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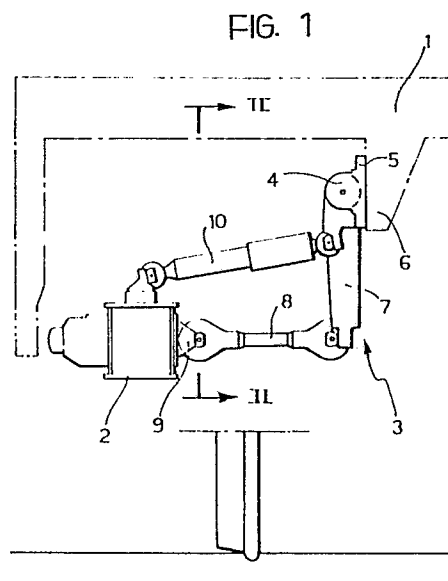
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54 **A transverse suspension for railway vehicles.**

57 A transverse suspension for railway vehicles a torsion bar (4) mounted on the body (1) or on the bogie and connected to the bogie (2) or to the body (1) respectively by means of a shaft (8) which acts on a lever (7) keyed to the torsion bar (4).



Description

A transverse suspension for railway vehicles

The present invention relates to a transverse suspension for railway vehicles.

Conventionally the transverse suspension of a railway vehicle is usually constituted by devices with helical or rubber springs which act in parallel with the secondary suspension between the structure of each bogie and the body of the vehicle.

These solutions normally involve relative sliding between the body and the bogie which can give rise to slackness due to wear and to the transmission of vibrations.

In order to avoid this problem, the subject of the present invention is a suspension for railway vehicles, characterised in that it includes a torsion bar mounted on one of the body and the bogie and means for connecting the torsion bar to the other of the bogie and the body.

The advantage of this solution lies in the fact that in all the relative body-bogie movements, the transverse forces between the body and the bogie are applied without causing any relative sliding with the problems which could result therefrom.

According to a preferred embodiment of the invention, the torsion bar is arranged parallel to the longitudinal axis of the vehicle with its ends fitted tightly into attachments fixed to the body, and the connection means comprise a substantially vertical lever with one end keyed to the torsion bar, and a shaft arranged substantially parallel to the transverse axis of the vehicle with its ends articulated to the frame of the bogie and to the other end of the lever respectively.

The invention will now be described in detail with reference to the appended drawings provided purely by way of non-limiting example, in which:

Figure 1 is a schematic cross-section of part of a railway vehicle provided with a transverse suspension according to the invention, and

Figure 2 is a section taken on the line II-II of Figure 1.

With reference to the drawings, the lower part of the body of a railway vehicle is schematically indicated 1 and a part of the structure of one of its bogies is indicated 2, a transverse suspension 3 according to the invention being interposed between them. It should be noted that two suspensions 3 are normally associated with each of the vehicle bogies and are situated symmetrically on opposite sides close to the sides of the body 1.

The transverse suspension 3 comprises essentially a torsion bar 4 arranged parallel to the longitudinal axis of the vehicle with its ends tightly fitted into a pair of attachments 5 carried by a bracket 6 of the body 1. The upper end of a lever 7 is keyed to the torsion bar 4 and is arranged substantially vertically, its lower end being articulated to one end of a shaft 8 which is arranged substantially parallel to the transverse axis of the vehicle. The opposite end of the shaft 8 is articulated at 9 to the frame of the bogie 2.

In operation, the relative transverse movements

between the body 1 and the bogie 2 are resiliently opposed by corresponding torsional deformations of the bar 4, achieved by the transmission constituted by the lever 7 and the shaft 8.

The suspension 3 may also be equipped with a transverse shock-absorber 10 interposed between the body 1 and the frame of the bogie 2 as shown in Figure 1.

Claims

1. A transverse suspension for railway vehicles, including a bogie and a body, characterised in that it includes a torsion bar (4) mounted on one of the body and the bogie (1, 2) and means (7, 8) for connecting the torsion bar (4) to the other of the bogie and the body (2, 1).

2. A suspension according to Claim 1, characterised in that the torsion bar (4) is arranged parallel to the longitudinal axis of the vehicle with its ends fitted tightly into attachments (5) fixed to the body (1), and in that the connection means comprise a substantially vertical lever (7) with one end keyed to the central part of the torsion bar (4) and a shaft (8) arranged substantially parallel to the transverse axis of the vehicle with its ends articulated to the chassis of the bogie (2) and to the other end of the lever (7) respectively.

FIG. 1

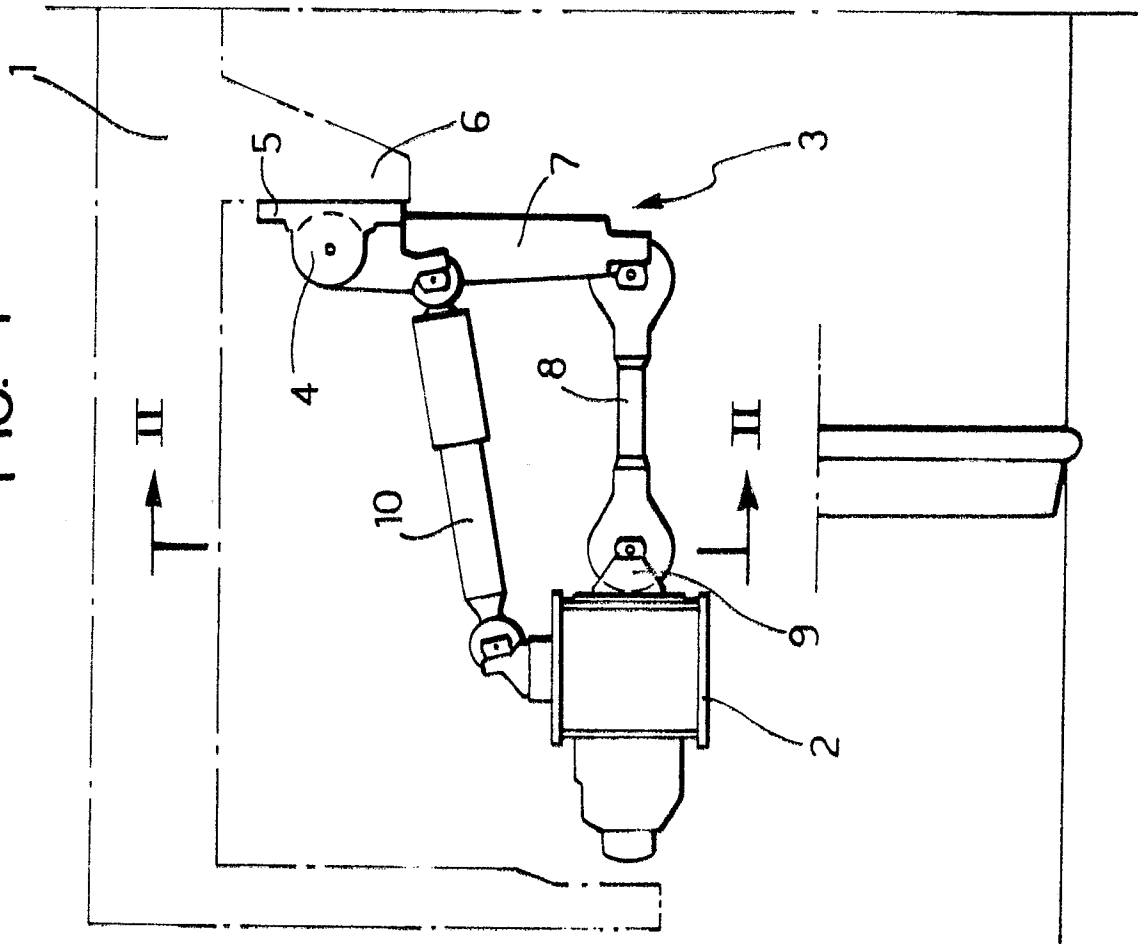


FIG. 2

