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(54) **Hauling bogie for railway vehicles**

Mitnehmerwagen für Schienenfahrzeuge

Bogie entraîneur pour véhicules ferroviaires

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(56) References cited:

DE-A- 2 204 954

DE-B- 1 780 628

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Description

This invention relates to a hauling bogie as per the preamble of claim 1, the evident purpose of which is to constitute an element or device capable of allowing to haul railway vehicles, related to the railway shaft and causing, as a consequence of it, the vehicle or assembly of vehicles displacement.

FIELD OF THE INVENTION

This invention will find application in the industry devoted to the manufacture of material for railways.

RELATED ART

It is known, at present, the existence of different machines and devices which are capable of being constituted as a tractor element of railway vehicle units, which are used in a conventional way in railway installations in order to compose different railway groupings, or in order to allow several railway units to be moved for being submitted to overhaul.

At present, these machines are generally fed by gasoil, although there are also machines of this type being moved through electric drive, being of substantially reduced dimensions as compared with conventional locos for hauling compositions of railway vehicles, and that, broadly speaking, are known as shunting engines.

Nevertheless, when it is necessary to move one unit or a composition of units, and these machines are not available, some tractors are to be used made suitable for running on the rails of railways, which means a substantial waste of time when the hauled vehicles are to be displaced from a composition site to a fixed location, in which the tractor must be incorporated again to carry out a new coupling to the vehicle in the desired composition.

The evident solution to this type of problems would be to rely in a hauling bogie for railway vehicles which could allow to carry out this kind of operations without the absolute necessity to use vehicles which are secondary to the railway vehicles themselves or compositions of railway vehicles to be grouped.

Hauling bogies for this purpose have been described in DE-A-1 780 628 and DE-A-2 204 954 on which the preamble of claim 1 is based.

SUMMARY OF THE INVENTION

The hauling bogie for railway vehicles as proposed by the invention constitutes per se an evident solution to the present problems on this subject, having its application in the movement of railway vehicles for shunting and maintenance purposes, independently from the conventional rail traction.

In a more definite way, the hauling bogie for railway

vehicles which is the object of the present invention, can be laid on every type of rail where it is necessary to move railway vehicles - either for maintenance operations or shunting.

The hauling bogie for railway vehicles consists of a hauling bogie or carriage which, when idle, is to be placed under the railway vehicle shaft, and by means of a hydraulic station two rollers are adapted through wheel flange, so making the railway shaft wheel allied to the hauling bogie itself, which, in this position, travels on the rail wing.

In synthesis, once the railway vehicle to be moved, or the composition of railway vehicles to be moved, has been parked, the idle hauling bogie is moved until finding one of the parked vehicle - shafts.

By the action of a hydraulic station incorporated in the bogie itself, a set of pistons, also hydraulic, lift articulated arms provided with rollers which contact the wheel through a flange.

Later, the brake of the vehicle or composition of vehicles to be moved is released, and the traction motors mounted on the bogie are activated.

Since the vehicle wheel cannot be disengaged from the rollers, the vehicle moves together with the hauling bogie.

Once the vehicle has been placed in the corresponding site, it is braked and the hydraulic station is disabled so that the railway brake is freed from the rollers, and the hauling bogie is then withdrawn.

This operation can be repeated so many times as it will be necessary, until placing the shaft in the required position, having an essential condition shown in the useful hauling length, which is to be equal or greater than the equality between railway shafts or railway bogies.

If the installation is longer, this means a smaller number of operations.

The features of the invention are shown in the characterizing part of claim 1.

BRIEF DESCRIPTION OF THE DRAWINGS

In order to complement this description and to aid to a better understanding of the features of the invention, the accompanying drawings, which are part of this specification, show in an illustrative but non limitative manner, the following:

Fig. 1 shows a side elevational view the hauling bogies for - railway vehicles, which is the object of the invention.

Fig. 2 shows a plan view of the object illustrated in Fig.1.

Fig. 3 shows, lastly, a front elevational view of the object illustrated in the preceding figures.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

From these views, it can be seen how the hauling bogie for - railway vehicles as proposed by the invention is constituted starting from the hauling bogie itself. To carry out a vehicle or a composition of vehicles displacement, the hauling bogie is to be situated idle until finding one of the shafts (2) on the parked railway vehicles.

A hydraulic station (5) located on the bogie itself drives hydraulic pistons carried by the own bogie. These pistons lift articulated arms provided with rollers (3) which contact the wheel (2) of the railway vehicle.

The contact of the wheel (2) with the rollers (3) is through a flange.

Later, the brake of the vehicle to be moved is released, the traction motors (4) carried by the hauling bogie are activated, and as the railway vehicle wheel (2) cannot be disengaged from the rollers (3) located on the bogie, the railway vehicle moves jointly with the hauling bogie.

Once the railway vehicle has been situated at the appropriate site, it brakes and then the hydraulic station (5) is disabled, so that the railway shaft (2) is freed from the rollers (3) carried by the bogie.

In short, the hauling bogie for railway vehicles will run on a rail (1), exactly on its inner part, acting on the shaft of a railway vehicle (2), by means of rollers (3) carried by the own hauling bogie which has traction wheels (4), a hydraulic control (5) and traction motors (6) acting to operate the bogie.

Lastly, the hauling bogie has an appropriate electric power supply (7) and corresponding rail anchoring elements (8).

It is not considered necessary to extend more this description for an expert in the art to understand the scope of the invention and the advantages derived from it.

The materials, shape, size and arrangement of the components will be open to variation, provided that it does not imply any alteration to the essence of the invention.

The terms under which this specification has been described should be always taken in an ample and non limitative sense.

Claims

1. A hauling bogie for railway vehicles, of those destined to allow a railway vehicle or a composition of railway vehicles to move, wherefor the idle bogie is placed until being coupled to a railway shaft (2) located on the parked vehicle or vehicles and to be moved, said hauling bogie comprising traction wheels (4) running on the inner part of rails (1) adapted to rail anchoring elements (8), as well as articulated arms that can be operated to cause roll-

ers (3) mounted thereto to contact the flange of the wheels (2) of the railway vehicle, characterized in that the hauling bogie further includes an hydraulic station (5) mounted thereto, hydraulic pistons that are driven by said hydraulic station and act said articulated arms so that said rollers (3) contact the flange of the wheels (2) of the railway vehicle, traction motors (6) carried by the hauling bogie, which are activated upon releasing the brake of the railway vehicle to be moved once the rollers (3) have contacted the flange of the wheels (2) of said vehicle, and an electric power unit (7) to energize each traction motor (6), which engages that part of the corresponding rail (1) located between the foot and the head thereof.

Patentansprüche

1. Mitnehmerwagen für Schienenfahrzeuge, der für die Bewegung eines Schienenfahrzeugs oder Schienenfahrzeugverbands bestimmt ist, wofür der leere Wagen gelegt wird bis er an eine an den zu bewegendenden, stationierten Schienenfahrzeug oder -fahrzeugen befindlichen Achse (2) angekoppelt ist, wobei besagter Mitnehmerwagen über Antriebsrädern (4), die auf der Innenseite der Schienen (1), die an Schienenverankerungselemente (8) angepaßt sind, laufen, sowie Gelenkarme, die so betätigt werden können, daß die an ihnen angebrachten Rollen (3) Kontakt mit den Spurkränzen der Räder (2) des Schienenfahrzeuges machen, verfügt, dadurch gekennzeichnet, daß der Mitnehmerwagen außerdem eine darin eingebaute hydraulische Anlage (5), hydraulische Kolben, die durch die hydraulische Anlage betätigt werden und auf die Gelenkarme wirken, so daß besagte Rollen (3) mit den Spurkränzen der Räder (2) des Schienenfahrzeugs in Kontakt kommen, Antriebsmotoren (6), die von dem Mitnehmerwagen getragen sind und die aktiviert werden, wenn die Bremse des zu bewegendenden Schienenfahrzeugs gelöst wird, nachdem die Rollen (3) Kontakt mit den Spurkränzen der Räder (2) besagten Fahrzeugs aufgenommen haben, und eine elektrische Versorgungseinheit (7) zum Ansteuern jedes Antriebsmotors (6), die auf den zwischen dem Fuß und Kopf befindlichen Bereich der jeweiligen Schiene (1) aufgebracht ist, beinhaltet.

Revendications

1. Bogie entraîneur pour véhicules ferroviaires destiné à permettre la mobilisation d'un véhicule ferroviaire ou d'une composition de véhicules ferroviaires, ce pour quoi on place le bogie à vide jusqu'à l'accoupler à un axe ferroviaire (2) placé sur le ou les véhicules stationnés et qui doivent être mobilisés, ledit bogie entraîneur comprenant des roues de traction

(4) qui se déplacent sur la partie intérieure de rails
(1) adaptés à des éléments (8) d'ancrage de rail,
ainsi que des bras articulés pouvant être actionnés
pour faire que des rouleaux (3) montés sur eux éta-
blissent un contact avec le boudin des roues (2) du 5
véhicule ferroviaire, caractérisé par ce que le bogie
entraîneur inclut, en outre, une station hydraulique
(5) montée sur lui, des pistons hydrauliques action-
nés par cette station hydraulique et qui agissent sur
ces bras articulés de sorte que ces rouleaux (3) 10
fassent contact avec le boudin des roues (2) du
véhicule ferroviaire, moteurs de traction (6) portés
par le bogie entraîneur, qui sont activés en lâchant
le frein du véhicule ferroviaire à mobiliser une fois
que les rouleaux (3) ont fait contact avec le boudin 15
des roues (2) du dit véhicule, et une unité d'alimen-
tation électrique (7) pour exciter chaque moteur de
traction (6), qui s'applique à la partie du rail corres-
pondant (1) placée entre le pied et la tête de celui-
ci. 20

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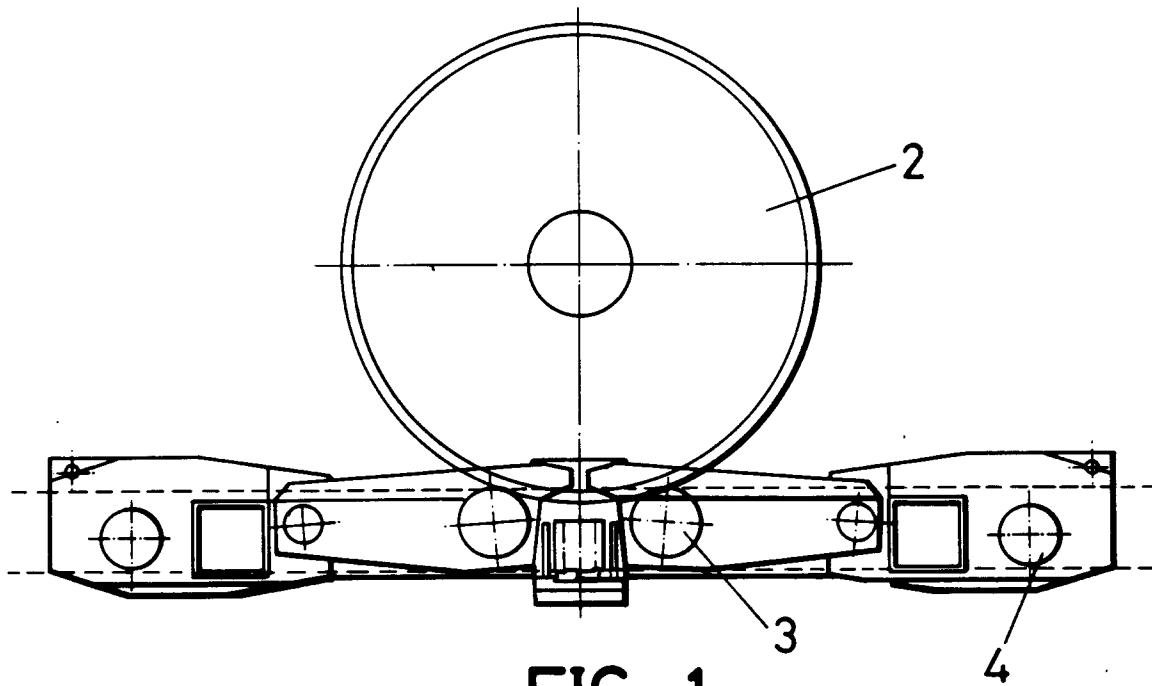


FIG.-1

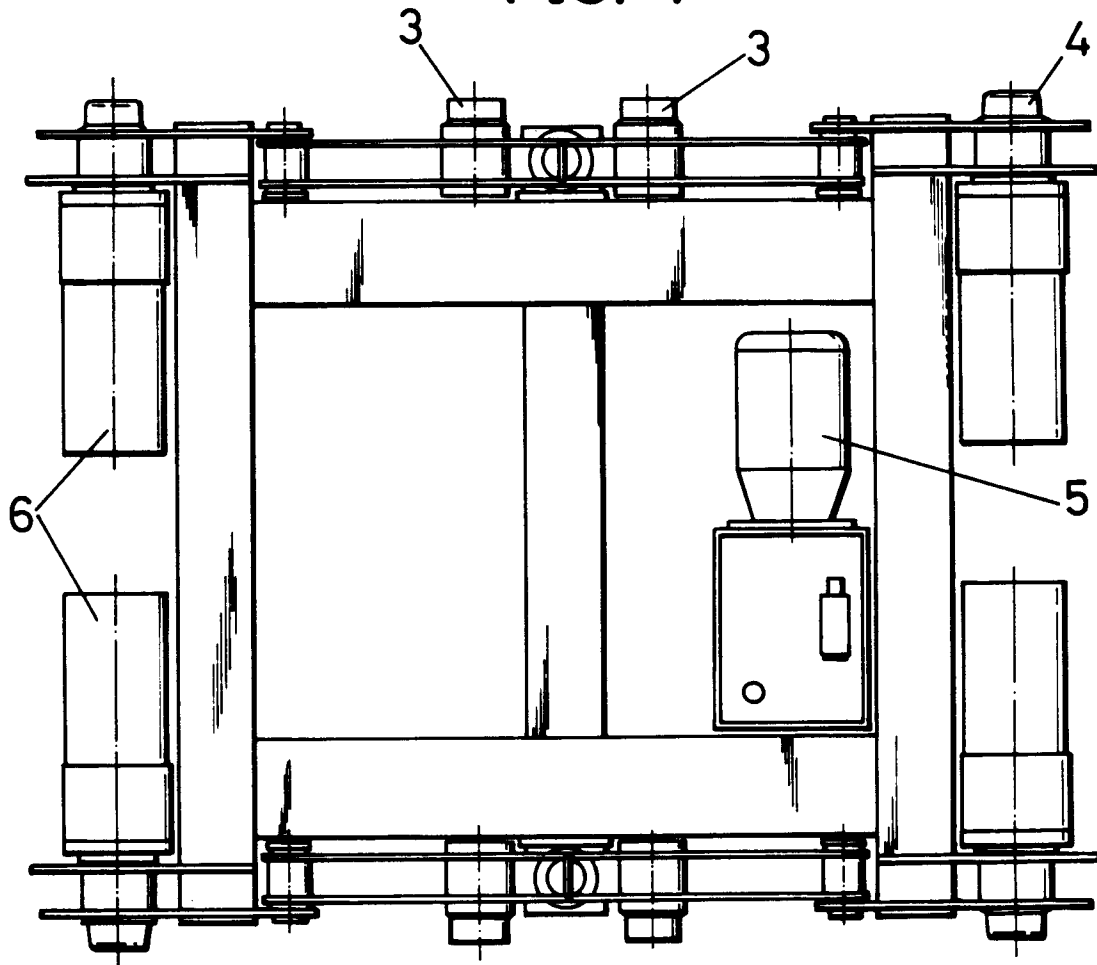


FIG.-2

