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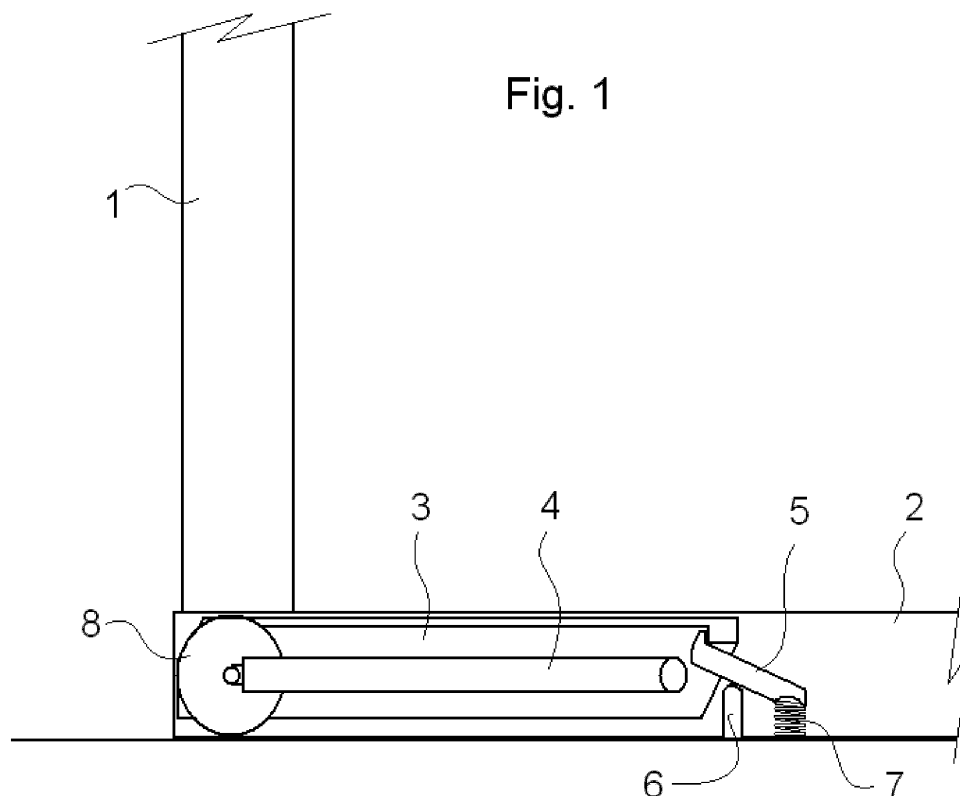
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(54) **DEVICE FOR PREVENTING GOALS, FURNITURE AND THE LIKE FROM OVERTURNING.**

(57) Anti-overturn device for goalposts, furniture and other similar elements, comprising, in the base (2) of the element (1) which is intended to be prevented from falling by tipping forwards, a telescopic device provided with an

ejection mechanism (4), which is activated upon slightly lifting this portion, causing a support foot (3) to come out spontaneously forward, towards the front, which becomes an additional frontal foot that prevents the forward overturn of the element (1).

Fig. 1



Description

Object of the invention

[0001] The present invention, as indicated in the title, relates to a device that prevents the forward overturning of a goalpost, furniture or any other element that has a vertical orientation and due to its scarce support on the base, or due to the action of hanging from it, may cause it to tip and fall forwards, onto the people or the objects located underneath, or around it.

Background of the invention

[0002] In light of the serious problem posed for the integrity of people and after many serious or fatal accidents, specifically, in which children who hang from the goalposts end up being hit by them or falling on top of them with deadly consequences, it has been decided to attach the goalposts to the ground of the precinct. When regarding a football pitch, it is not as important, but in multi-sports fields wherein the goalposts are regularly moved around, or are simply removed so that other sports can be practiced; the attachment of the goalpost to the ground poses an insuperable practical problem in the majority of cases. Bookcases and other types of furniture that have a vertical orientation can fall forwards if pulled or hung from, therefore it is necessary to attach them to the back wall, where appropriate, to prevent this contingency.

[0003] There are some known devices, specifically suitable for goalposts, which have the objective of impeding the goalposts to fall forwards, consisting in an auxiliary post, hinged on the upper part, which theoretically, upon the goalpost tilting, unfolds and comes to constitute a 45° support, which will prevent the goalpost from falling completely. The operation of these devices is not reliable, as neither is the position in which the goalposts are when the device works.

[0004] There are also some devices known to fix a chest of drawers to the floor, with the purpose of preventing that, when all or part of the drawers are opened, the weight thereof does not cause the furniture to give way forwards and prevent it from possibly falling on top of the user.

Description of the invention

[0005] The device of the invention comprises an ejection mechanism, at the base of the element, which prevents it from falling as a result of tipping forwards, whether said the element it is a goalpost, bookshelf or any other element that is placed vertically and that is susceptible to fall, tilting forwards. Said mechanism is activated when said base is slightly lifted, causing a support foot to come out suddenly, which stands towards the front, as an extension of the base of the element to be protected, forming an additional foot preventing it from tipping forwards.

Thus, this device is inserted in the sides of the goalpost and in the event of ejection, the corresponding side, the additional foot and the frame of the goalpost form a completely stable inverted "T". When applied to furniture, the side configuration is an "L" shape, whose wing is formed by the furniture itself, while the base section is constituted by the additional foot that is ejected when the device is activated.

[0006] The auxiliary support foot has, in the back area, a stopper by which is retained by means of a trigger, remaining hidden inside the base, in rest position, while the protected element does not incline forwards slightly. Said trigger is retained by a rod underneath the base of the furniture or the goalpost that rests upon it, but when the base is lifted, the trigger is unlocked, releasing the additional foot that is ejected out to the front of the element to prevent the forward overturning thereof. The ejection mechanism of the foot towards the front is constituted by a cylinder, whose piston is loaded with pressurised gas or a spring, constituting a spring impelling the foot.

[0007] The auxiliary foot is expected to present, in the front area, a wheel, located at ground level, which facilitates its coming out and forwards extension, at the moment of the ejection caused by the slight forward inclination of the element.

[0008] In addition, other aspects that facilitate the mobility of the goalpost or furniture have also been provided. They materialize in the form of a rod or pin that passes through the base of the element and the auxiliary foot, forming the casing of the device, through corresponding holes, present on both parts, in such a way that both elements remain locked, so the device is not activated while the rod is placed in this position, so the element protected with the anti-overturn can be moved and its location can be changed.

[0009] According to another characteristic of the invention, it has been envisaged to provide the device with a sound alarm that alerts when it is activated, in such a way that the auxiliary foot makes a characteristic sound when it is ejected out. This alarm simply consists of a sheet housed in the exit end, and a jagged part placed on the piston, so when it is activated and is driven outwards, said jagged part passes through the sheet and produces a warning sound.

Description of the figures

[0010] To complete the description and with the aim of aiding a better understanding of the characteristics of the invention, attached to the present specification is a set of figures wherein by way of non-limitative example, the following has been represented:

Figure 1 shows a side elevational view of the device of the invention in rest position.

Figure 2 shows the same device at the moment of the ejection, which is produced when the element

(1) inclines forwards.

Figure 3 represents the device after the ejection, with the element to be stabilised (1) once again in vertical position.

Figure 4 shows a side elevational view of the device of the invention in rest position and locked so the element (1) can be moved without causing its ejection.

Preferred embodiment of the invention

[0011] As it can be observed in the referenced figures, the device of the present invention is intended to prevent the forwards tilting and falling of the element (1), this element being any furniture unit or item of street furniture, generally of a great height in relation to its depth, or because of its intended use it may constitute an easy access for children to hang from while they are playing, for example, a goalpost. According to what is shown in the figures, the device is included in the lower part or base (2) of this element (1), in the case of a goalpost, in the side beams and in the case of furniture, in the bottom part, which is normally hollow, or in at least one gap provided in the plinth thereof. This device is constituted by an auxiliary foot (3), hidden in the base (2) in rest position, provided with a mechanism that ejects it until placing it in front of the element (1) to prevent its tipping, at the moment in which the base (2) is slightly lifted from the back area caused by a light forward inclination of the upright (1). At the back of this foot (3) there is a stopper by which it is held in retracted position by means of a trigger (5), which has a spring (7) that drives it to release the stopper of the foot (3), resisting its action there is a rod (6) connected to the trigger (5) which protrudes through a hole in the lower face of the base (2) abutting against the floor of the precinct underneath the base (2) and pushing the trigger (5) to maintain it coupled to the stopper present in the foot (3) while said base is against the floor; so that when the base (2) is slightly lifted, the rod (6) passes through the base (2) towards the floor, causing the tilting of the trigger (5) which then releases the additional foot (3), that is ejected out towards the front of the element (1).

[0012] The additional foot (3) is joined to the base (2) by means of a cylinder (4), whose piston (9) is loaded with pressurised gas or a spring, so when it is released, it is ejected out forwards, as it can be observed in figures 2 and 3, to form a horizontal support that prevents the tipping of the upright (1). In the figures, a wheel (8) can be observed, located on the frontal area of the foot (3), on which the foot is supported against the floor when it is ejected out, preventing it from digging into the floor if it is soft, or scratching it, if it is hard. At the same time, it forms a rounded front which, if it hits a person at the moment of the ejection, it will cause significantly less damage than if it were a hard edge or if the element (1) were to fall on top of someone.

[0013] As it can be seen in figure 4, the base (2) has

in the upper face, in correspondence with the auxiliary foot (3) forming the casing of the device, a hole, through which a pin (10) is inserted, blocking both elements, preventing the activation of the device, so it is possible to move the element (1) and change its location. This solution is ideal for goalposts located in multi-sports fields wherein it is necessary to change regularly their location.

[0014] Once the nature of the invention has been sufficiently described, as well as an example of a preferred embodiment, it must be pointed out, for all applicable purposes, that the materials, shape, size and arrangement of the described elements may be modified, provided this does not involve an alteration of the essential characteristics of the invention that are claimed as follows:

Claims

1. Anti-overturn device for goalposts, furniture and other similar elements **characterised in that** it is mounted on the base (2) of the element (1) that is intended to be prevented from falling as a result of tipping forwards and comprises a telescopic device, consisting in an auxiliary support foot (3) which has, in its back area, a stopper by which it is retained, by means of a trigger (5) which maintains it in retracted position, hidden inside said base (2), said trigger (5) being provided with an ejection mechanism, which is activated upon slightly lifting said base (2), causing the support foot (3) to spontaneously come out forwards, which becomes an additional frontal foot.
2. Anti-overturn device, according to claim 1, **characterised in that** the ejection mechanism of the auxiliary support foot (3) comprises a rod (6) connected to the trigger (5), retaining the foot (3) which passes through a hole present in the lower face of the base (2), pushing the trigger (5) to maintain it coupled to the stopper present in the foot (3), while said base is against the floor; said trigger (5) has on the opposite end, interposed between it and the base (2), a spring (7) that tends to disengage it from the stopper of the foot (3), so that when the base (2) is slightly lifted, the rod (6) passes through the base (2) towards the ground, causing the tilting of the trigger (5) which then releases the additional foot (3), that is ejected out towards the front of the element (1).
3. Anti-overturn device, according to claims 1 and 2, **characterised in that** the foot (3) is joined to the base (2) by means of a cylinder (4), whose piston (9) is loaded with pressurised gas or a spring, which constitutes a spring impelling the foot (3) towards the front, at the moment of unlocking the trigger (5).
4. Anti-overturn device, according to claims 1 to 3, **characterised in that** the auxiliary foot (3) has, in

the front area, a wheel (8), located at ground level, which facilitates its coming out and extension forwards, at the moment of the ejection caused by the slight forward inclination of the element (1).

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5. Anti-overturn device, according to claims 1 to 4, **characterised in that** the base (2) has a hole in correspondence with the auxiliary foot (3) forming the casing of the device, through which a pin (10) is inserted, blocking both elements, preventing the activation of the device in order to move the element (1) and change its location. 10
6. Anti-overturn device, according to claims 1 to 5, **characterised in that** it is provided with an alarm 15 that is activated when the auxiliary foot (3) is ejected out towards the front, consisting in a sheet housed in the exit area of said foot (3), in correspondence with a jagged element present in the piston (9), which, upon moving, abuts against said sheet, producing a sound alerting about such action. 20

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Fig. 1

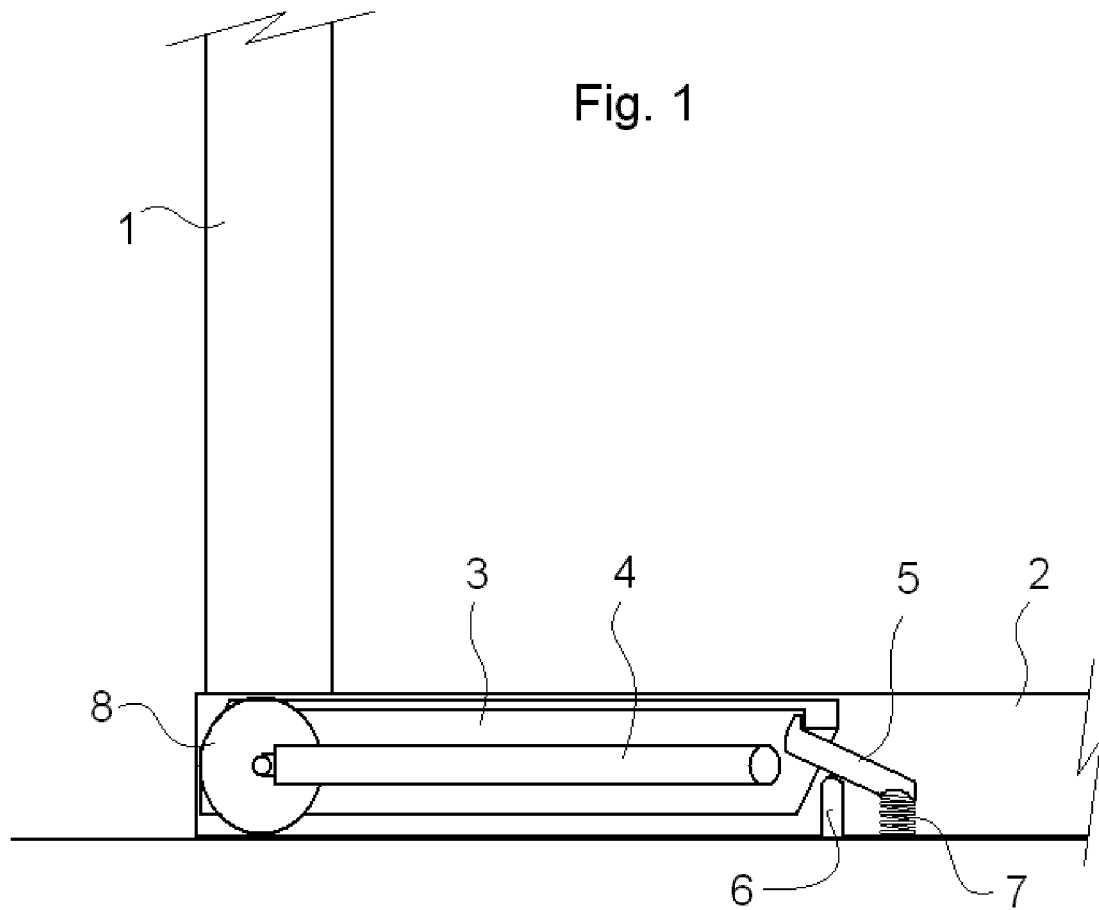
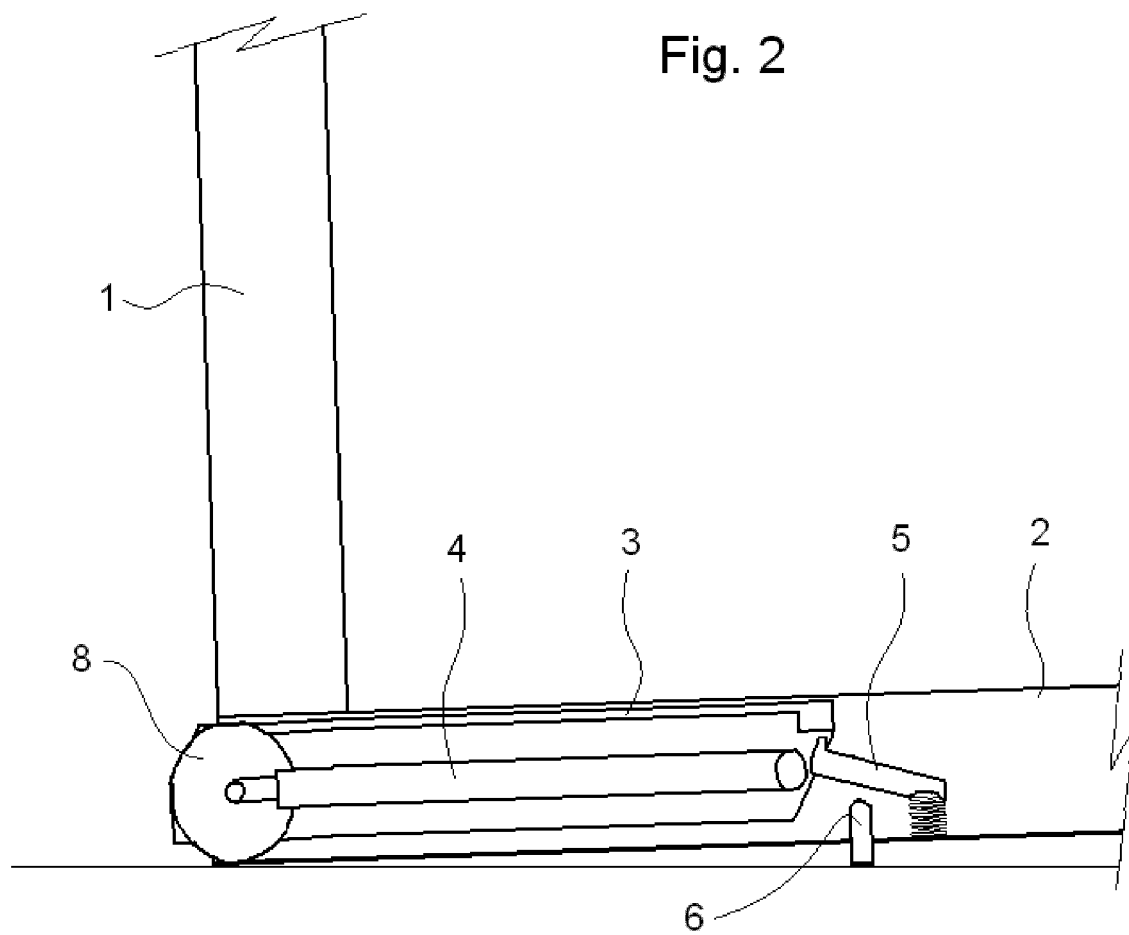


Fig. 2



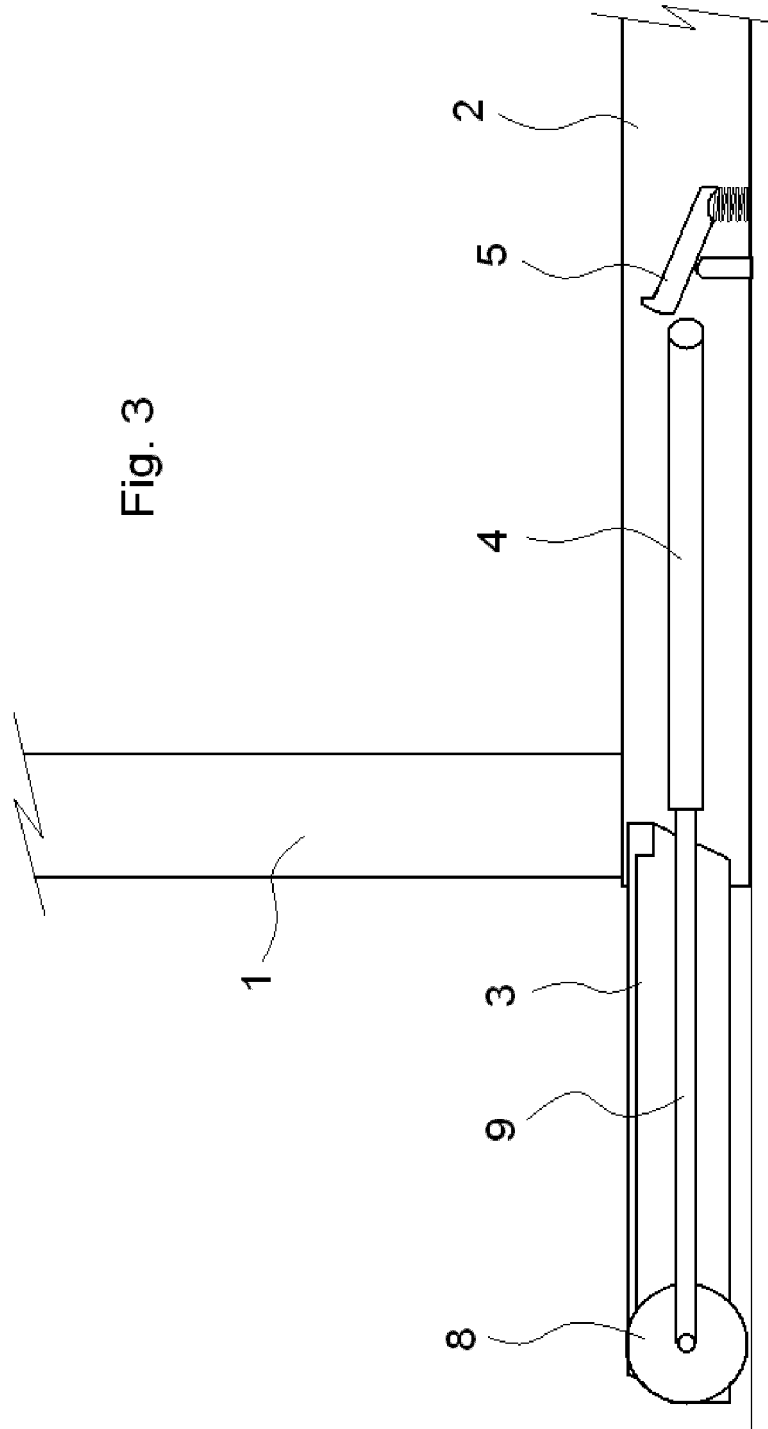
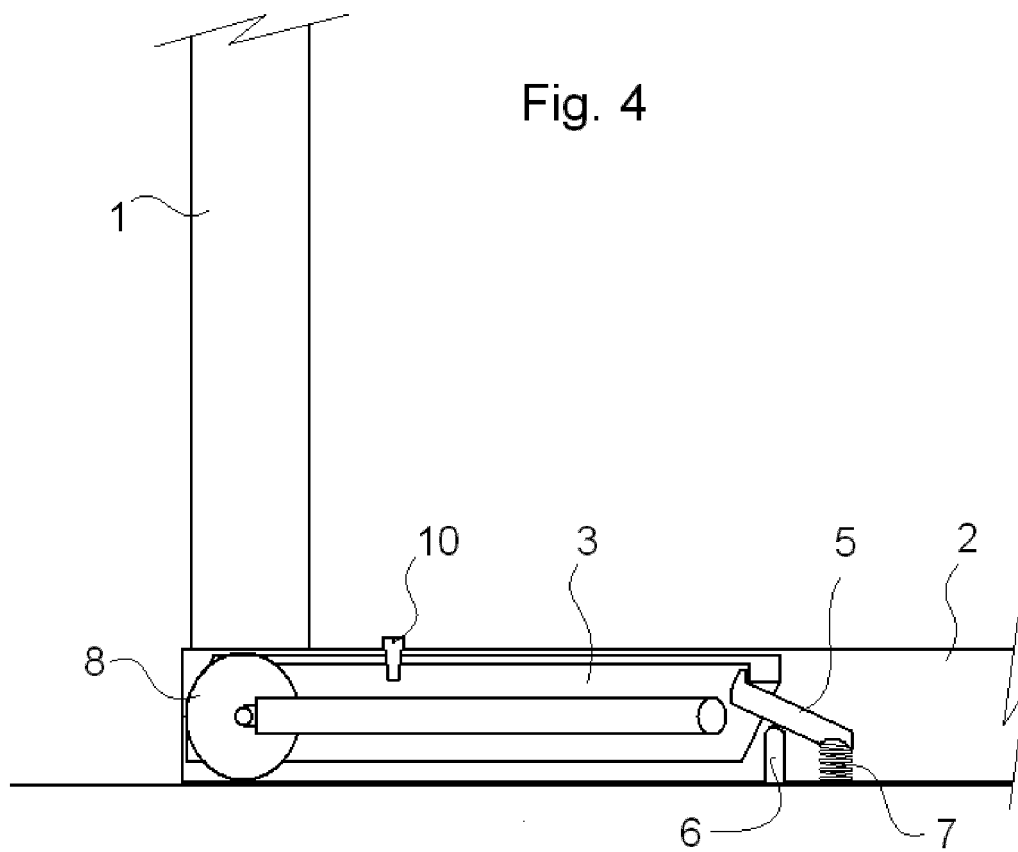


Fig. 3

Fig. 4



INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES2011/070715

A. CLASSIFICATION OF SUBJECT MATTER

A63B63/00 (2006.01)

A47B96/00 (2006.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A63B, A47B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC, INVENES

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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A	WO 9632914 A1 (INTERMETRO CORP) 24/10/1996, page 31, line 1 - page 35, line 10; figures 1, 17	1-6
A	US 2005077259 A1 (MENZ ALBERT) 14/04/2005, figures 2 - 4. paragraphs[25 - 31];	1-6
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☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance.	
"E" earlier document but published on or after the international filing date	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"O" document referring to an oral disclosure use, exhibition, or other means.	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other documents , such combination being obvious to a person skilled in the art
"P" document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent family

Date of the actual completion of the international search
20/01/2012Date of mailing of the international search report
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES2011/070715

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