

Description

Field of technology

[0001] The technical solution relates to the upper mechanism for opening of the sliding wall or the side wall mainly for rolling stock or for superstructures of freight vehicles.

State of the art

[0002] The current solution enabling opening and subsequent sliding of the side wall or the sliding wall by means of several elements of the mechanism with low friction or by means of application of simple elements with high friction based mainly upon movement on a circular path or on a curve.

[0003] In the international patent application WO2010130537 (A1), which was publicized on 2010-11-18, a system of sliding doors for rolling stock is described; this system contains a bottom guiding rail, upper guiding rail and at least one wing part arranged movably between the guiding rails, whereby this solution does not contain elements for pushing out the wing part.

[0004] In the Chinese utility model CN207809393 (U), which was publicized on 2018-09-04, a system of sliding doors is described, which contains a rail attached to the wagon body and a slide, which is fixed in the upper part of the sliding doors. The slide is equipped with two pairs of bearings, which are mutually oriented in two vertical directions, where these bearings slide on the rail. On one end, the rail is bent, in order to pull the sliding door away from the side wall.

Nature of technical solution

[0005] Nature of technical solution lies in the solution for the upper mechanism for opening of a sliding wall or a side wall; the mechanism is based upon combination of a simple pushing out on a curve with the maximal elimination of friction between segments, which, at the same time, does not require any auxiliary elements. The upper mechanism consists of a guiding, mainly of circular cross-section, located between pulleys and attached through a bearing to a carrier that is attached on the sliding wall. By rotating the shaft on the circular path, the sliding wall is pushed out to opened position. After pushing out the sliding wall and by means of its subsequent moving, the pulleys start to roll on the guiding. At the end of the guiding, the pulleys pass fluently to the formed profile of the second sliding wall so that this formed profile creates a guiding for the carrier for complete pushing out of the sliding wall.

[0006] The submitted solution is advantageous because friction between pushed out element and pushing out element is eliminated to the maximal possible extent. Moreover, vertical releasing of the sliding wall or the side wall enables fluent movement also in case of manufac-

turing inaccuracies. The solution is advantageous also because the mechanism is a compact and simple construction.

Review of figures in the drawings

[0007] In the Fig.1, there is displayed a cut of the wagon is the area of the upper mechanism. In the Fig.2, there is displayed the upper mechanism in closed position. In the Fig.3, there is displayed the upper mechanism in opened position.

Examples of embodiment of the technical solution

[0008] The upper mechanism for opening of a sliding wall or a side wall is based upon a combination of simple pushing out on a curve with the maximal elimination of friction between segments, which, at the same time, does not require any auxiliary elements. The upper mechanism for opening of a sliding wall or a side wall contains the guiding 1, which is located between the pulleys 2 and it is attached to the carrier 3 through the bearing, whereby the carrier 3 is attached to the sliding wall 4, where the guiding 1 is connected to the shaft 5. By rotating the shaft 5 on a circular path, the sliding wall 4 is pushed out to the opened position. After pushing out the sliding wall 4 and after it is subsequently moved, the pulleys 2 start to roll on the guiding 1. At the end of the guiding 1, the pulleys 2 pass fluently to the formed profile of the second sliding wall 6 so that this formed profile creates the guiding 1 for the carrier 3 for complete pushing out of the sliding wall 4.

Claims

1. The upper mechanism for opening of a sliding wall or a side wall **characterised in that** it contains the guiding (1), which is located between the pulleys (2) and it is attached to the carrier (3) through the bearing, whereby the carrier (3) is attached to the sliding wall (4), where the guiding (1) is connected to the shaft (5).
2. The upper mechanism for opening of a sliding wall or a side wall according to the Claim 1, **characterised in that** the guiding (1) is of circular cross-section.

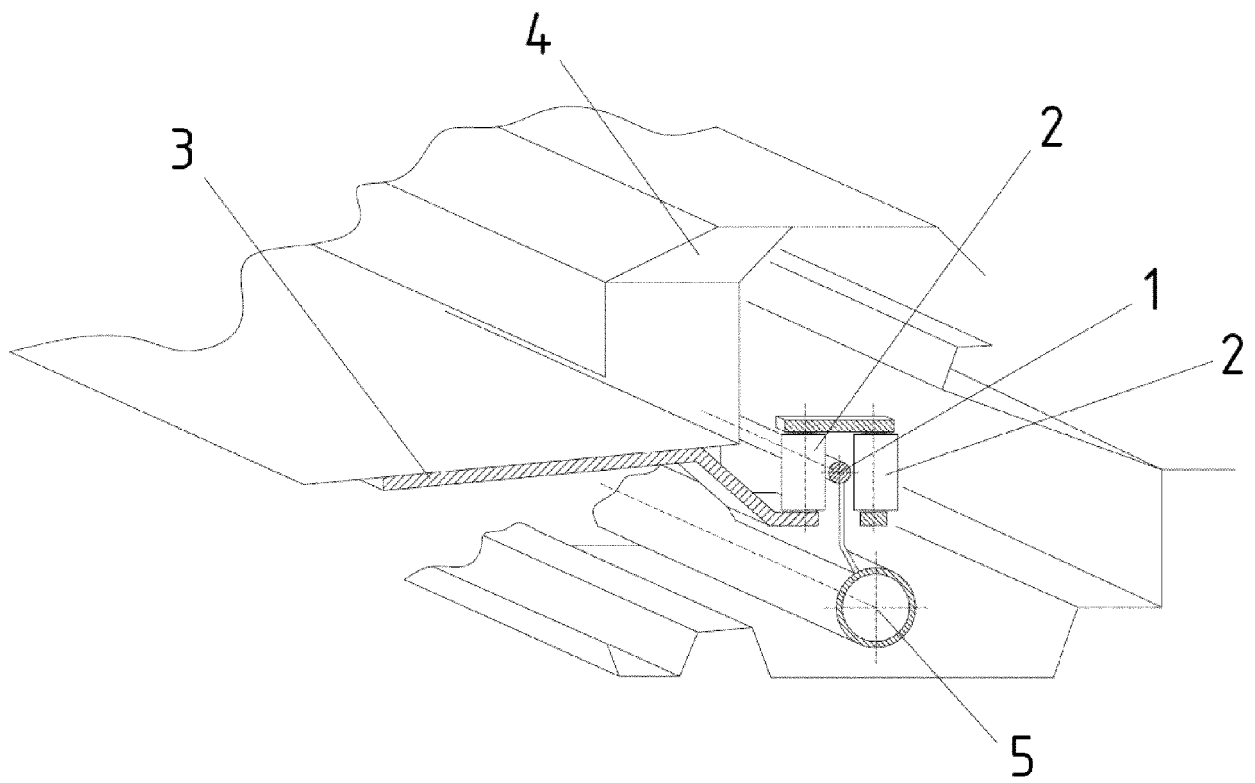


Fig.1

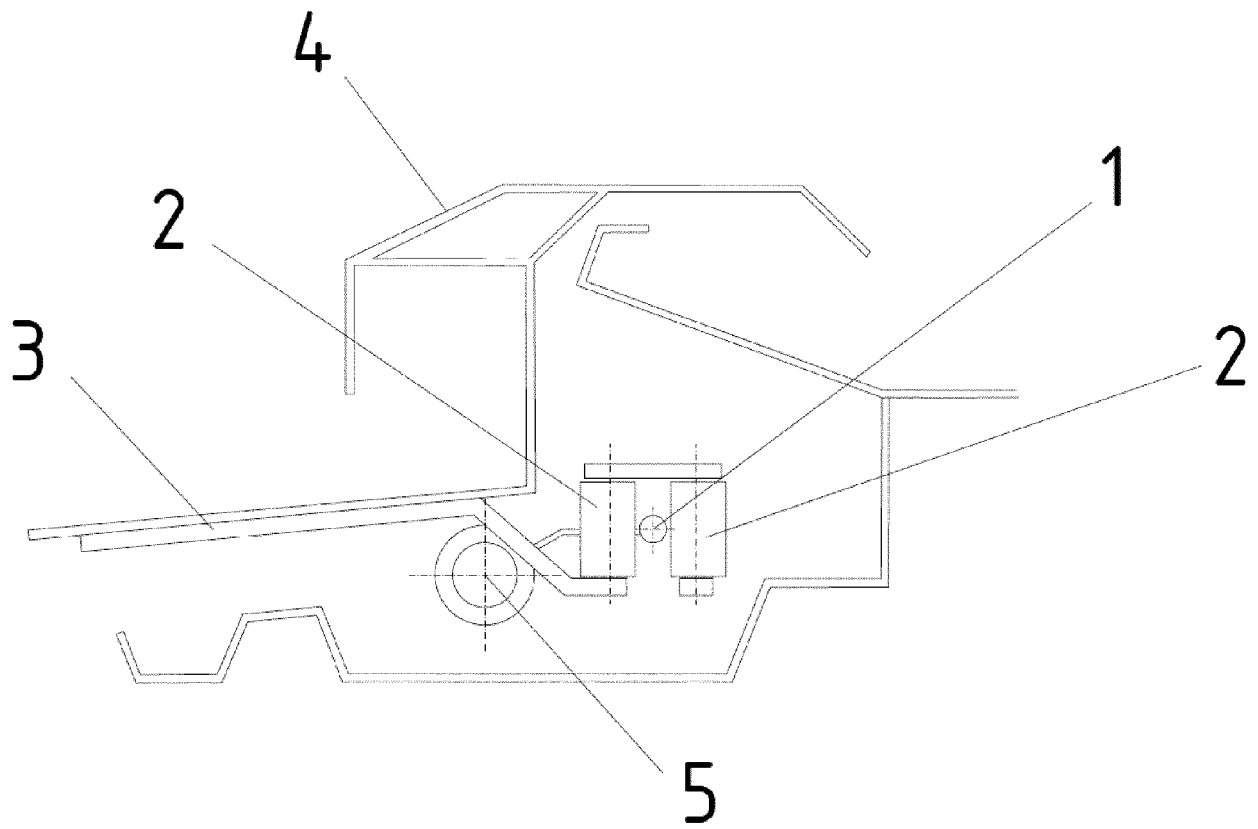


Fig.2



EUROPEAN SEARCH REPORT

Application Number
EP 19 47 5501

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			TECHNICAL FIELDS SEARCHED (IPC)
			E05D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 29 October 2019	Examiner Wagner, Andrea
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document 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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EPO FORM 1503 03/82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 19 47 5501

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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- CN 207809393 U [0004]