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(54) Side closure for facade scaffolding

(57) Side closure for facade scaffolding that comprises a frame (8) provided with open hooks on its lower part designed to guide and support it on a horizontal component of the facade scaffolding and other hooks on the upper part designed to centre and guide it on vertical components or struts of the facade scaffolding, with manual gripping handles (22,23) to assemble and disassemble it, and automatic locking means with regard to the scaffolding to prevent it from accidentally coming loose.

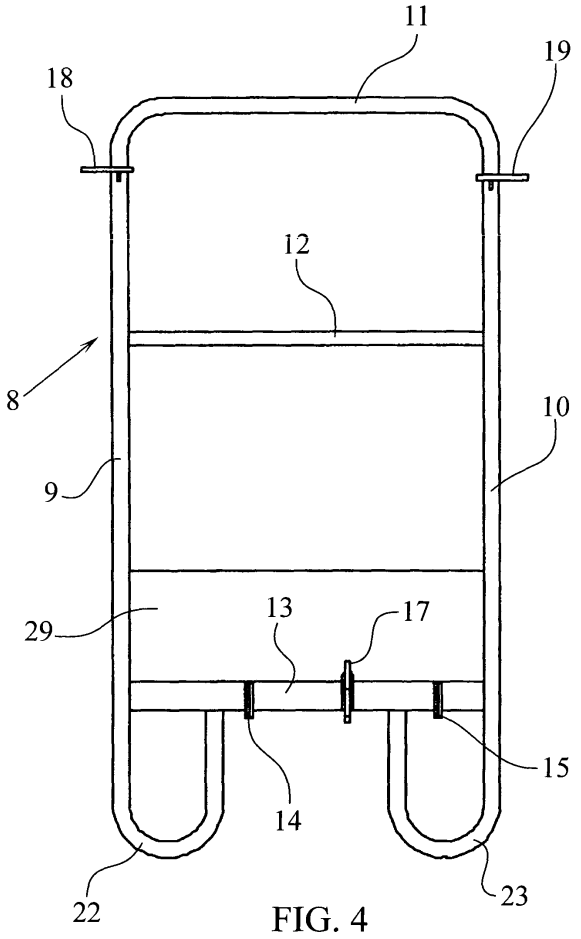

FIG. 4

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Description

[0001] The present invention relates to a side closure for facade scaffolding, having many advantages over currently known devices for this function.

[0002] The operation of closing the sides of the facade scaffolding is often made difficult by the need to place the side closure from the platform itself, even though momentarily there is no protection at the ends, which is a risk for the operators.

[0003] The object of the present invention is to provide a side closure for facade scaffolding that allows great positioning versatility, particularly from the lower part of the platform that is to be protected, with the result that operations to position the side closure that must be conducted from platforms that in part are not protected, are avoided.

[0004] Similarly, given the characteristics of the side closure to which the present invention relates, the device can be positioned both from an area under a platform and as indicated previously, from the upper part downwards, or sideways, if it is cantilever assembled.

[0005] To achieve its objectives the side closure to which the present invention relates consists of a frame, preferably rectangular with rounded corners, provided with wide lower gripping handles and provided with guiding and support hooks both on a horizontal component such as a beam or crosspiece of the scaffolding and on vertical components such as struts thereof, which allows guiding of the closure component from below the platform to be carried out easily, by means of the guiding components passing in the vertical struts and moving until it reaches the support on the corresponding horizontal component of the scaffolding, at which time the side closure is held on the horizontal support component by means of an automatic closure device that holds it on the horizontal component.

[0006] The invention will be better understood by reference to the accompanying explanatory drawings, given as an explanatory but not limiting example.

[0007] Fig. 1 shows an example of facade scaffolding in a case where, given the existence of two front bodies on the building, the provision of protection devices is required on normal platforms and on others cantilever assembled.

[0008] Fig. 2 shows a view in side elevation corresponding to Fig. 1.

[0009] Fig. 3 shows a view in elevation of a set of two side closure elements, one for a normal platform and the other for a cantilever assembly.

[0010] Figs. 4, 5 and 6 show dihedral views of a side closure according to the present invention.

[0011] Figs. 7 and 8 show diagrammatically the form and operation of the automatic locking device of the side closure element.

[0012] Figs. 9, 10, 11 and 12 illustrate diagrammatically the operation of the retaining device.

[0013] As illustrated in the figures, the side closure can be applied to facade scaffolding of the type generally indicated by the number -1- in Fig. 1, of which the facade scaffolding is erected on the facade of a building -2- that in the case illustrated has a projecting body -3-, which necessitates the provision of platforms, for example platform -4- of the normal type, in other words, fitted directly to the facade of the body -3- and other platforms of the double type, in other words, that have a normal platform aligned with platform -4- and a second platform -5-fitted to an entry area -6- of the facade, comprising a cantilever assembly of the platform -7-.

[0014] To close the sides of the scaffolding, the present invention provides for the production of rectangular frames -8-, Figs. 4, 5 and 6, consisting essentially of vertical spans -9- and -10- and a variable number of horizontal spans, such as -11-, -12- and -13-, the last span being of greater mechanical strength as it is designed to be supported by means of projecting hooks -14- and -15- on a horizontal support component of the scaffolding. Said horizontal element receives the frame -8- of the device supported thereon by means of the hooks referred to above -14- and -15-. An automatic retaining device -17- is incorporated in the horizontal component -13-, automatically retaining the side closure -8- on the horizontal component of the scaffolding.

[0015] Similarly, the vertical components -9- and -10- of the side closure -8- each have hooks -18- and -19- on the upper part designed to allow the centring and guiding of the frame -8- in the vertical struts of the scaffolding, such as those indicated with the numbers -20- and -21- in the figures. Said hooks -18- and -19- are slightly displaced vertically to each other, as can be seen in Figs. 3 and 5, to allow them to be positioned side by side, on the same vertical strut.

[0016] For handling, the side closure has one or more manual gripping handles on the lower part, such as those illustrated with the numbers -22- and -23-.

[0017] The automatic retaining component -17- consists, as can be seen in detail in Figs. 9 to 12, showing the arrangement of a support -24- fixed to the lower horizontal component -13- of the side closure device, of which the support has a bent hook -26- rocking on a horizontal shaft -25-, which hook is extended upwards in a projecting finger -27-. The position of stable equilibrium is that shown in Figs. 9 and 12, showing the contact position with a tubular horizontal component -28- of the facade scaffolding, illustrating the vertical descent position of the side closure gripped at the bottom by the handles -22- and -23-not illustrated in the diagrammatic Figs. 9 to 12. The vertical guided descent of the side closure causes rocking of the retaining device, as can be seen in Fig. 10, in which the backwards rotation of the hook -26- and of the projecting finger -27- has occurred, Fig. 11 showing a later position in which the rocking of the retaining component is more accentuated, until it reaches the point illustrated in Fig. 12 in which, since the tubular component -28- is seated partly in the indentation of the support -24-, the retaining component rocks back to its

position of equilibrium, and therefore the hook -26- prevents the vertical dismantling of the side closure device. For said dismantling, pressure must be applied manually or in another way to the upper projecting finger -27- if it is being dismantled from above or the hook -26- if it is being dismantled from the lower platform, causing rocking of the retaining device, which allows the side closure to rise vertically in order to be dismantled.

[0018] It will therefore be seen that by means of the side closure for facade scaffolding to which the present invention relates assembly and disassembly can be performed both from the lower platform, with the result that when the operator climbs to the upper platform it already has the side closure or guardrail installed, and also from the platform itself that is to be protected or even sideways, particularly in the case of projecting platforms.

[0019] The side closure comprises an integral skirting board -29-.

[0020] The side closure to which the invention relates can be fitted or removed at any time, between the start of assembly and the final dismantling of the scaffolding.

[0021] In the process of assembly from the module immediately below, the assembler does not need to access heights of more than 1.75 metres and for disassembly heights of more than 1.95 metres, which avoids the need for the operator to have to climb onto any kind of platform to carry out said operation.

[0022] The process of assembling and dismantling the side closure is guided by the side closure itself, avoiding the loss of stability and speeding up the process.

[0023] The side closure is symmetrical apart from the upper hooks which differ slightly in height to allow assembly of two or more side closures on the same vertical strut and at the same level.

[0024] The automatic retaining device or lock actuated by the effect of gravity may also incorporate a spring and can be actuated by the upper projecting finger or by the lower edge of the hook situated beneath the horizontal component of the scaffolding.

Claims

1. Side closure for facade scaffolding, that can be applied to the ends of facade scaffolding platforms for safety purposes, **characterised in that** it comprises a frame provided with open hooks on its lower part designed to guide and support it on a horizontal component of the facade scaffolding and other hooks on the upper part designed to centre and guide it on vertical components or struts of the facade scaffolding, with manual gripping handles to assemble and dismantle it, and automatic locking means with regard to the facade scaffolding to prevent it from accidentally coming loose.

2. Side closure for facade scaffolding, according to claim 1, **characterised in that** the device is of generally symmetrical form, preferably rectangular with rounded edges, having upper hooks slightly displaced vertically to make it possible to incorporate two or more of them on the same vertical strut.

3. Side closure for facade scaffolding, according to claim 1, **characterised in that** the automatic locking device for locking the closure on the facade scaffolding comprises a body associated with the closure carrying a hook that rocks about a horizontal shaft, that can be retained automatically by rocking when lowering the closure device, preventing it from accidentally disassembling.

4. Side closure for facade scaffolding, according to claim 3, **characterised in that** the automatic locking device has an upper finger that allows it to be actuated manually for opening prior to disassembly of the side closure from the scaffolding.

5. Side closure for facade scaffolding, according to claim 1, **characterised in that** the position of equilibrium of the rotating hook of the automatic locking device allows contact of the lower edge of the hook on the crossbeam on which the side closure must remain supported, in such a way that the hook opens automatically for it to be positioned.

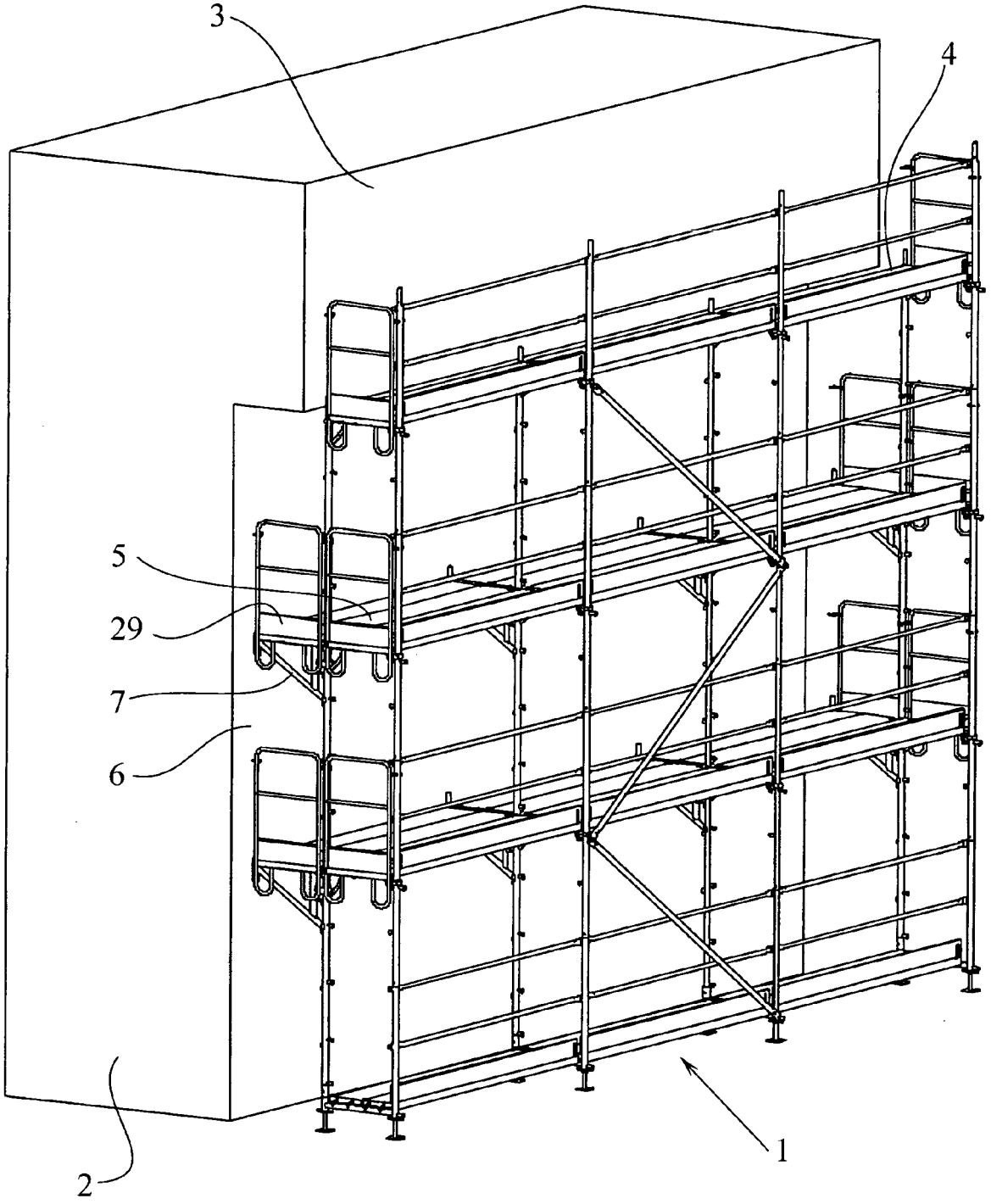

FIG. 1

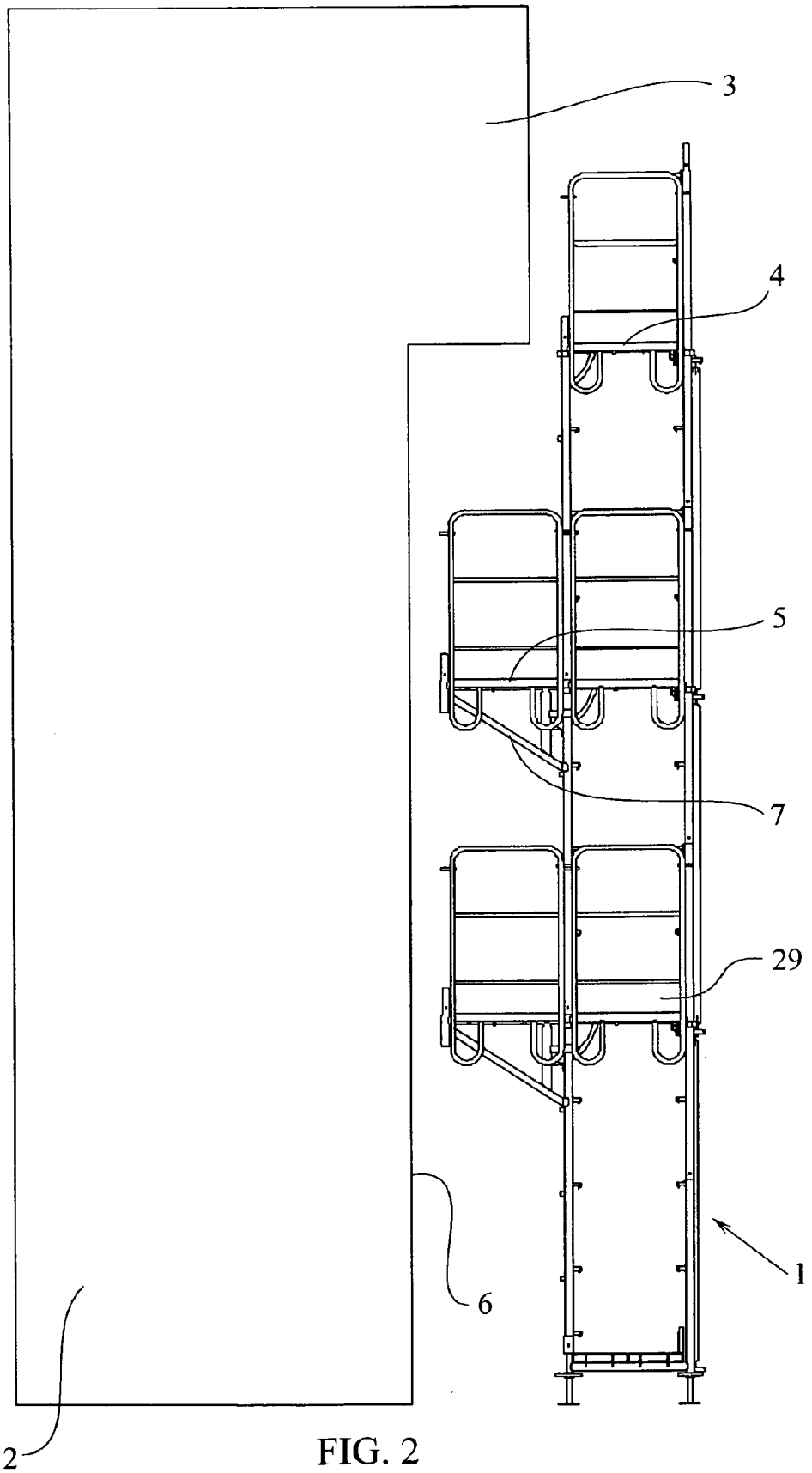

FIG. 2

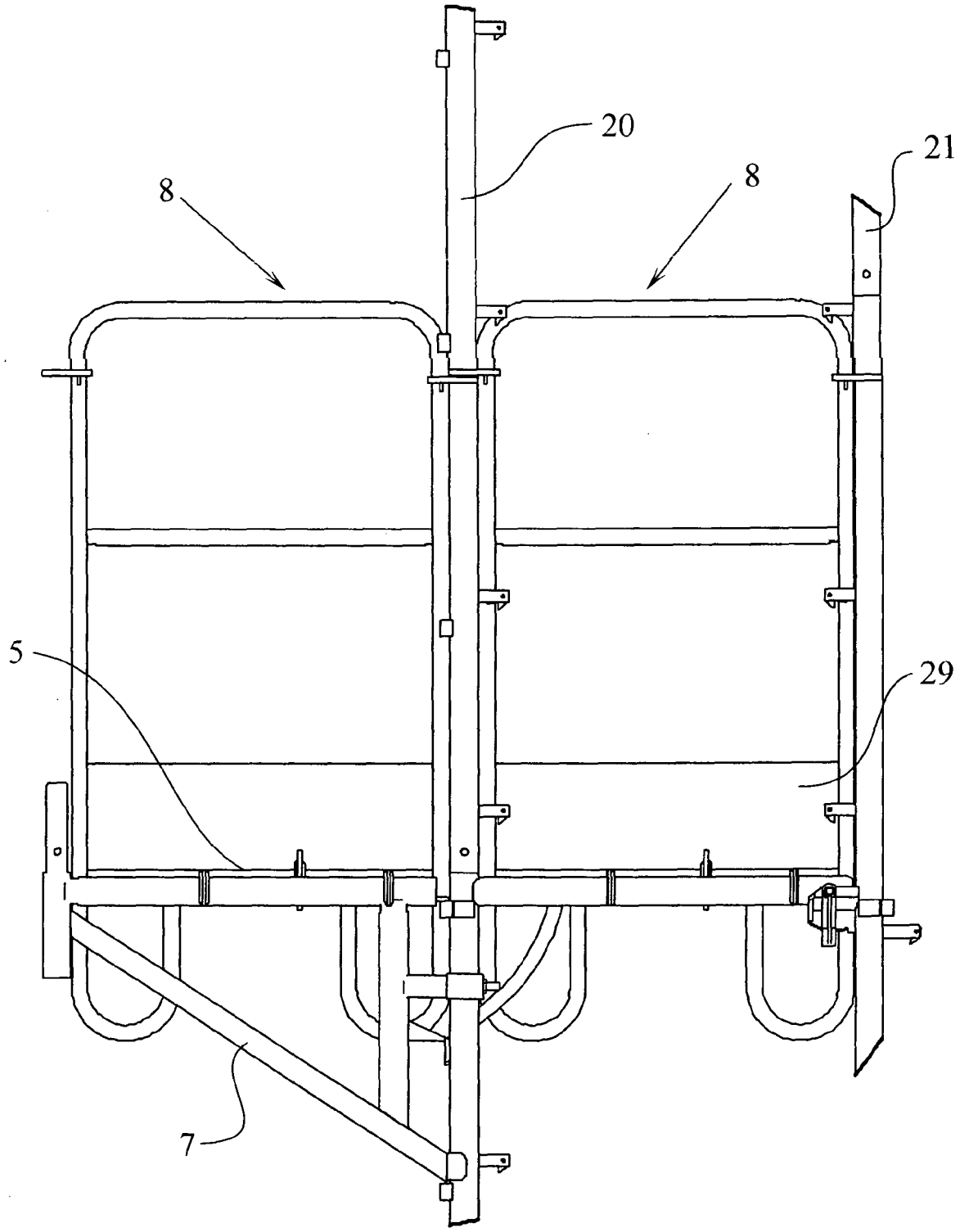

FIG. 3

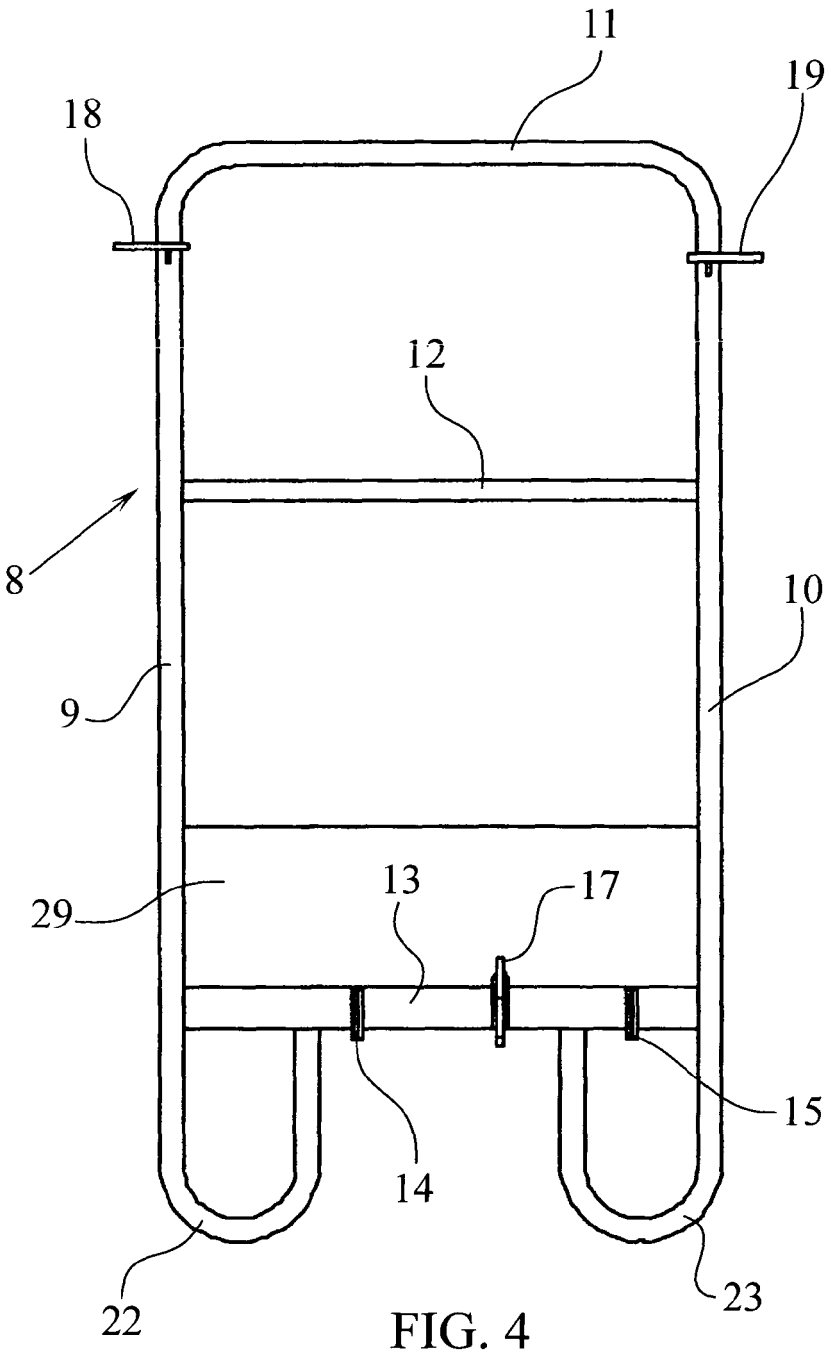

FIG. 4

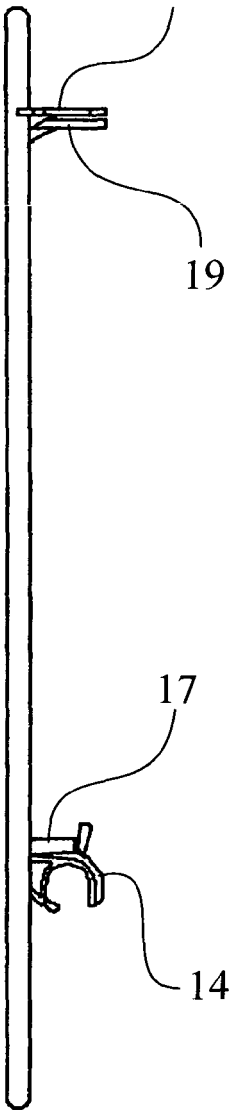

FIG. 5

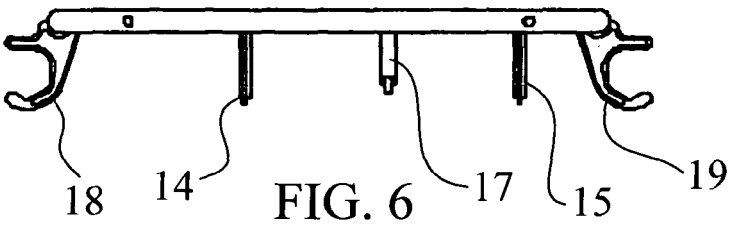

FIG. 6

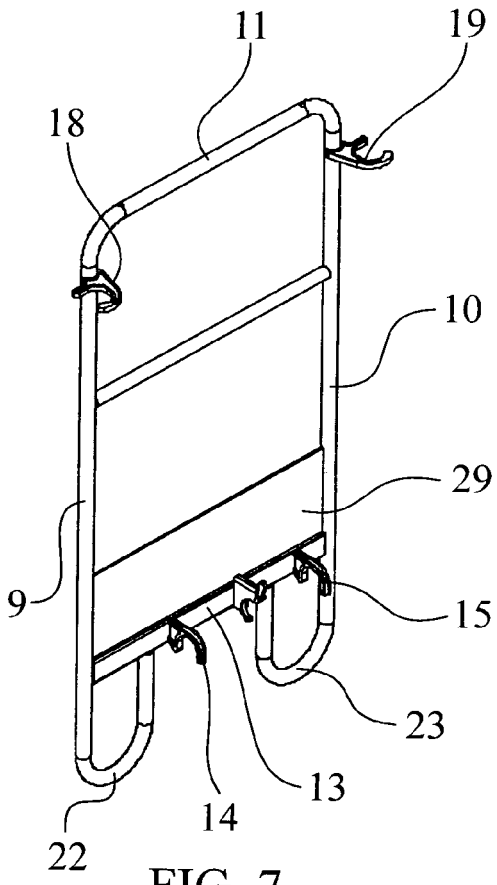

FIG. 7

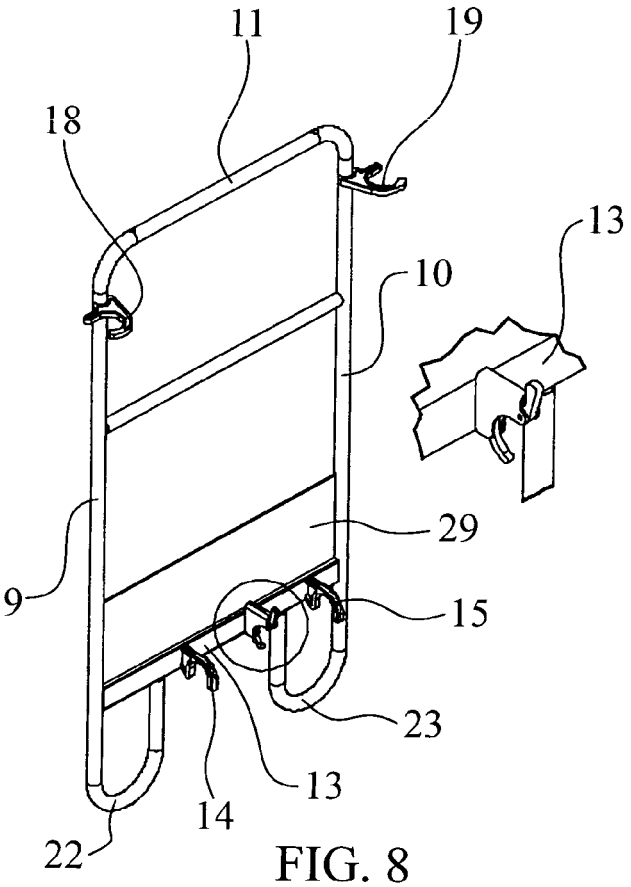

FIG. 8

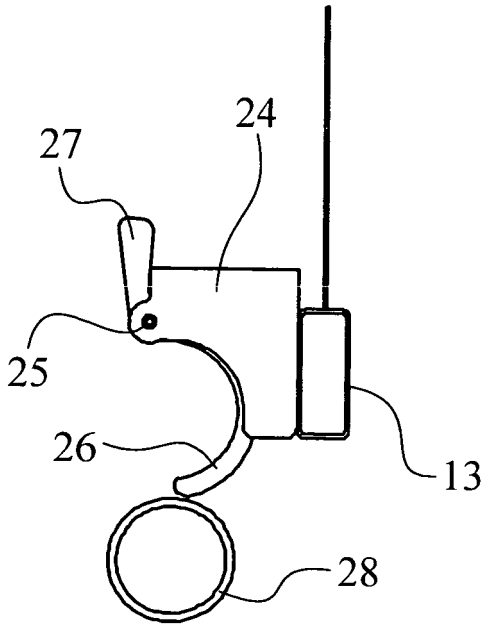

FIG. 9

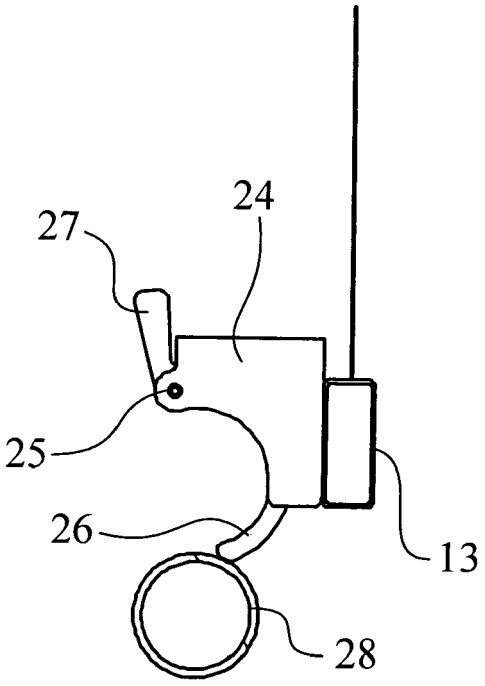

FIG. 10

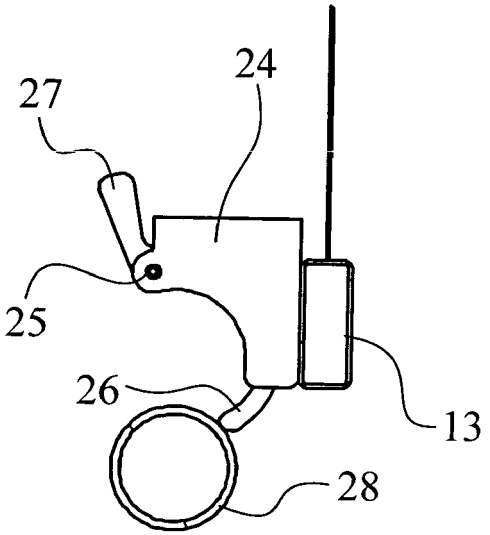

FIG. 11

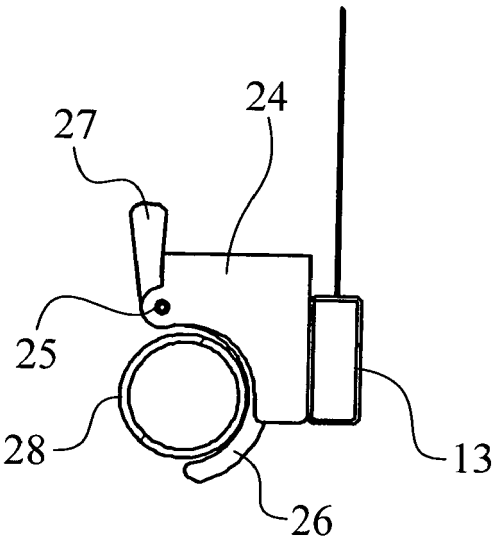

FIG. 12