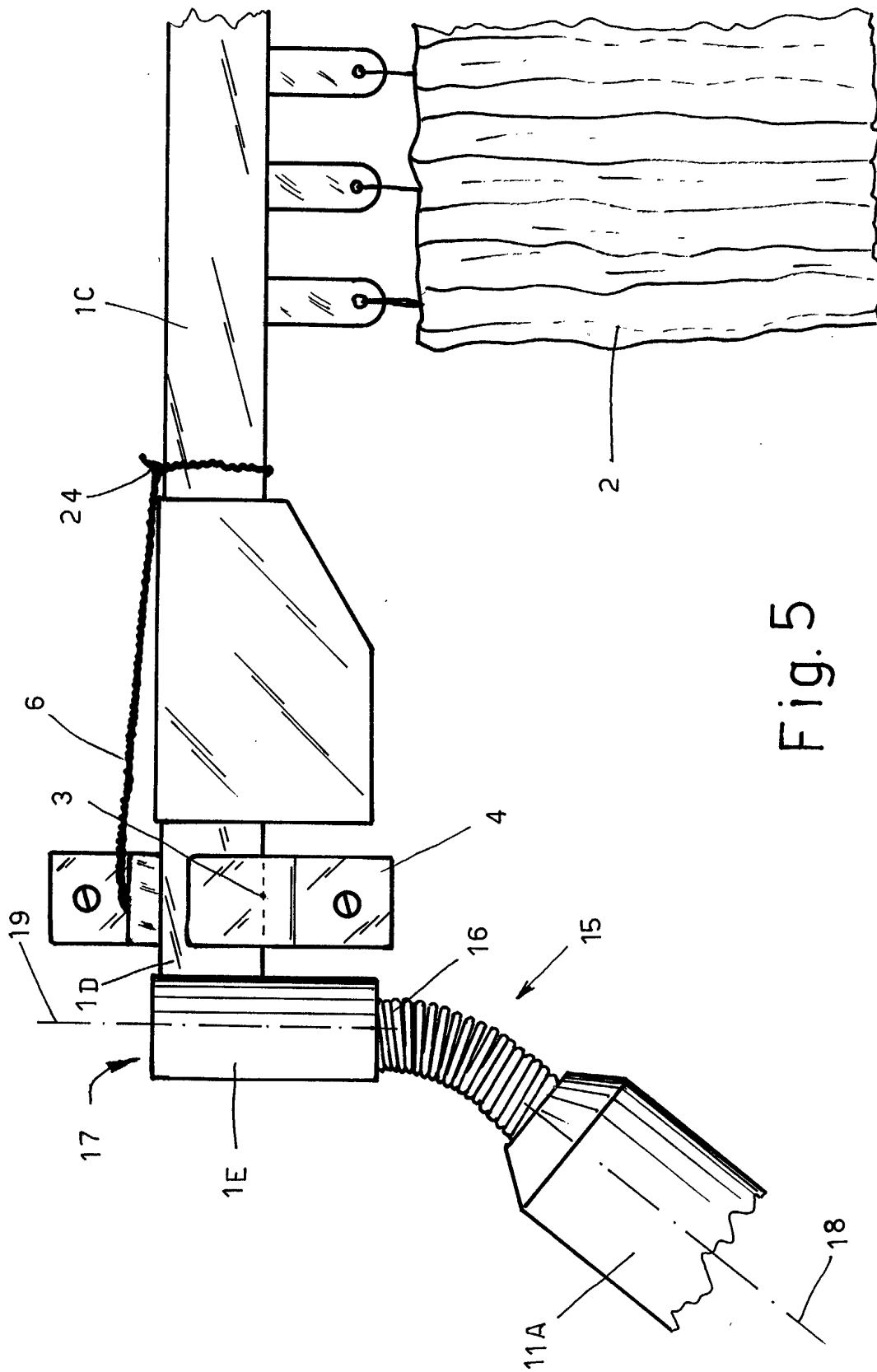


Fig. 5

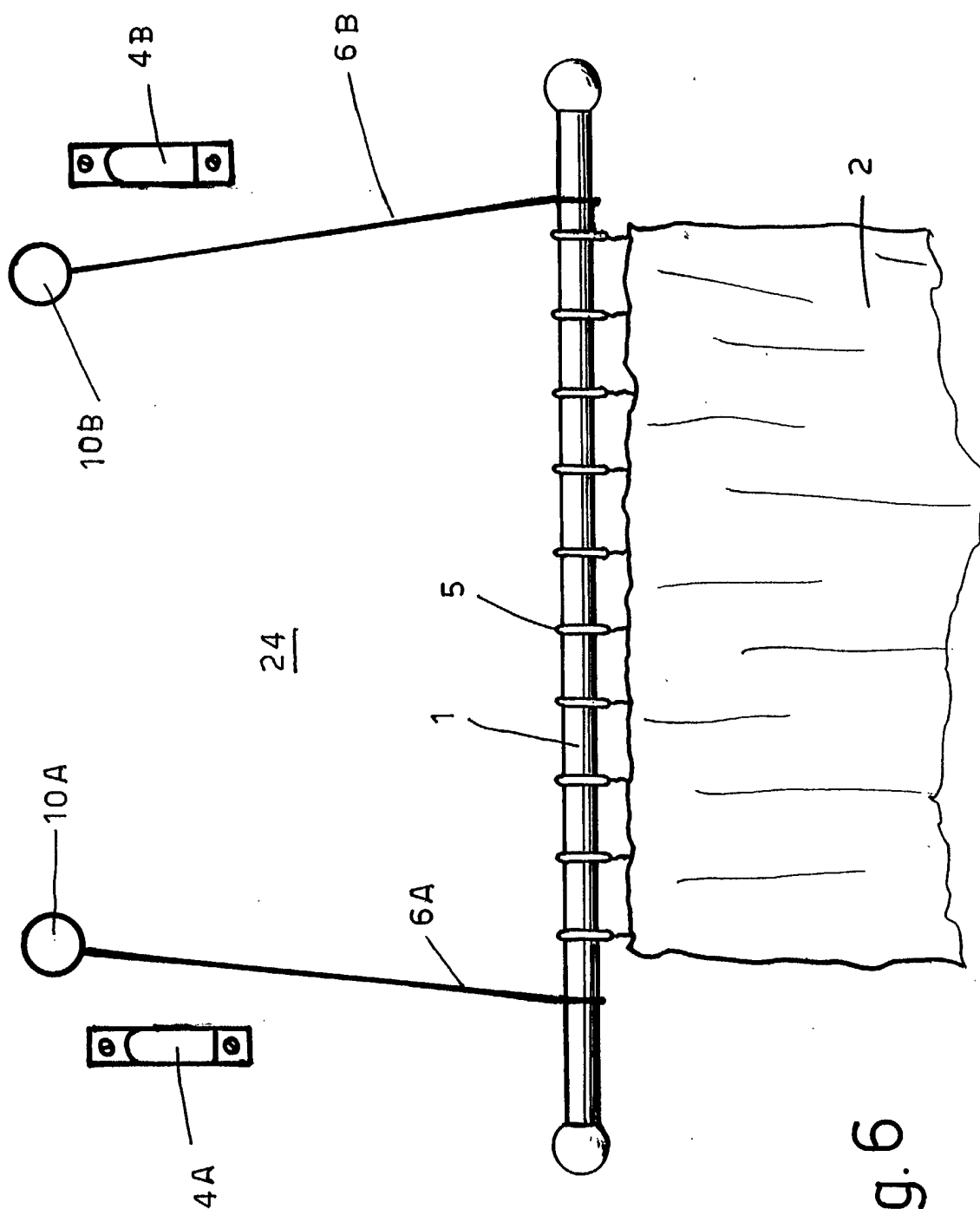


Fig. 6