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(54) Benævnelse: **MONTERINGSINDRETNING**

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**AT-B- 353 442**
**NL-A- 7 702 392**
**US-A- 2 841 404**
**US-A1- 2007 235 403**

Description

The present invention relates to a mounting device for a support of a loading crane or for a loading crane with the features of the preamble of claim 1 and a motor vehicle with the features of the preamble of claim 10.

In generic mounting devices, a subframe is positioned on the longitudinal chassis beam. The cross-members of the mounting device are fastened to the subframe. The loading edge is disadvantageously raised.

A generic mounting device follows from US 2007/235403 A1.

The object of the invention is to provide a mounting device and a motor vehicle with such a mounting device, wherein in the mounted state there is as low a loading edge as possible.

This object is achieved by a mounting device with the features of claim 1 and a motor vehicle with the features of claim 10.

In the mounting device according to the invention the subframe can be dispensed with, with the result that it is possible for the mounting device to be mounted on the vehicle chassis weld-free. The full platform length can be used with as low a loading edge as possible. The support of the loading crane or the loading crane with all its components, such as crane column with crane arms arranged thereon and booms, are arranged on the mounting device.

Advantageous embodiments are defined in the dependent claims.

If it is provided that the at least one cross-member is formed as a hollow profile having a hollow space, it can be provided that a boom of the loading crane to be arranged on the mounting device is moveably mounted in the hollow space.

In the case of larger cranes, at least two cross-members will be provided. Then it can be provided that the hollow space of one of the at least two cross-members is open in the area of the first retaining bracket and the hollow space of the other of the at least two cross-members is open in the area of the second retaining bracket. The cross-members can in turn be used for mounting booms of the loading crane to be arranged on the

mounting device. The need for separate guides for the boom or booms is eliminated, whereby a simplified construction results compared with the state of the art.

In this embodiment example, the cross-member(s) represents or represent part(s) of the loading crane itself to all intents and purposes.

To put it another way, in the case of a motor vehicle with a mounting device according to this embodiment example, with a loading crane arranged thereon, the lower part of the crane structure made in the form of one, two or more cross-members can be viewed as a force- and moment-transferring part of the mounting device.

The longitudinal chassis beams can run parallel to one another or have offsets. The retaining brackets are preferably to be arranged in the sections running in parallel.

It can preferably be provided that at least one mounting plate for a crane column of the loading crane is arranged on the at least one cross-member. This results in an even stronger integration of loading crane and mounting device as a separate component for mounting the crane column on the mounting device can be dispensed with. Two mounting plates can also be provided, for example for the selective mounting of the loading crane on one mounting plate or on the other. For example, one of the mounting plates could be arranged centrally and the other mounting plate could be arranged at the edge of the mounting device.

For easier fastening of the retaining brackets to the longitudinal chassis beams it can be provided that the first and second retaining brackets each have an upper part and a lower part connected thereto. This results in simple mounting: upper parts can be placed on the longitudinal chassis beams. Then, the lower parts are connected to the upper parts and thus engage around the longitudinal chassis beams. The upper and lower parts can be screwed to each other, for example.

The upper and lower parts can be connected, for example, such that the upper parts and the lower parts of the first and second retaining brackets are connected to each other on those sides of the first and second retaining brackets which are facing away from each other.

Alternatively or in addition it can be provided that the upper parts and the lower parts of the first and second retaining brackets are connected to each other on those sides of the first and second retaining brackets which are facing each other.

Particularly preferably it is provided that the at least one cross-member is fastened to the first and second retaining brackets by means of a detachable connection, preferably a clamping connection. This results in a modular structure of the mounting device, with simple adaptability to different chassis geometries. In addition, a smaller pack size results when shipping the mounting device.

In a motor vehicle according to the invention it is particularly preferably provided that the height of the retaining brackets substantially corresponds to the height of the longitudinal chassis beams. The mounting device does not additionally build on the chassis.

Further advantages and details of the invention result based on Figures 1 to 9. Each figure has sub-figures a and b. The sub-figures a relate in each case to the mounting device in an isolated state and the sub-figures b relate to the mounting device in the mounted state on the longitudinal chassis beams.

Figure 1a shows a perspective view of a mounting device 1 according to the invention. A first retaining bracket 3 and a second retaining bracket 4 are provided, which run parallel to each other and are connected to each other by two cross-members 5, 6 running transversely with respect to the retaining brackets 3, 4. In the mounted state (Figure 1b) the retaining brackets 3, 4 engage around a first longitudinal chassis beam 10 and a second longitudinal chassis beam 11, which in this embodiment example run parallel to one another without offset.

The two cross-members 5, 6 here are formed in this embodiment example as hollow profiles having hollow spaces. The hollow space of one of the two cross-members 5, 6 is open in the area of the first retaining bracket 3 and the hollow space of the other of the two cross-members 5, 6 is open in the area of the second retaining bracket 4. The cross-members 5, 6 can therefore be used for the moveable mounting of boom enlargements. In Figure 1, the upper parts 31, 41 and the lower parts 32, 42 of the retaining brackets 3, 4 can be seen. In the present embodiment example, these are connected to each other both on those sides of the first and of the second retaining brackets 3, 4 which are facing away from each other and on those sides which are facing away from each other. In the present embodiment example, the connection is effected in the form of screw connections (see, for example, Figures 5 and 6) 12, 13. These have only a friction-locking function, the

mounting device 1 is therefore not screwed to the chassis. A mounting plate 8 for a crane column of a loading crane 2 can also be seen.

Figure 2 shows a perspective view from below.

Figure 3 shows a plan view onto the retaining bracket 4.

Figure 4 shows a plan view onto the retaining bracket 3.

Figure 5 shows a plan view onto the first cross-member 5.

Figure 6 shows a plan view onto the second cross-member 6.

Figure 7 shows a plan view from below.

Figure 8 shows a plan view from above.

Figure 9 shows a motor vehicle 9 with a loading crane 2 mounted via the mounting device 1.

**Patentkrav**

**1.** Monteringsindretning (1) til en støtte af en læssekran eller en læssekran (2), med hvilken støtten eller læssekranen kan monteres på en første chassislængdedrager (10) og en anden chassislængdedrager (11) på et motorkøretøj (9), hvor monteringsindretningen (1) har mindst en travers (5, 6), **kendetegnet ved, at** monteringsindretningen (1) har en første holdeklamme (3) og en anden holdeklamme (4), der gennem den mindst ene travers (5, 6) er forbundet med hinanden, hvor den første holdeklamme (3) er udformet til i monteret tilstand at omslutte den første chassislængdedrager, og den anden holdeklamme (4) er udformet til i monteret tilstand at omslutte den anden chassislængdedrager (11).

**2.** Monteringsindretning ifølge krav 1, hvor den mindst ene travers (5, 6) er udformet som en hulprofil med hulrum.

**3.** Monteringsindretning ifølge krav 2, hvor der er tilvejebragt mindst to traverser (5, 6), og hulrummet i en af de mindst to traverser (5, 6) er åbent i området med den første holdeklamme (3), og hulrummet i den anden af de mindst to traverser (5, 6) er åbent i området med den anden holdeklamme (4).

**4.** Monteringsindretning ifølge krav 2 eller 3, hvor der i hulrummet på den mindst ene travers (5, 6) er bevægeligt monteret en udligger.

**5.** Monteringsindretning ifølge mindst et af kravene 1 til 4, hvor mindst en monteringsplade (8) til en kransøjle på læssekranen (2) er anbragt på den mindst ene travers (5, 6).

**6.** Monteringsindretning ifølge mindst et af kravene 1 til 5, hvor de første og anden holdeklammer (3, 4) hver har en overdel (31, 41) og en dermed forbundet underdel (32, 42).

**7.** Monteringsindretning ifølge krav 6, hvor overdelene (31, 41) og underdelene (32, 42) på de første og anden holdeklammer (3, 4) forbindes med hinanden på

de sider af de første og anden holdeklammer (3, 4), der vender væk fra hinanden.

**8.** Monteringsindretning ifølge krav 6 eller 7, hvor overdelene (31, 41) og underdelene (32, 42) på de første og anden holdeklammer (3, 4) forbindes med hinanden på de sider af de første og anden holdeklammer (3, 4), der vender mod hinanden.

**9.** Monteringsindretning ifølge mindst et af kravene 1 til 8, hvor den mindst ene travers (5, 6) over en aftagelig forbindelse, fortrinsvis en klemforbindelse, fastgøres til den første og den anden holdeklamme (3, 4).

**10.** Motorkøretøj (9) med en første chassislængdedrager (10) og en anden chassislængdedrager (11), og en monteringsindretning (1) ifølge mindst et af kravene 1 til 9, hvor den første holdeklamme (3) forbindes med den første chassislængdedrager (10), og den anden holdeklamme (4) forbindes med den anden chassislængdedrager (11).

**11.** Motorkøretøj ifølge krav 10, hvor højden på holdeklammerne (3, 4) i alt væsentligt svarer til højden på chassislængdedragerne (10, 11).

**12.** Motorkøretøj ifølge krav 10 eller 11, hvor der på mindst en travers (5, 6) på monteringsindretningen (1) monteres en læssekran (2).

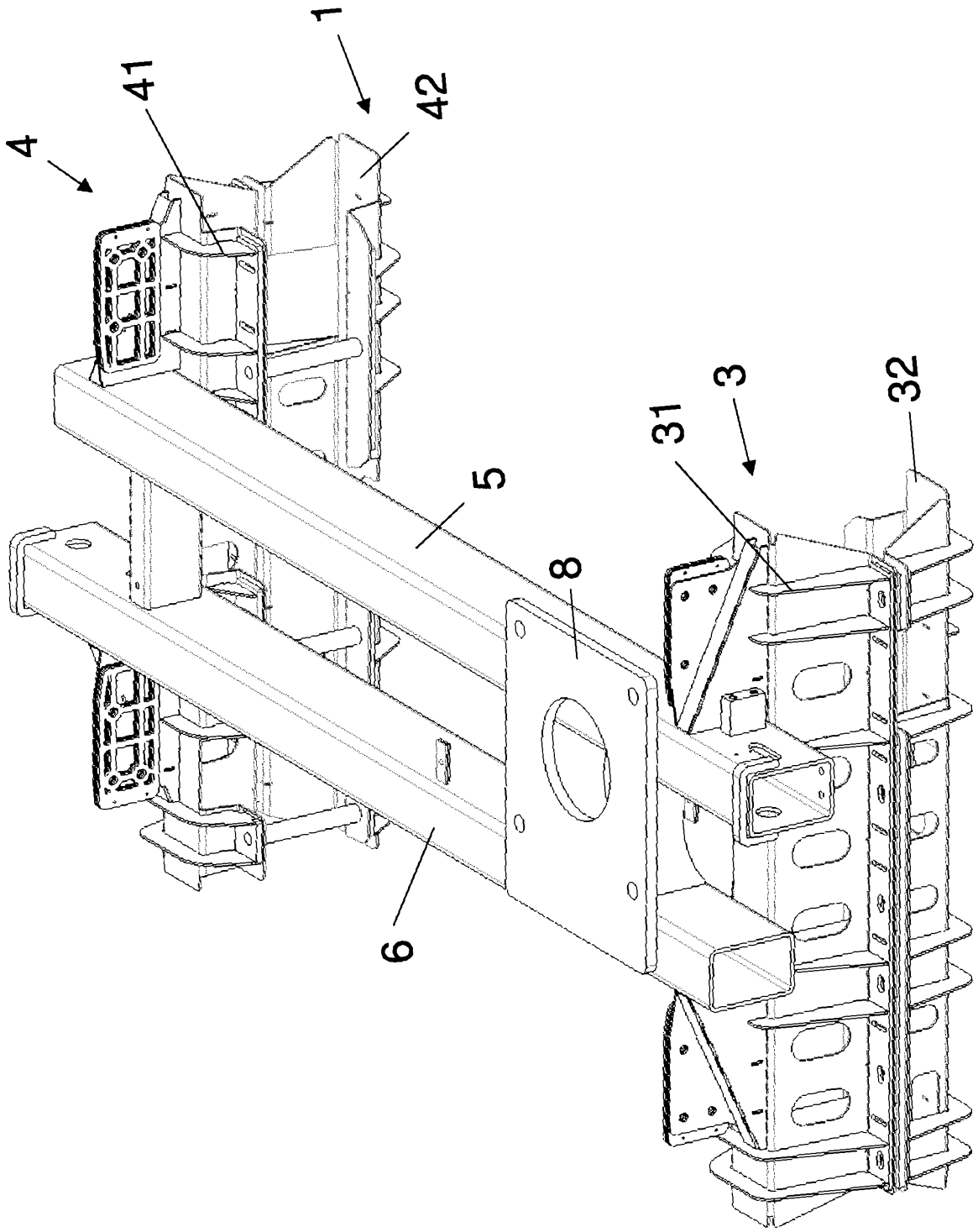


Fig. 1a

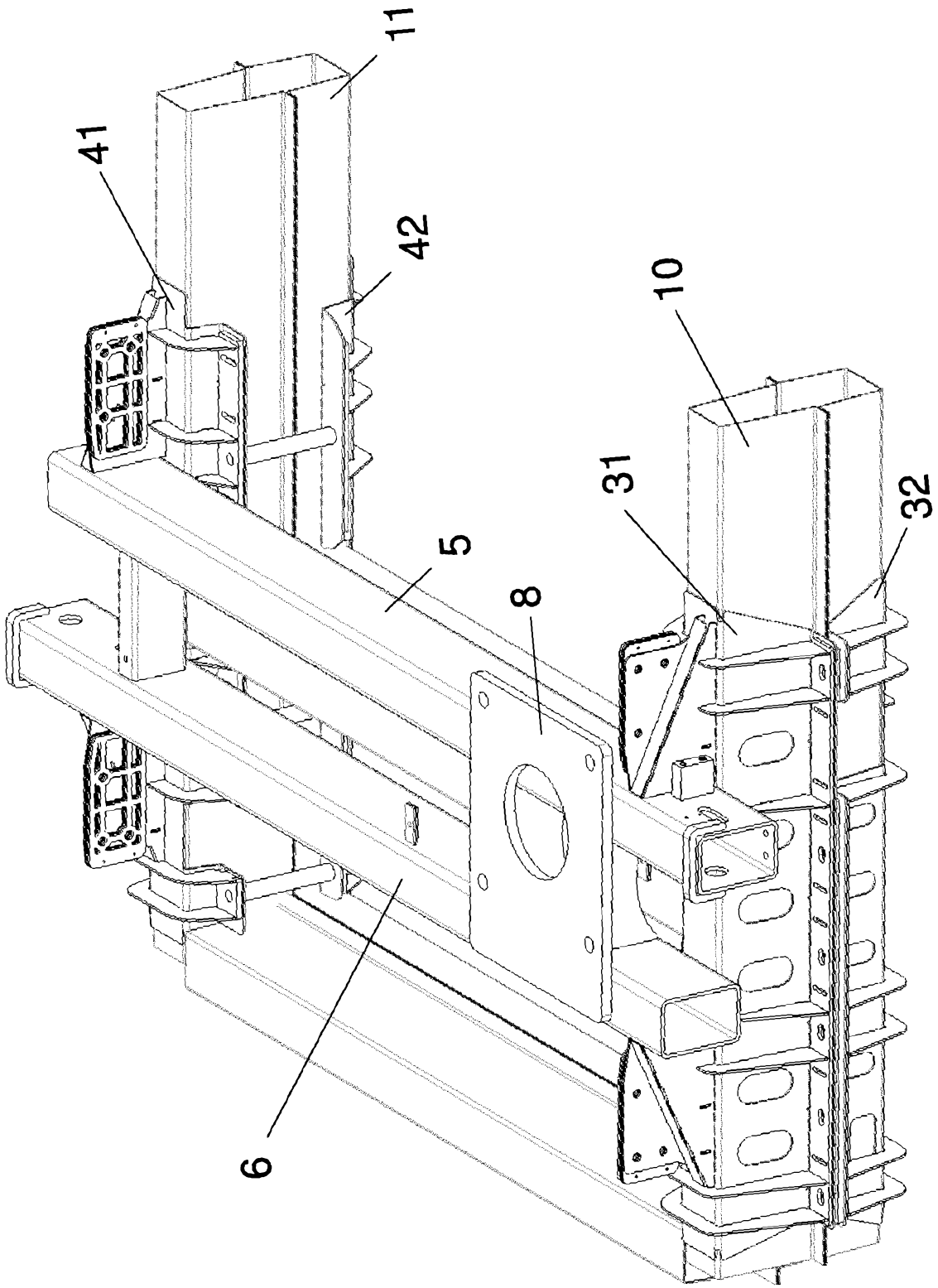


Fig. 1b

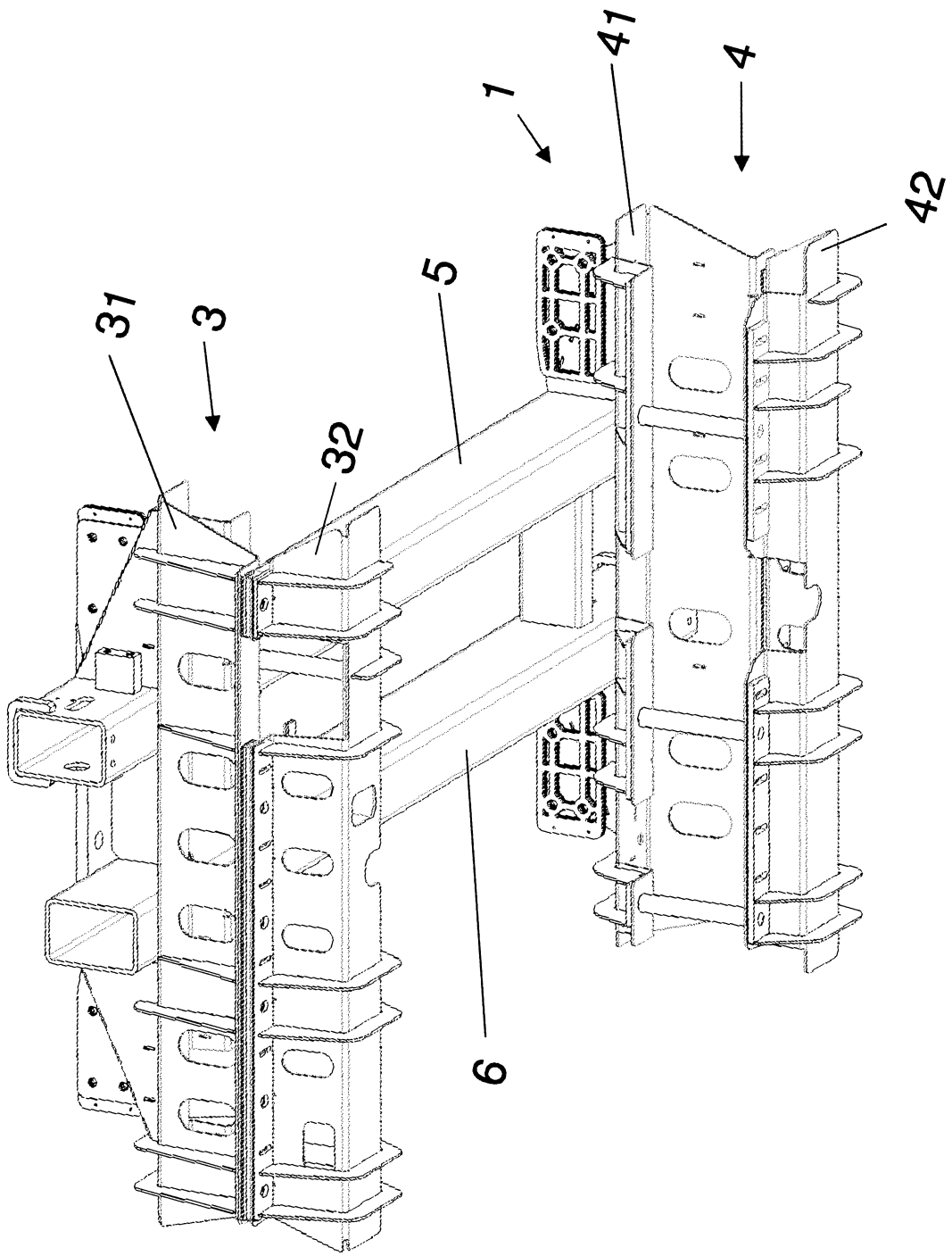


Fig. 2a

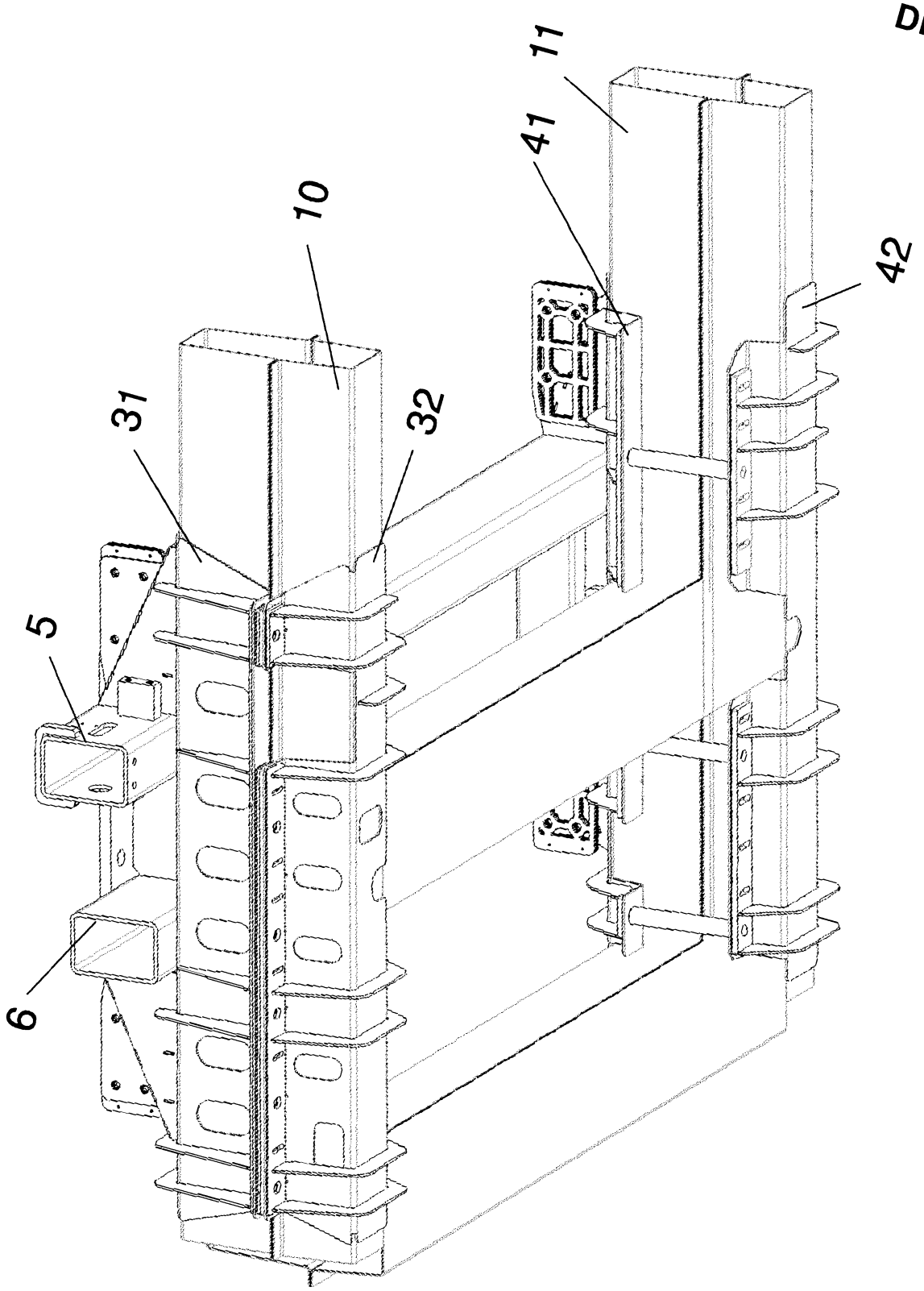


Fig. 2b

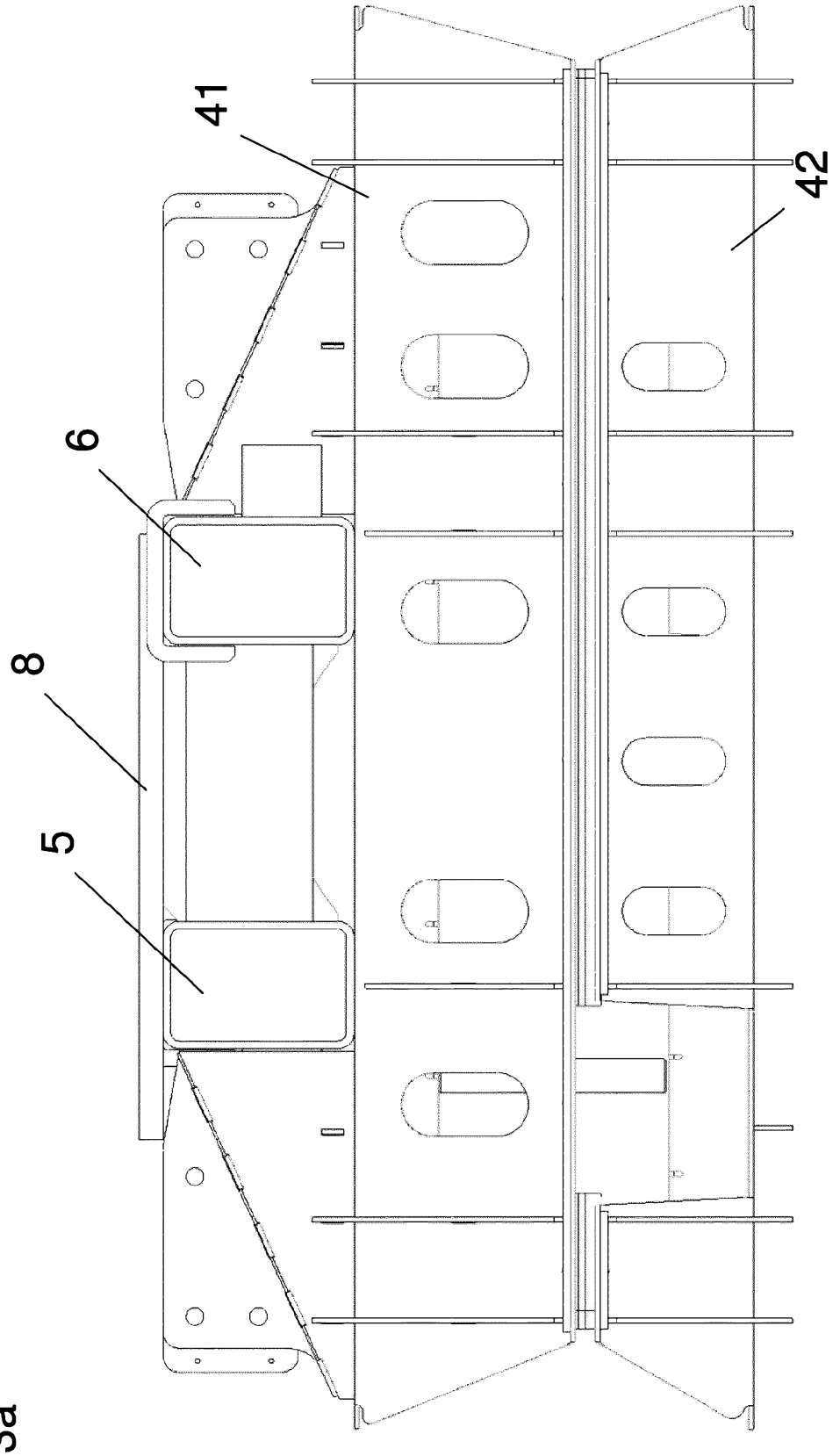


Fig. 3a

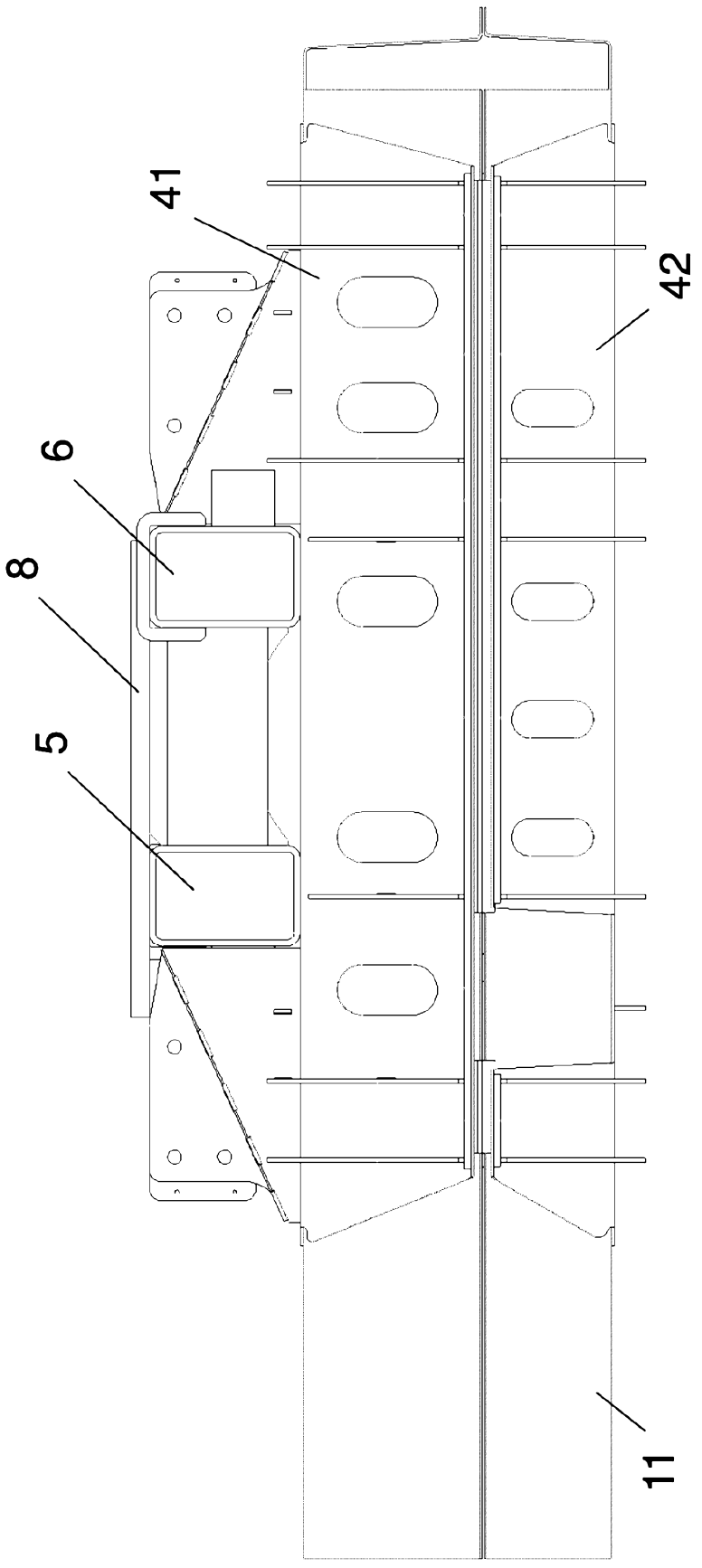


Fig. 3b

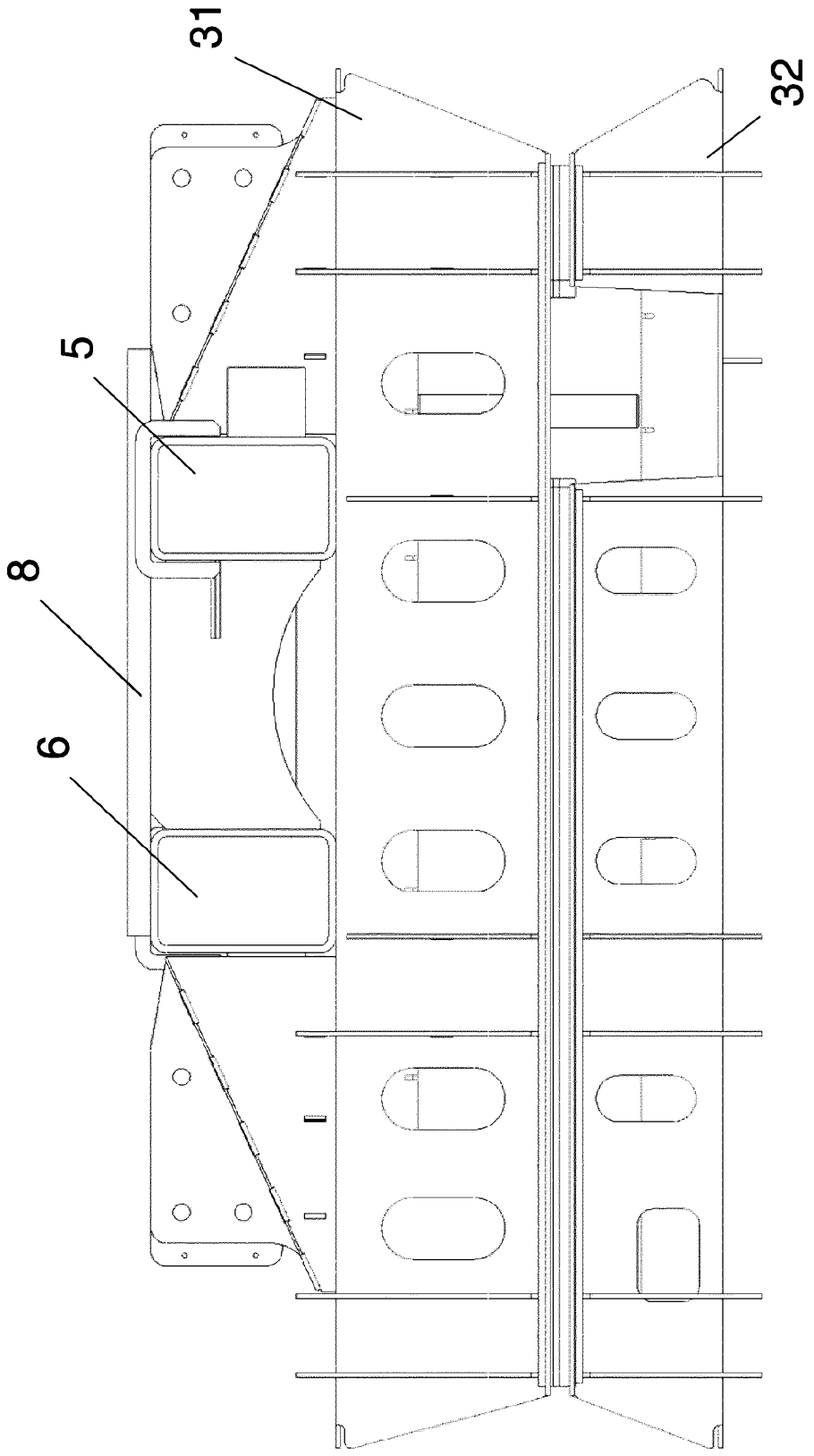


Fig. 4a

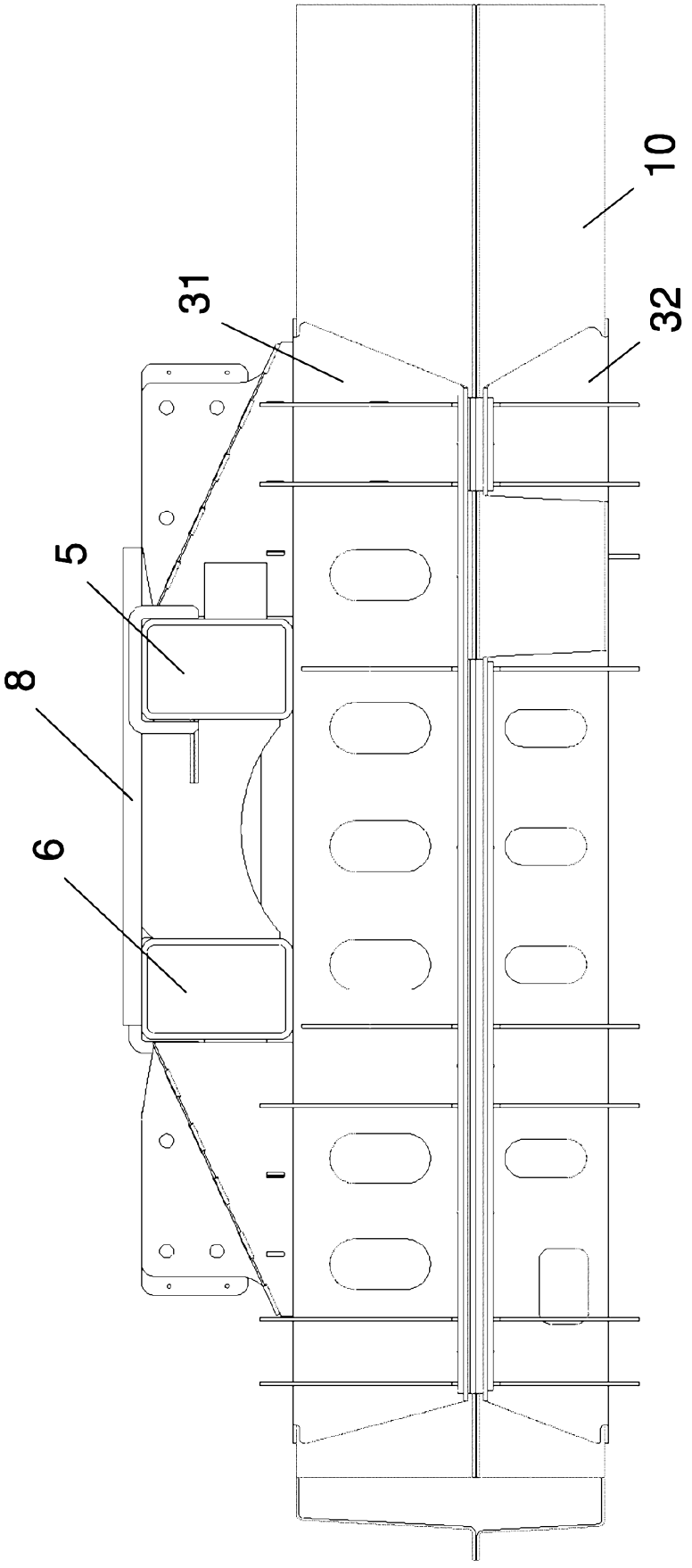


Fig. 4b

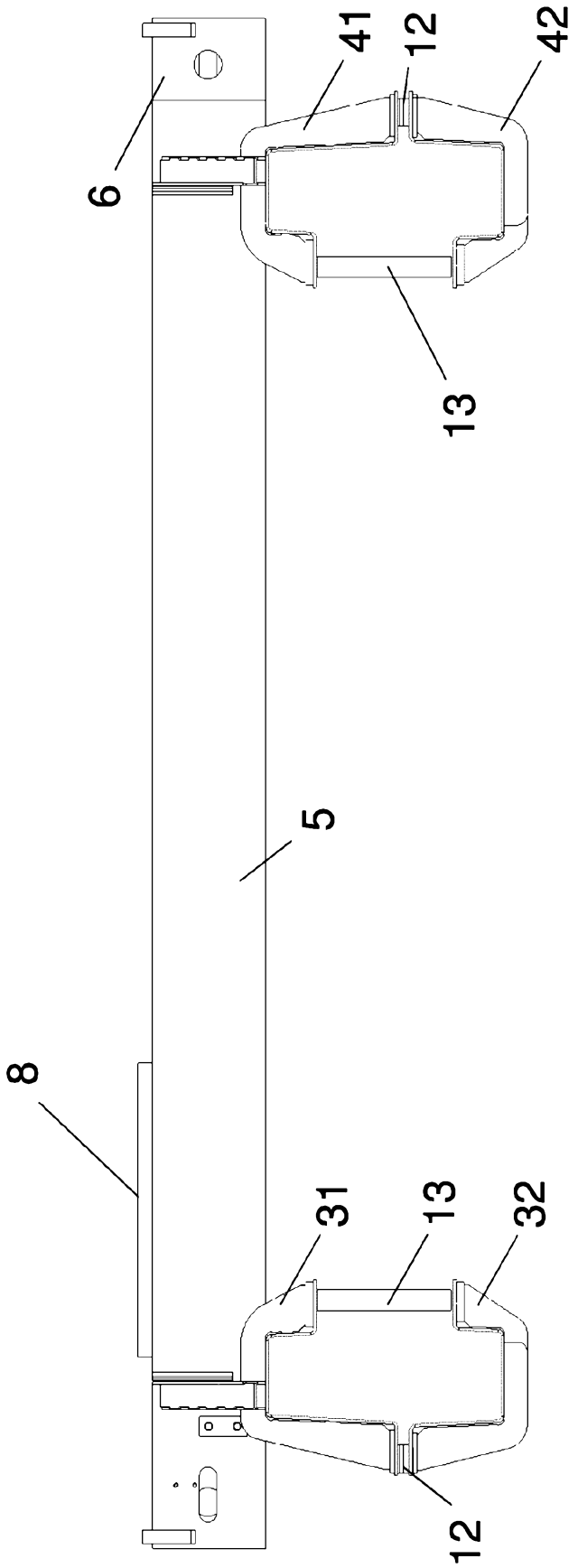


Fig. 5a

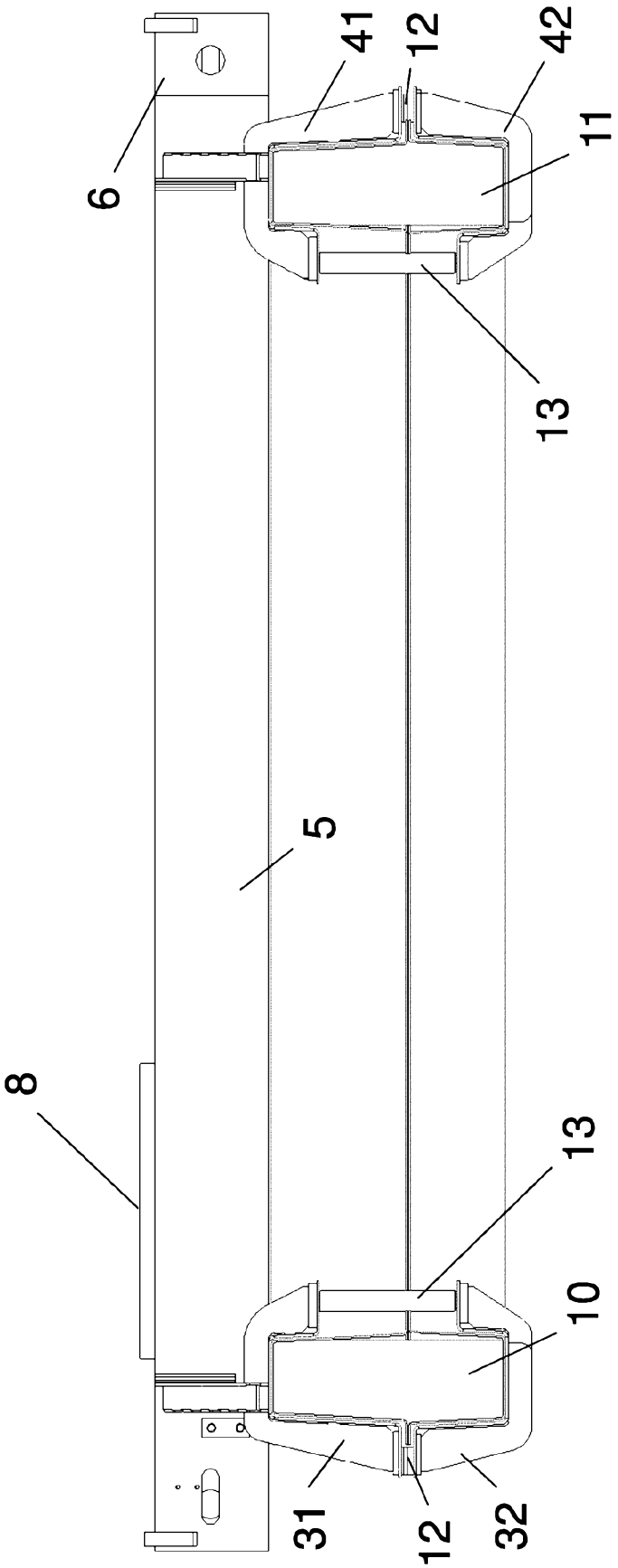


Fig. 5b

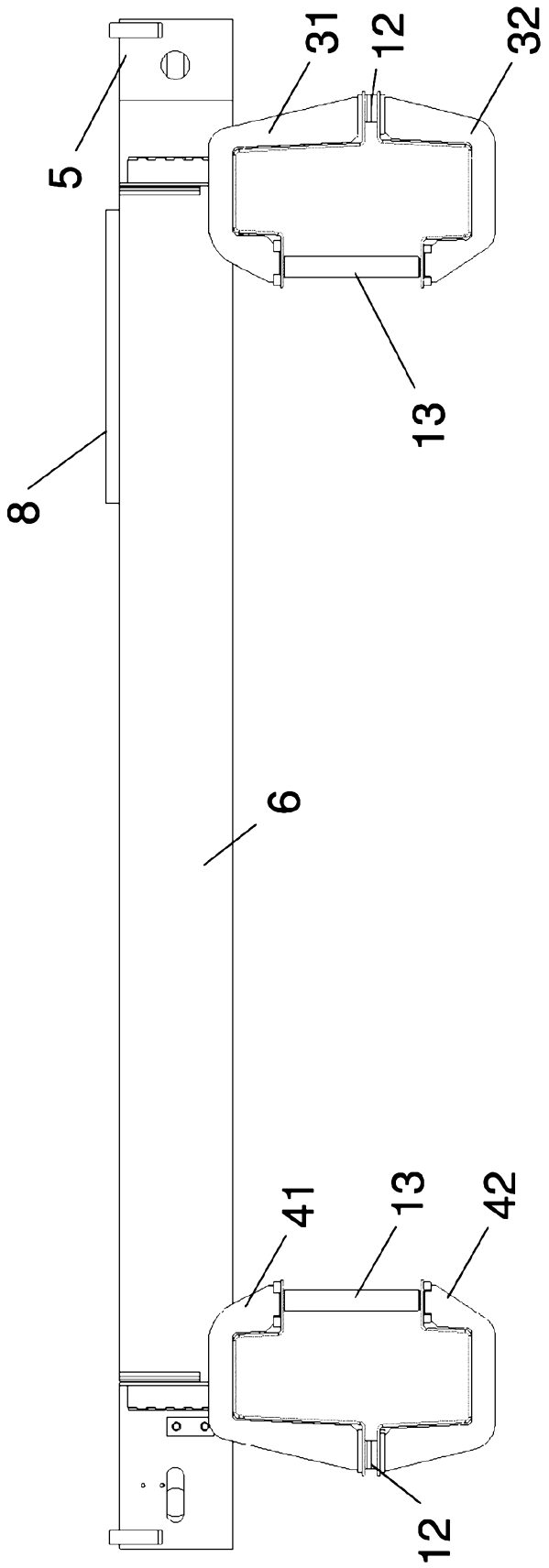


Fig. 6a

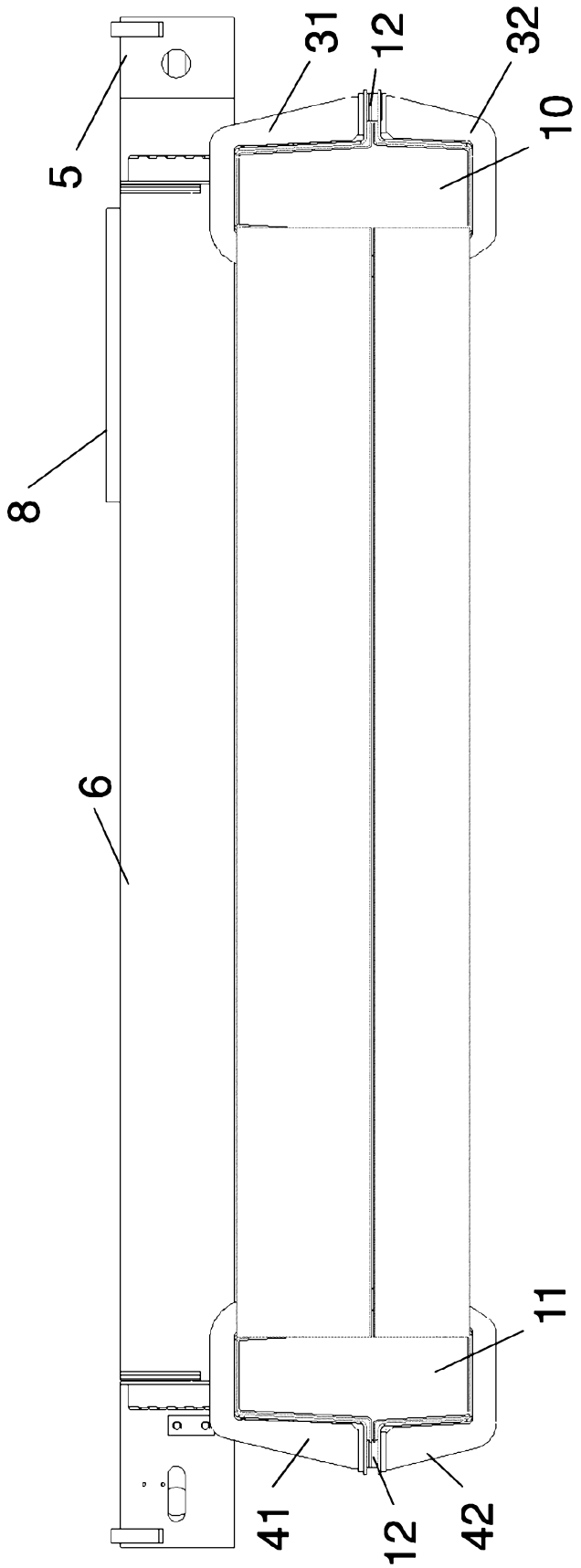


Fig. 6b

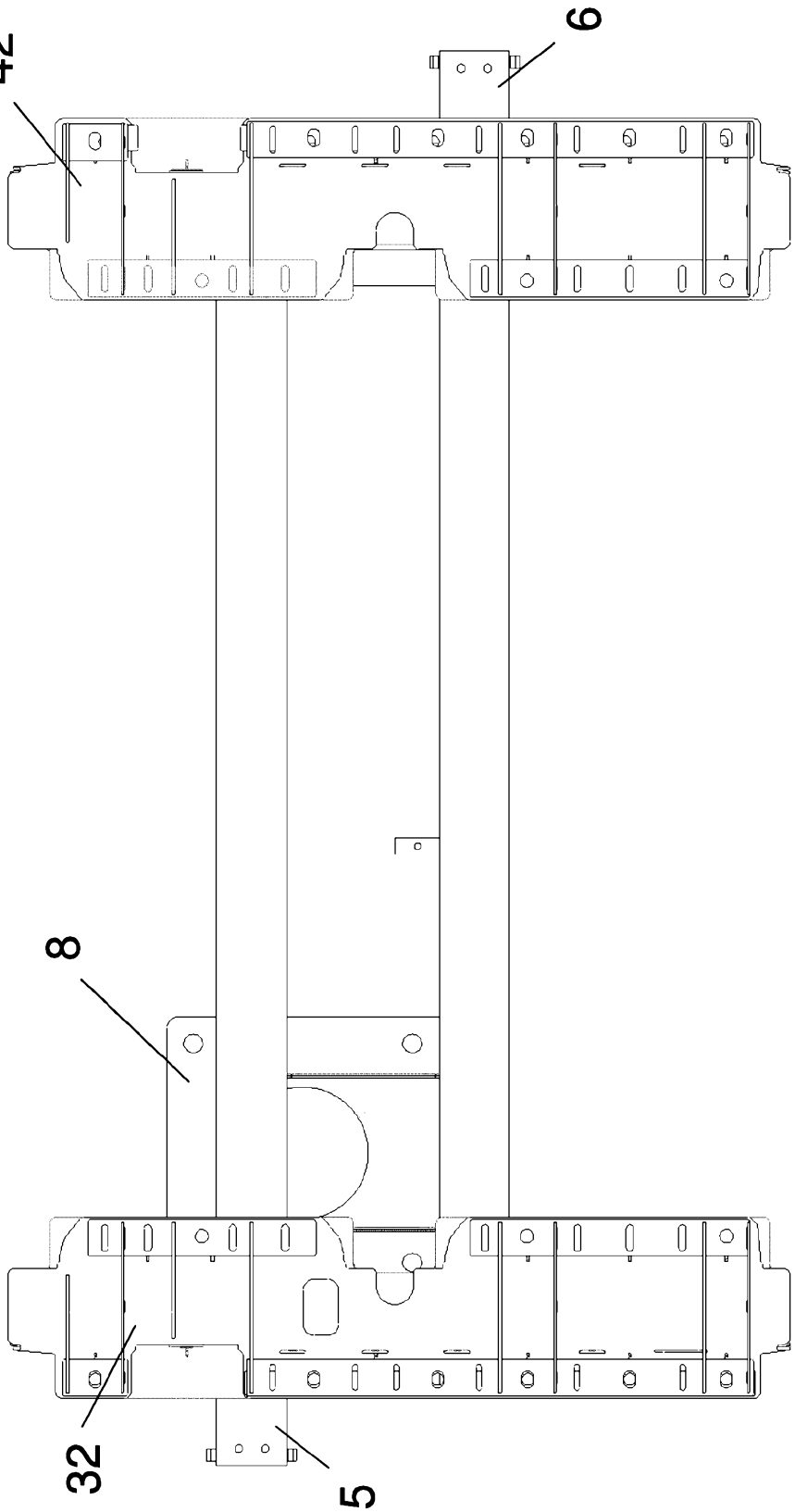


Fig. 7a

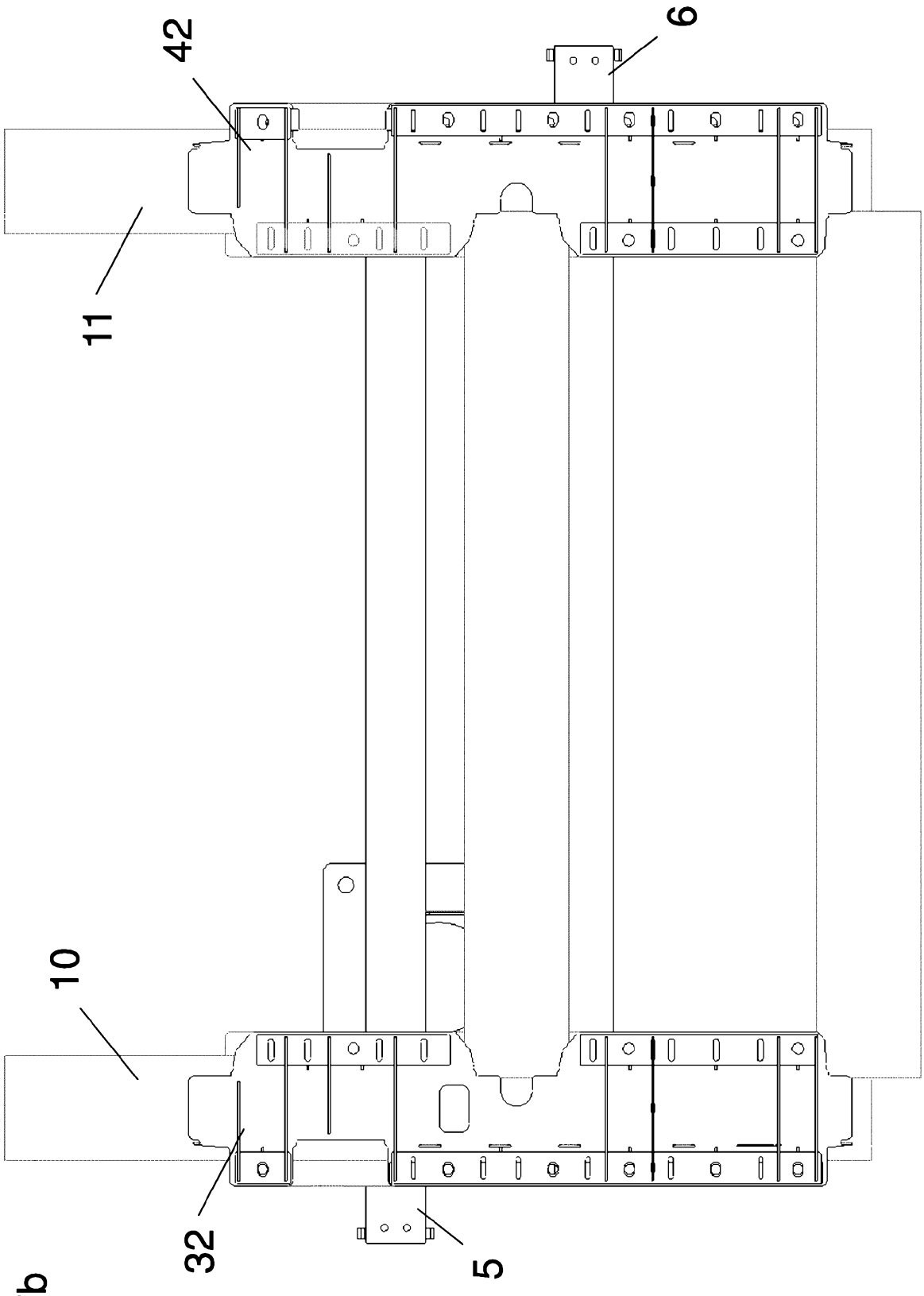


Fig. 7b

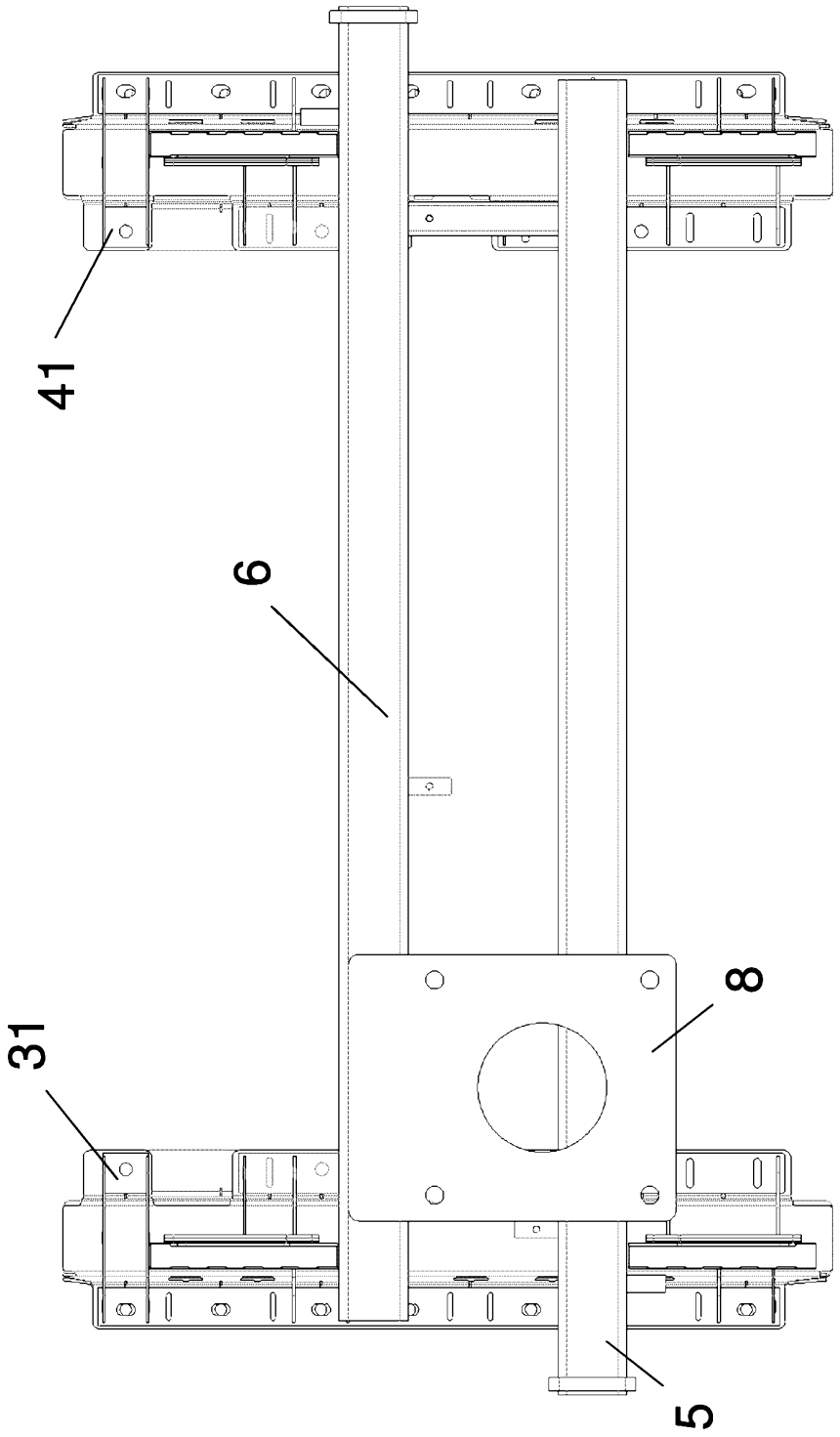


Fig. 8a

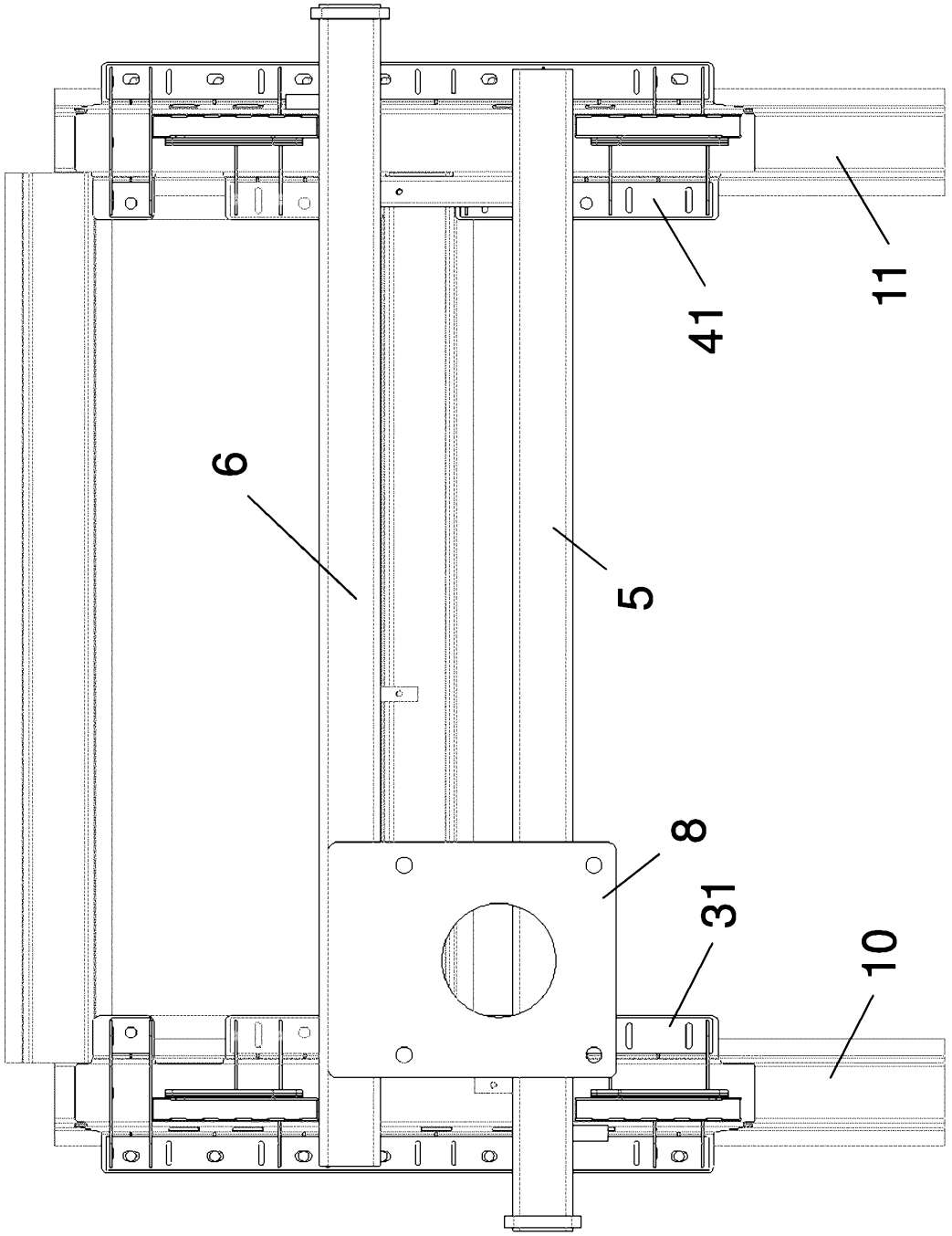


Fig. 8b

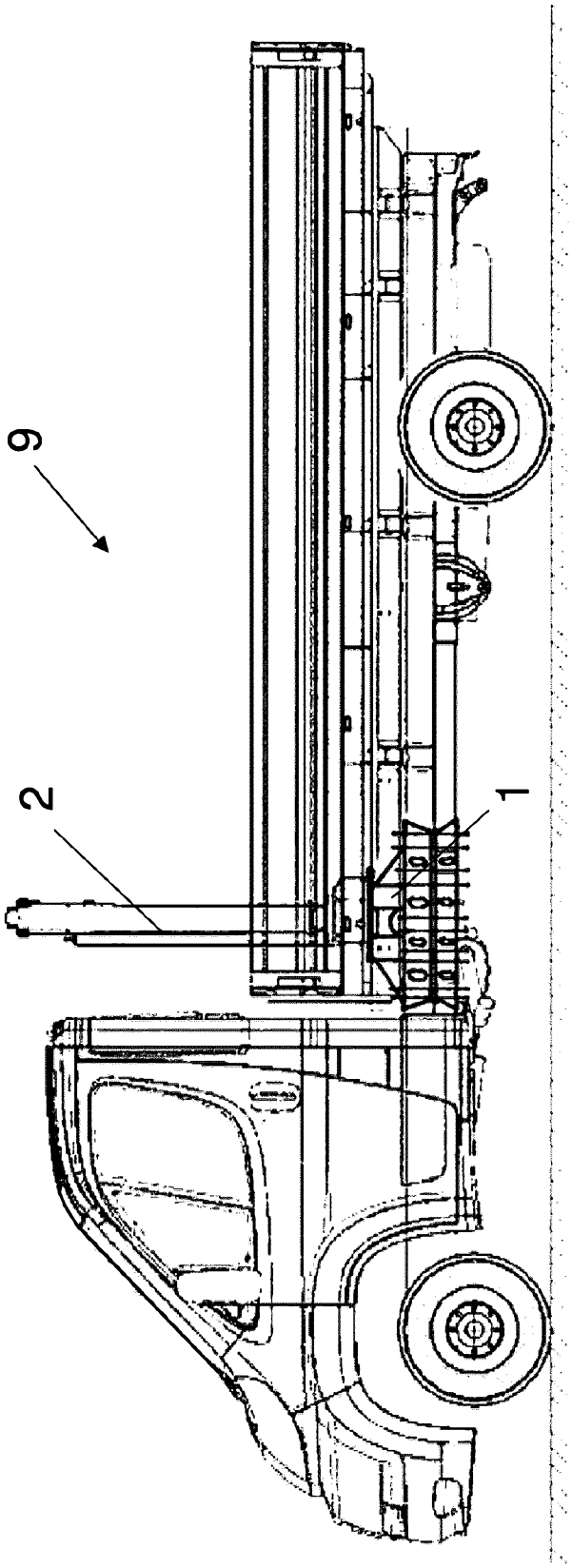


Fig. 9