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## (54) Safety device for swings

(57) A safety device for a child's swing having a seat (2) fixed at its ends by a pair of stays (3, 4) which keep the seat itself raised from the ground. This device includes at least one horizontal bar (6) placed between the two stays which in the operating position is located near the child's head and prevents the formation of twisting of the stays in that zone due to the rotation of the swing seat around a vertical axis.

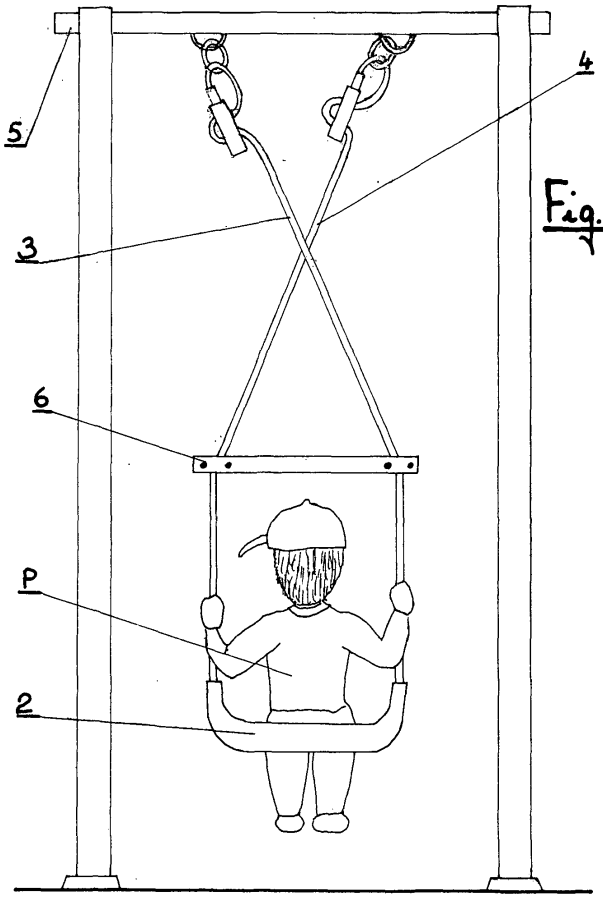


Fig. 8

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## Description

**[0001]** This invention refers to an anti- twisting safety device for swings.

**[0002]** Swings are generally made up of a seat fixed at its ends by a pair of stays, for instance rigid bars or chains or ropes, which keep the seat raised from the ground. These stays are fixed at one of their ends in an articulated way to a supporting structure for the swing which may be made up of a structure built specifically to sustain the swing or may be made simply from the branch of a tree, a horizontal bar or something similar.

**[0003]** The articulated fixing allows the seat and the stays to carry out a movement like a pendulum when a person is correctly positioned on the seat.

**[0004]** Very often it happens that, especially when the stays are made of ropes or chains, children use the swing in an improper way, that is in trying to make the seat turn around a vertical axis thereby twisting the stays. Once it is executed this action, releasing the stays and sitting on the seat, one obtains a spinning effect on the seat.

**[0005]** During this rotation and the successive twisting in the opposite sense delicate parts of the child's body such as his arms or neck could be injured even with dramatic consequences.

**[0006]** The aim of this invention is to obviate the above mentioned inconveniences by supplying a safety device for swings that prevents that twisting taking place in proximity of the child's body. In particular, the safety device includes at least one horizontal bar placed between the two stays that in the operating position is placed near the child's head and prevents the formation of twisting of the stays in that zone due to the voluntary rotation of the swing seat.

**[0007]** These and other aims, according to the invention, are reached by making a safety device according to claim 1 to which one is referred for the sake of brevity.

**[0008]** Further features and advantages of such a safety device according to this invention, will result clearer from the following description, giving examples but not limits, referring to the schematic drawings attached, in which:

Figure 1 shows a view from above of the bar that makes up the safety device according to this invention;

Figure 2 shows the side view of the bar in figure 1;

Figure 3 shows a view from above of the clamping plate;

Figure 4 shows a side view of the clamping plate in figure 3,

Figure 5 shows a view from above of an exemplar solution of the joint between the bar and rope stays;

Figure 6 shows an enlarged view from above of an exemplar solution of the joint between the bar and chain stays;

Figure 7 shows a swing fitted with the safety device according to this invention;

Figure 8 shows a swing with the stays twisted fitted with the safety device according to this invention.

**[0009]** With reference to the above mentioned figures a swing is generally made up of a seat 2 fixed at its ends by a pair of stays 3 and 4, for instance rigid bars or chains or ropes, which keep the seat itself raised from the ground. These stays are fixed at one of their ends in an articulated way to a support structure 5 for the swing which may be made up of a structure built specifically to sustain the swing or may be made simply from the branch of a tree, a horizontal bar or something similar.

**[0010]** The articulated fixing allows the seat and the stays to carry out a movement like a pendulum when a person P is correctly positioned on the seat.

**[0011]** The safety device according to this invention includes at least one horizontal bar 6 placed between the two stays 3 and 4 that in the operating position is placed near the child's head and prevents the formation of twisting of the stays in that zone due to the voluntary rotation of the swing seat.

**[0012]** This bar is preferably to be fixed in a sliding manner to the stays in such way that its position may be regulated compared to the child's head as a function of his height. Furthermore, in some cases it is possible that the safety device envisages the presence of more than one bar (for instance, two as shown in figure 7) one of which may also be used as a back rest on swings that do not have such a back rest.

**[0013]** The joint between the bars and the stays may be obtained by means of clamping plates 8, which by using bolts produce a clamping system that tightens on the two stays (as shown in figure 5); alternatively, in case the stays are made from chains 3' and 4' the joint may be obtained by means of fixed systems with pins to engage between the links of the chain (as shown in figure 6).

**[0014]** The bars may be equivalently made of metal, plastic or wooden material as long as they are sufficiently rigid to maintain their linearity during the twisting of the stays.

**[0015]** The bars may be regulated telescopically with a longitudinal movement and blocked in the middle by a screw, or by means of a spring-block. The bars may be tubular, hollow or full, straight or bent or of a flat shape. The latter may be regulated in width and in this case the bars are made up of two separate pieces that are overlapped and fixed in the middle by a passing screw.

**[0016]** For greater safety and comfort concerning the back rest, the bars may be covered in foam rubber or other similar protective material.

**[0017]** From the description carried out the features of the safety device, subject of this invention, are clear as are the advantages.

**[0018]** Finally, it is evident that numerous other variations may be made to the safety device in question without stepping outside the principles of novelty inherent to the inventive idea, just as it is clear that, in practical implementation of the invention, the materials, shapes, pro-

portions, sizes and details illustrated may be whatsoever according to the needs and the same may be replaced with others that are technically equivalent.

## Claims

1. A safety device for a swing including a seat (2) fixed at its ends by a pair of stays (3, 4, 3', 4') that keep the seat itself raised from the ground and that are fixed at one of their end in an articulated way to a supporting structure (5) **characterised by** the fact that said safety device includes at least one horizontal bar (6) placed between the two stays that in the operating position is placed in proximity of the child's head and prevents the formation of twisting of the stays in that zone due to the rotation of the swing seat around a vertical axis.

2. A safety device, according to claim 1, which envisages the presence of more than one bar of which one may be used as a back rest on swings lacking such a back rest.

3. A safety device, according to claim 1, in which said bar is joined in a sliding way to the stays in such way that its position may be regulated in accordance with the child's head as a function of his height.

4. A safety device, according to claim 1, in which the joint between the bars (6) and the stays (3, 4) may be obtained through clamping plates (8) which by means of bolts create a clamping system that tightens around the two stays.

5. A safety device, according to claim 1, in which the stays are made up of chains (3', 4') and the joint is obtained through fixed systems with pins to engage between the links of the chain.

6. A safety device, according to claim 1, in which the bars (6) may be regulated in width by means of a telescopic movement or by means of overlapping of the two separate pieces blocked in the middle by a screw or by means of a spring-block.

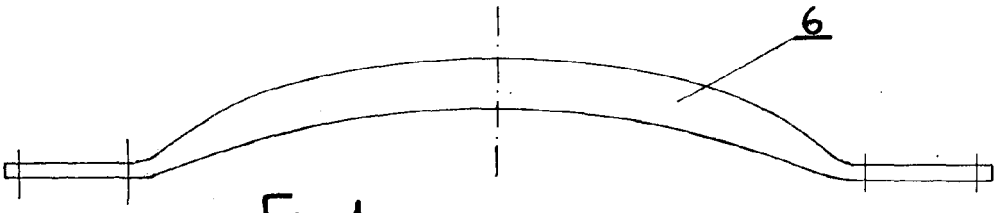



Fig.1

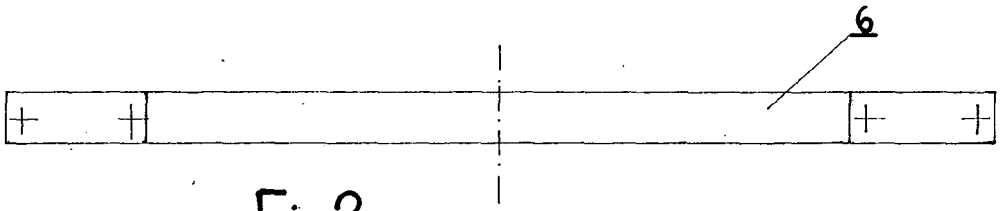



Fig.2

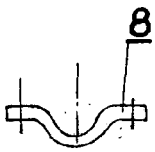



Fig.3

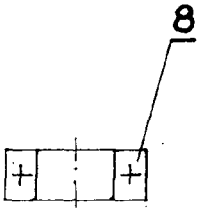



Fig.4

Fig.5

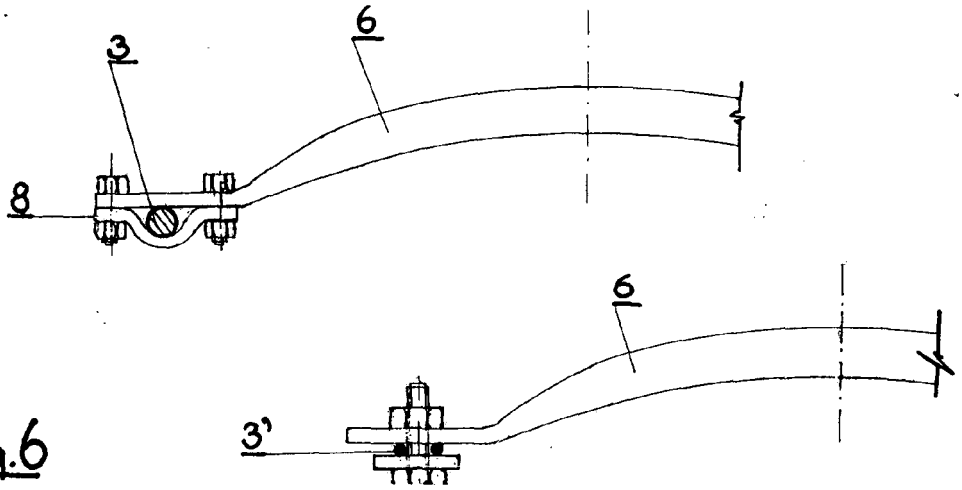



Fig.6

Fig.8

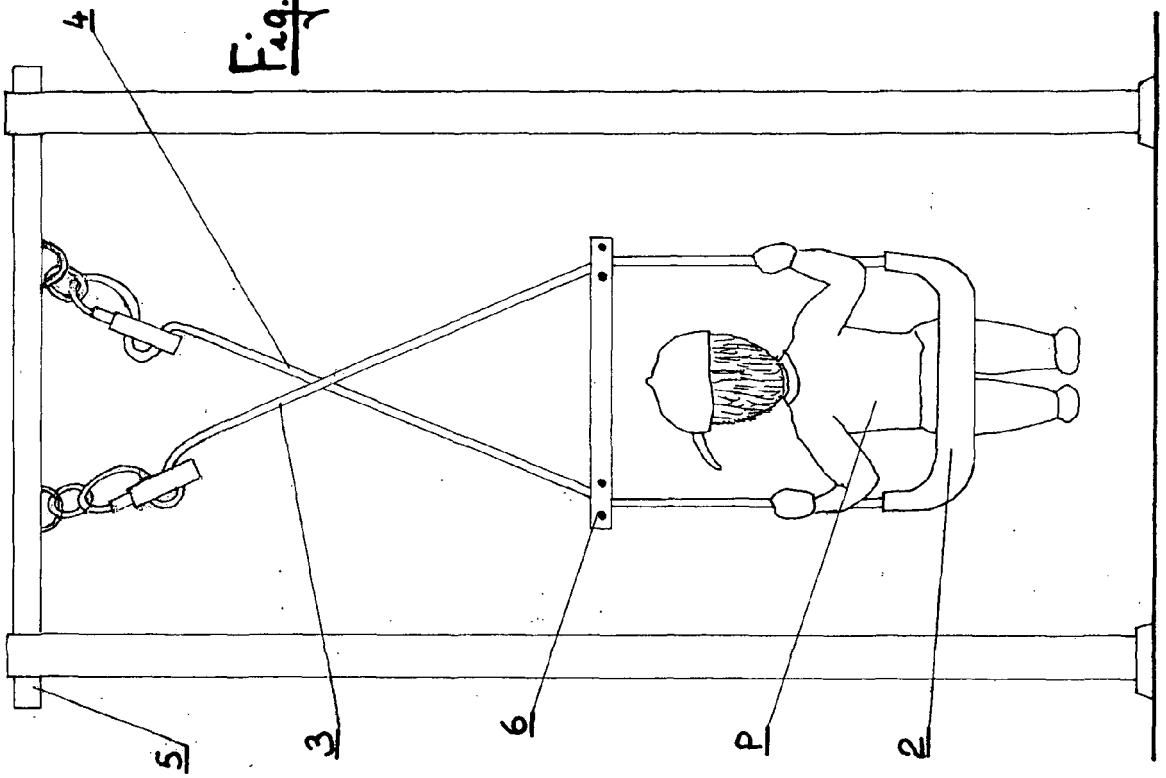
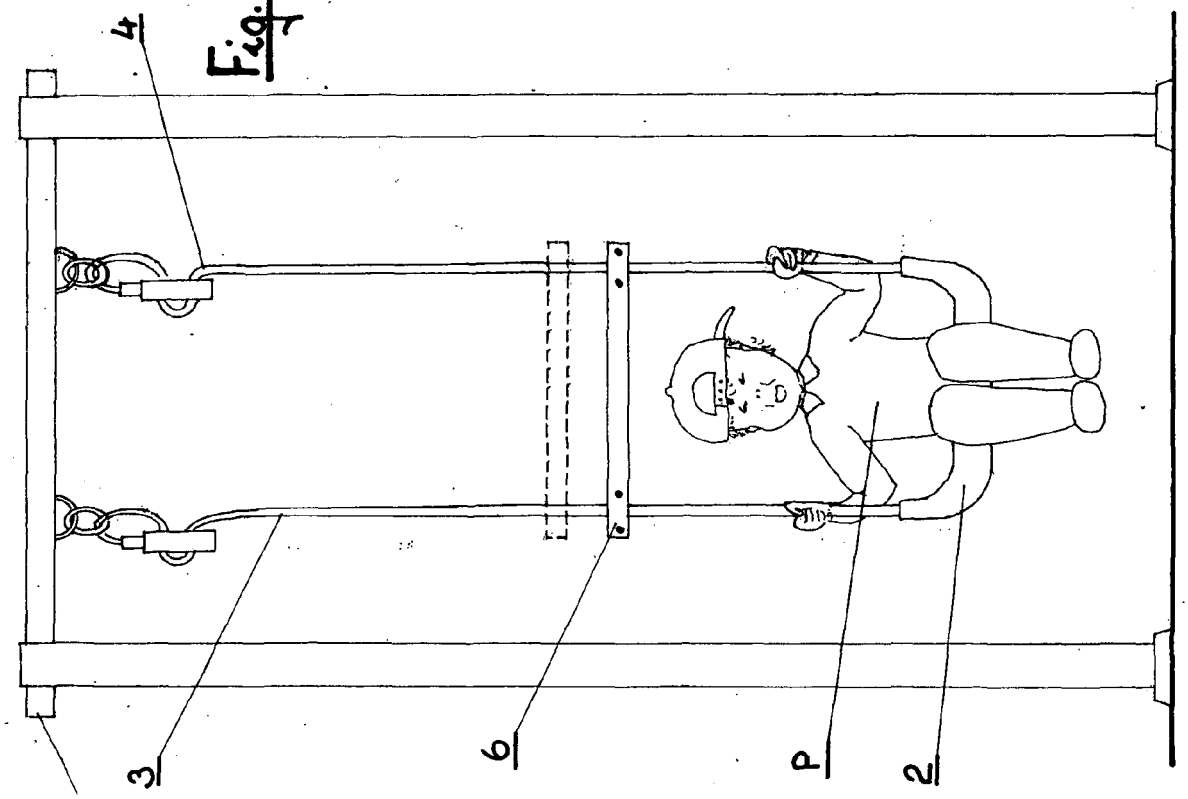



Fig.7



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# EUROPEAN SEARCH REPORT

Application Number
EP 06 01 6085

## DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (IPC) |
|---|---|---|---|
| X | US 4 492 373 A (DZITZER MAX [US])<br>8 January 1985 (1985-01-08)<br>* figures 1-8 *<br>----- | 1,2,4,5 | INV.<br>A63G9/00 |
| X | US 5 067 706 A (TSAI WEN-GUO [TW])<br>26 November 1991 (1991-11-26)<br>* figure 1 *<br>----- | 1,3 | |
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| X | US 3 161 893 A (SILER ROBERT W)<br>22 December 1964 (1964-12-22)<br>* figures 8-10 *<br>----- | 1,4,5 | |

TECHNICAL FIELDS SEARCHED (IPC)

A63G

The present search report has been drawn up for all claims

| Place of search | Date of completion of the search | Examiner |
|---|---|---|
| Munich | 27 November 2006 | Shmonin, Vladimir |

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27-11-2006

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82