

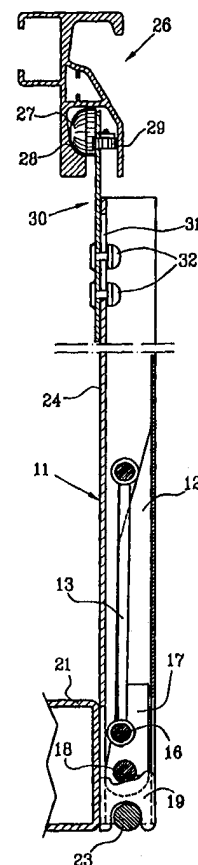


INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(21) International Application Number: PCT/SE97/02042 (22) International Filing Date: 5 December 1997 (05.12.97) (30) Priority Data: 9604504-2 5 December 1996 (05.12.96) SE (71)(72) Applicant and Inventor: ROSEN, Göran [SE/SE]; Jakob- sbergs Säteri, S-640 50 Björmlunda (SE). (74) Agent: GÖTEBORGS PATENTBYRÅ AB; Sjöporten 4, S-417 64 Göteborg (SE).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>In English translation (filed in Swedish).</i>

(54) Title: STANCHION FOR VEHICLE LOAD PLATFORM**(57) Abstract**

Stanchion for a vehicle load platform (21) which stanchion is releasably connected to the platform at its lower end and is connected to a frame part (26) for carrying a weather protection. The stanchion (11) is fixable to a stanchion holder (19) at the platform edge (20) via a manoeuvring arm (12) in the form of a double armed lever (12a, 12b) which is pivotably mounted in the stanchion (11) by means of a shaft journal (14). At the one end of the manoeuvring arm (12) a supporting member (18) is connected, which member is arranged to cooperate with the stanchion holder (19). The stanchion is provided with a locking device (23) at its lower end, which device is designed to be brought out of or into connection, respectively, with a locking surface (22) by means of the manoeuvring arm at the stanchion holder at a displacement of the stanchion in its longitudinal direction. The pivoting shaft (16) of the lever (12) is mounted at one end of a link (13). The opposite end of the link is mounted in said shaft journal (14). The locking surface of the stanchion holder (19) is designed as a downwardly open fork (22) to cooperate with the locking device (23) of the stanchion (11). The locking device (23) is fixedly arranged between the side flanges of the U-shaped stanchion.



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STANCHION FOR VEHICLE LOAD PLATFORM

The present invention relates to a stanchion for a vehicle load platform which stanchion is releasably connected to the platform at its lower end and is connected to a frame part being a part of a stand for carrying a weather protection at its other, upper end; the stanchion is fixable to a stanchion holder at the platform edge via a manoeuvring arm in the form of a double armed lever which is pivotably mounted in the stanchion by means of a shaft journal; at the one end of the manoeuvring arm a supporting member is connected, which member is arranged to cooperate with the stanchion holder; the stanchion is provided with a locking device at its lower end, which device is designed to be brought out of or into connection, respectively, with a locking surface by means of the manoeuvring arm at the stanchion holder at a displacement of the stanchion in its longitudinal direction.

Background of the invention and the problem to be solved

Displaceable stanchions for vehicle platforms of the type described above are previously known from EP-A2-0 335 427. At this embodiment the platform edge is designed with a track extending along said edge, against which track the supporting member of the stanchion rests and along which track the stanchion can be displaced. A disadvantage using such a construction is that it does not stand major loads from the inside of the platform. If the goods on the platform should be displaced against the stanchion at a transport, no larger forces are needed to bring the supporting member to be released from the track and to straighten the hook which catches underneath the platform edge.

The object of the invention and the solution of the problem

The object of the invention is to obtain:

- * a simple and reliable construction;
- * which withstand high side loads, both from the inside as well as from the outside
- * which in its active, vertical position obtains support from the platform edge, and
- * the manoeuvring arm of which adopts a stable, safe position.

These tasks have been solved by means of the present invention as at least the lower part of the stanchion is made U-shaped, that the pivoting shaft of the lever is mounted at one end of

a link, that the opposite end of the link is mounted in said shaft journal, that the locking surface of the stanchion holder is designed as a downwardly open fork to cooperate with the locking device of the stanchion, and that the locking device is fixedly arranged between the side parts of the U-shaped stanchion.

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Description of the drawings

The invention will be described more in detail in the following with reference to the accompanying drawing which shows one embodiment.

- 10 FIG. 1 shows a cross-section along the line I-I of Fig. 3 of a stanchion according to the invention, having a hinged manoeuvring arm,
FIG. 2 is a cross-section analogous to that of Fig. 1 of a stanchion having a downwardly hinged manoeuvring arm,
FIG. 3 shows a front view of a stanchion according to Fig. 1,
15 FIG. 4 is a cross-section according to line IV-IV of Fig. 2, and
FIG. 5 is a cross-section according to line V-V of Fig. 2.

Description of an embodying example

- The stanchion of the invention, having been denoted with 11 in the drawings, is provided
20 with a pivotable manoeuvring arm 12 at its lower end, which arm is articulately connected to the stanchion via a link 13. One of the upper flexible axles of the link is a shaft journal 14 connected the side flanges 15 of the stanchion 11 while the lower flexible axle of the link is a shaft journal 16 affixed to the side legs 17 of the manoeuvring arm. At some distance from the shaft journal 16 there is a supporting member 18 arranged between the legs 17, which
25 member is designed to cooperate with the upper side 33 of a stanchion holder 19 which is fixedly arranged at the side edge 20 of a load platform 21. At the underside of the stanchion holder 19 there is arranged a concave locking surface 22 which is intended to cooperate with a locking device 23 being fixedly at the lower end of the stanchion between the flanges 15.
In the rear part 24 of the stanchion an opening 25 is provided at the lower end thereof,
30 through which opening the stanchion holder 19 can be brought when the stanchion is applied to the platform edge 20. The upper side 33 of the stanchion holder has an inclined plane relative to the side edge 20 of the platform, which plane transcends into a rounded edge

towards the front edge. This inclined upper side is intended to provide a breaking action to the supporting member 18 and thereby the manoeuvring arm 12.

At the upper end thereof the stanchion is suspended into a frame part 26 of stand (not shown) which frame part is intended to carry a weather protection, e.g., a cover. The suspension means 30 of the stanchion 11 consists of a roll 27 which is movable along a guiding rail 28 at the lower end part of the frame part 26. Two supporting rolls 29 keep the roll 27 in place in the guiding rail 28. The suspension means 30 of the stanchion 11 is movably connected to the upper part of the stanchion, which has been made possible as the connecting means between the upper parts of the suspension means and the stanchion allows a relative movement between the parts. This has been obtained by means of a slot 31 of the rear part 24 which slot is passed through by two bolts 32 or the similar.

The stanchion is applied against the platform 21 having the manoeuvring arm 12 in the downwardly directed position shown in Fig. 2. In this position the stanchion is suspended in the frame part 26 and can be swung out from the edge 20 of the platform and be displaced along the guiding rail 28 to a parking position where the stanchion is out of its way during loading. If the stanchion should be attached to the platform edge it will be so displaced that the opening 25 of the lower part of the stanchion will be placed right opposite to the stanchion holder 19, in order to allow this to be brought through the opening. The supporting member 18 of the manoeuvring arm will thereby rest upon the upper side of the stanchion holder and by swinging the manoeuvring arm in the direction towards the stanchion this will raise in such a way that the locking means 23 is brought into the concave locking surface 22 on the underneath side of the stanchion holder 19.

The displacement movement of the stanchion in its longitudinal direction does not affect the suspension means 30 as the slot 31 allows the relative displacement movement.

In order to obtain a resting position of the upraised manoeuvring arm 12 the shaft journal 16 is arranged within a vertical centre line through the supporting member 18 and the locking device 23 when the manoeuvring arm is in its upright position according to Fig. 1. The centre of the shaft journal 16 has then passed over and by the dead point and will thus take a

stable position.

CLAIMS

1. A stanchion for a vehicle load platform (21)

a. which stanchion is releasably connected to the platform at its lower end and is connected to a frame part (26) for carrying a weather protection,

5 b. the stanchion (11) is fixable to a stanchion holder (19) at the platform edge (20) via a manoeuvring arm (12) in the form of a double armed lever (12a, 12b) which is pivotably mounted in the stanchion (11) by means of a shaft journal (14),

c. at the one end of the manoeuvring arm (12) a supporting member (18) is connected, which member is arranged to cooperate with the stanchion holder (19),

10 d. the stanchion is provided with a locking device (23) at its lower end, which device is designed to be brought out of or into connection, respectively, with a locking surface (22) by means of the manoeuvring arm at the stanchion holder at a displacement of the stanchion in its longitudinal direction,

e. **characterized in**

15 f. that at least the lower part of the stanchion (11) is made U-shaped,

g. that the pivoting shaft (16) of the lever (12) is mounted at one end of a link (13),

h. that the opposite end of the link is mounted in said shaft journal (14),

i. that the locking surface of the stanchion holder (19) is designed as a downwardly open fork (22) to cooperate with the locking device (23) of the stanchion (11), and

20 j. that the locking device (23) is fixedly arranged between the side flanges of the U-shaped stanchion.

2. Stanchion according to claim 1,

characterized in

25 that the upper side of the stanchion holder (19) cooperating with its supporting member (18) is designed with a supporting surface (33) being inclined in the direction downwardly towards the platform edge (20).

3. Stanchion according to claim 2,

30 **characterized in**

that the supporting surface (33) is designed to transcend into an elevated riblike part at the end opposite the platform edge.

4. Stanchion according to claim 1,

characterized in

that the centre of the pivoting axle (16) of the manoeuvring arm (12) is situated within a line between the centre of the shaft journal (14) and the centre of the supporting member

5 (18) when the arm is in an upright position.

5. Stanchion according to claim 1,

characterized in

that the stanchion holder (19) is arranged at or below the platform edge (20) so that the

10 stanchion (11) is supported thereby in an upright position.

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FIG.1

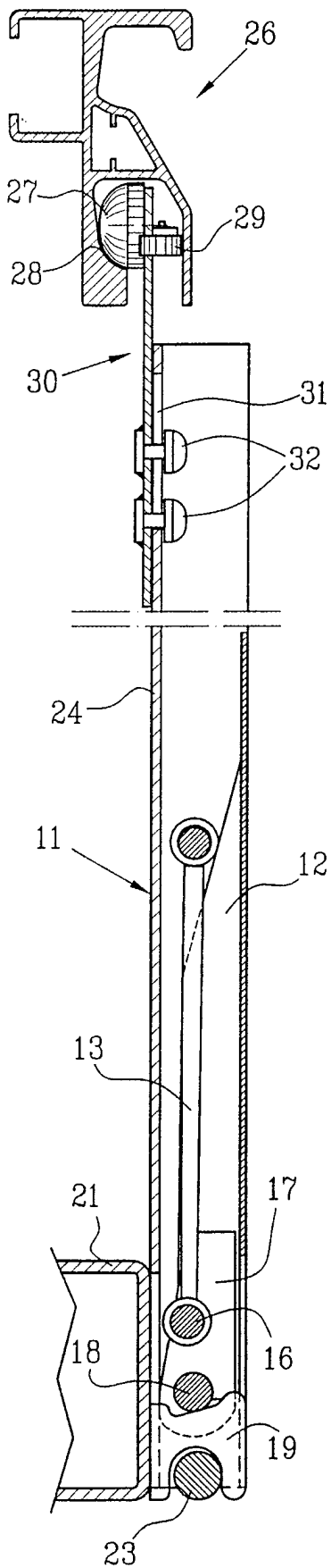
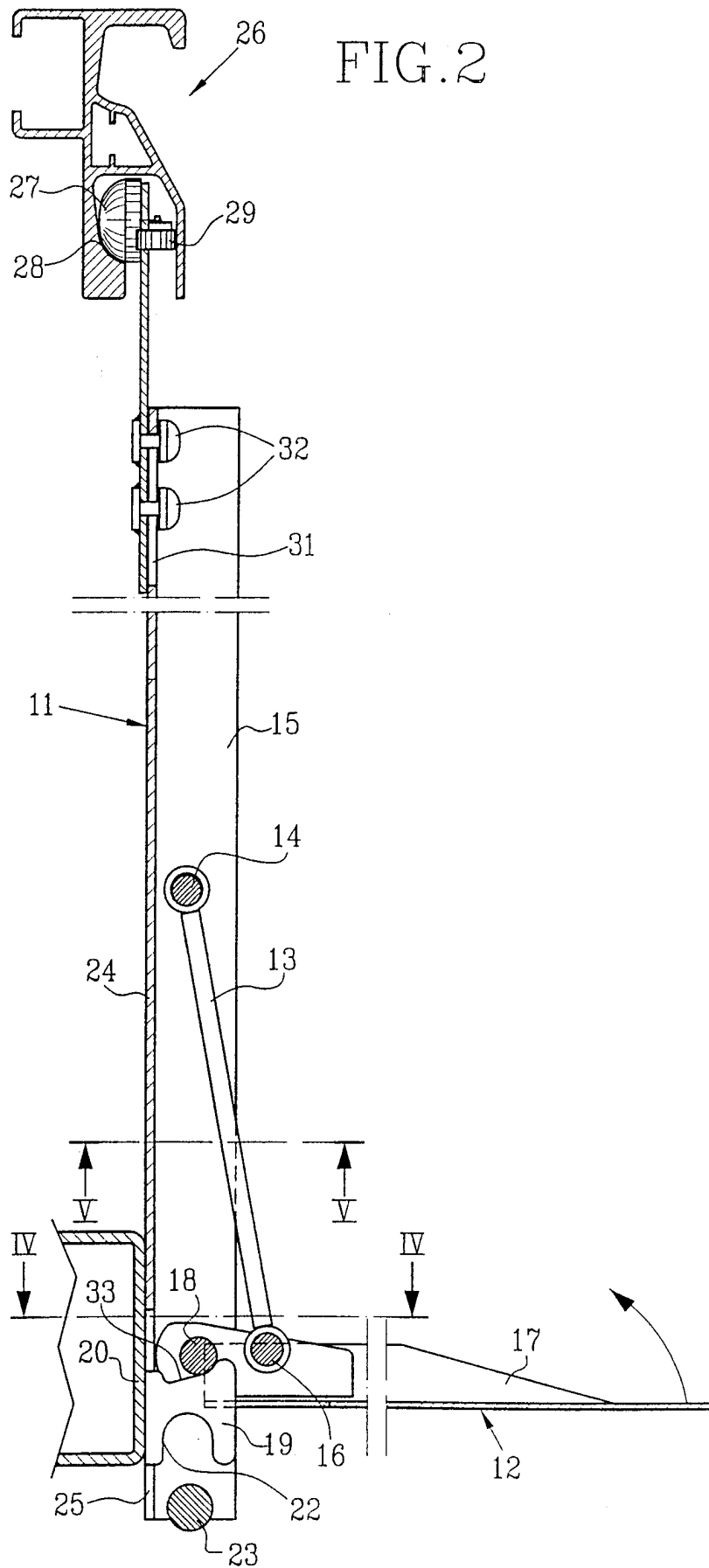


FIG.2



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FIG. 3

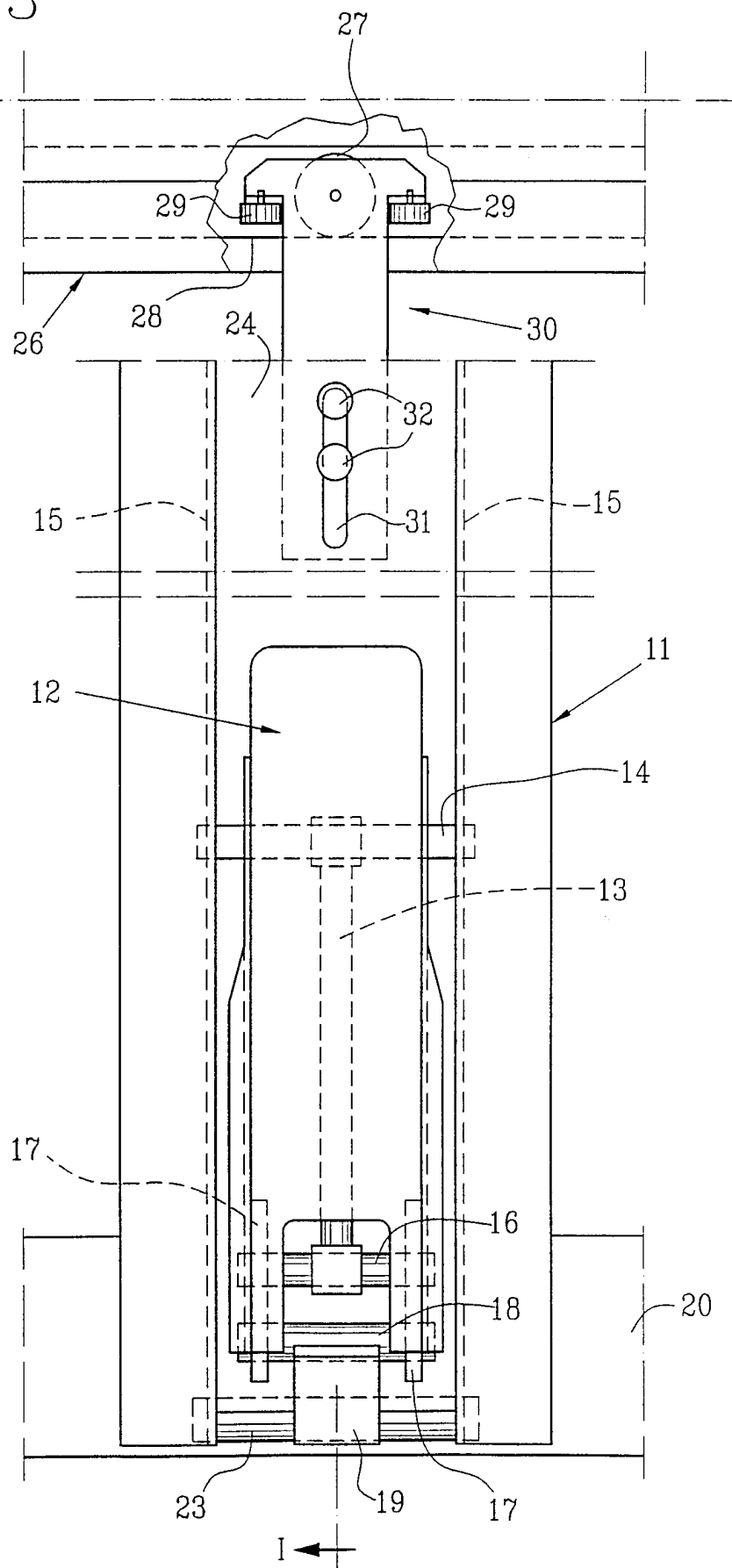


FIG. 4

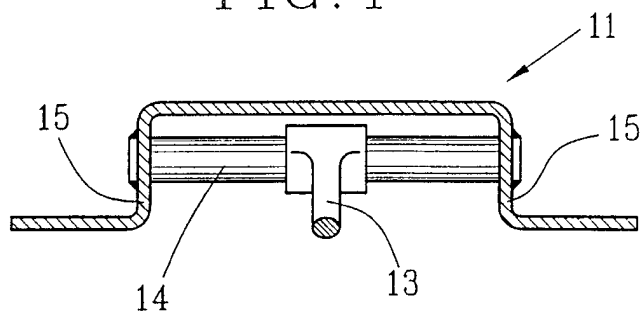
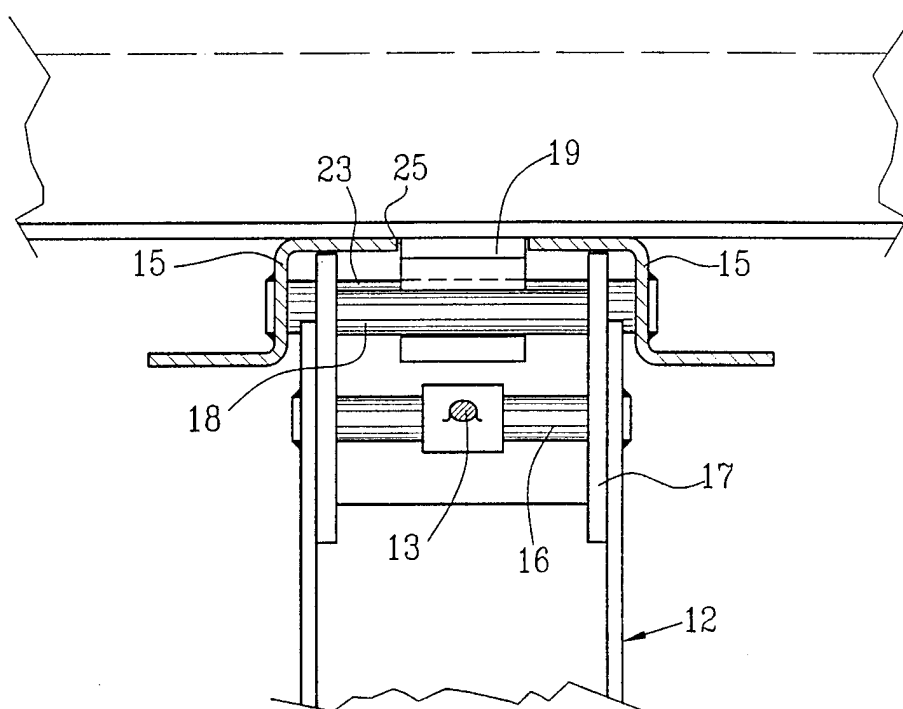


FIG. 5



INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 97/02042

A. CLASSIFICATION OF SUBJECT MATTER

IPC6: B62D 33/02, B60J 7/10, B60P 7/04

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)

IPC6: B62D, B60J, B60P

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

SE,DK,FI,NO classes as above

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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A	WO 9200869 A1 (ROSEN, GÖRAN), 23 January 1992 (23.01.92) --	1-5
A	EP 0335427 A2 (VAN HOOL), 4 October 1989 (04.10.89) --	1-5
A	FR 2523906 A1 (TRAILOR SA), 30 Sept 1983 (30.09.83) --	1-5
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