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MEANS FOR laterally ALIGNING TRACKS

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Fig. 1



Fig. 2

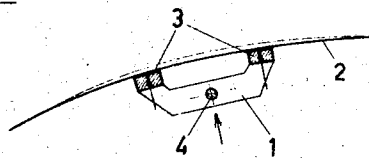


Fig. 3

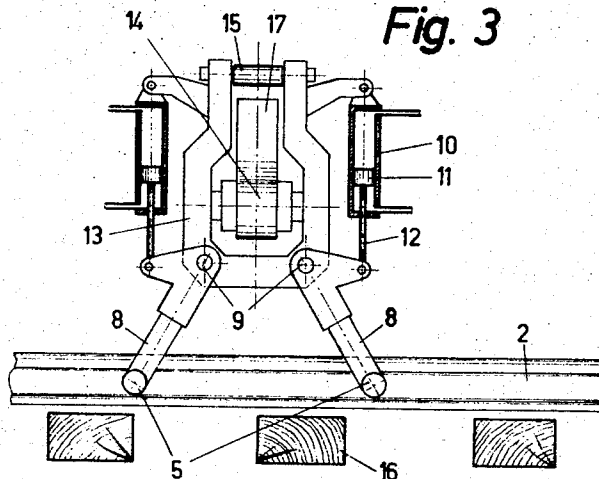
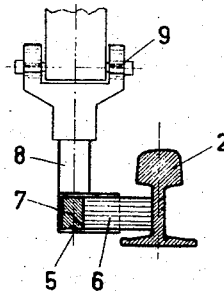


Fig. 4



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## MEANS FOR Laterally ALIGNING TRACKS

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5 Claims. (Cl. 104-8)

The present invention relates to means for laterally aligning tracks comprising at least one aligning tool which can be forced laterally against one of the rails of the track and which is adjustable transversely to the longitudinal track axis.

With the conventional devices of this design there always obtains the danger that such a tool will produce a bulge in the rail by its member exerting pressure against the said rail in the event that the latter exercises major resistance to a displacement in the horizontal plane, e.g. owing to the friction caused by the anchoring in the ballast. Such devices may deform the rail in an undesirable manner since they are forced against the rail to be laterally displaced only at a single point. To the extent that such deformations are permanent, they constitute, owing to the discontinuity of the alignment, a considerable danger to traffic; in so far as they are of an elastic nature, they prevent a truly accurate correction of the alignment of the track in the lateral direction because the track placed in the precalculated position will forthwith elastically return to its original position.

The present invention eliminates this drawback and relates to means for laterally aligning tracks having at least one aligning tool which can be forced against one of the rails of a track and which is adjustable transversely to the longitudinal axis of the track, characterized by the fact that the aligning tool is provided with at least two members exerting pressure which are spaced from each other in the longitudinal direction of the track and which are designed to be forced against the rail.

An embodiment is explained in greater detail in conjunction with FIGS. 1 through 4 of the attached drawing in which:

FIGS. 1 and 2 are diagrammatic views of the mode of operation of the conventional device and, respectively, of the means according to the present invention;

FIG. 3 is a side view of a further embodiment of the present means; and

FIG. 4 is a longitudinal section of an embodiment of a pressure exerting member in means according to FIG. 3.

As seen in the operational diagram of FIG. 1, a device of the conventional type which acts on only one point can only too easily cause deformation of the rail in the shape of a local bulge.

With the embodiment of the present invention according to FIG. 2, this danger is eliminated. The common holder 1 for the two members 3 exerting the pressure in the direction of the arrow on the rail 2 is freely pivoted to a hinge 4 in the horizontal direction. The pressure exerted by the dressing tool via the axis of the pivot 4 in any manner and directed transversely to the rail 2 in the direction of the arrow, by means of which the rail 2 and, along with it, the entire track is to be laterally displaced, is positively equally distributed between the two points of the rail 2 which the two members 3 exerting the pressure engage. The sufficiently rigid rail 2 thus preserves its continuous alignment.

Owing to the fact that the pressure exerting members are located at a more or less wide distance from each other, the area of the rail subjected to the action of the dressing tool on both sides extends beyond the point that should be displaced into the precalculated position and the track can therefore not be overstressed and deformed at this point.

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Various embodiments of such members of the dressing tool which are spaced from each other in the longitudinal direction of the rail are naturally possible. It is of advantage to arrange these members on one or several adjustable holders since this will ensure an adequate and uniform distribution of the pressure exerted on the rail if, by way of example, the members are arranged on either end of a holder which is freely swivelable in a substantially horizontal plane about a hinge with a vertical pivot provided substantially at the centre in the longitudinal direction. Thanks to this arrangement, both members will always become jointly operative, thus efficiently dividing the pressure exerted.

The members exerting the pressure may also be arranged so as to be adjustable in height so that they are placed into operative position only when required. This is of importance particularly when the aligning tools are arranged on a wheel frame and must be capable of being temporarily withdrawn into the frame when the machine moves from one point to another. By way of example, the members may then be arranged on the free ends of holders which are e.g. swivelably movable in the vertical direction about the wheel frame of an aligning machine or the like.

FIG. 3 is a lateral view of an arrangement in which the members exerting the pressure visible in greater detail also in FIG. 4 comprise a block 6 formed of wood, plastic or some other suitable material supported in a holder 5, the said block resting against an elastic insert 7 formed of hard rubber or the like on the inside of the said holder 5. The said members are arranged at both ends of holders 8 which are pivoted to hinges 9 so as to be swivelable in the vertical plane and can be controlled by the device comprising the cylinders 10, the pistons 11 and the piston-rods 12 in order to place the pressure exerting members into operative or inoperative position. In their position of rest, they are located within the wheel frame.

The device according to FIGS. 3 and 4 is mounted on the wheel frame 17 of a rail aligning machine; the supporting frame 13 for the aligning tools and their swivelling device itself may be pivoted to a hinge 14. Outward or inward movement of the hinge bolt 15 of this supporting frame 13 by means of an adjusting device of any suitable kind (not shown) positively moves the pressure exerting members in a direction transverse to the longitudinal axis of the track and operates so that they can laterally displace the rails 2 by the desired amount including the transverse ties 16 attached to them.

If the rail aligning machine of whose wheel frame only the portion 17 accommodating the hinge 14 is shown in FIG. 3 is driven to a new site, the holders 8 of the pressure exerting members may be swung up and placed inside the frame.

What is claimed is:

1. Apparatus for laterally aligning rails which comprises at least one aligning tool which, in use, is forced laterally against only one of the rails of a track, said aligning tool being provided with at least two longitudinally spaced pressure exerting members, and wherein said pressure exerting members (3) are attached to a common driver holder (1, 13) which is freely swivelable in a substantially horizontal plane about a hinge (4) arranged substantially in the center of said holder for carrying out simultaneously a lateral movement of the said spaced pressure exerting members (3) up to the said one rail (2) under the action of a common power source and for distributing between the said spaced members the pressure exerted on the said rail.

2. Apparatus according to claim 1, characterized in

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that the pressure exerting members are arranged for contacting a rail at a stem portion between the foot and head of the rail (Figure 4).

3. Apparatus according to claim 1, characterized in that the pressure exerting members are provided with a block (6), preferably changeable, and made of a material which is not too hard but which is resistant to compression.

4. Apparatus according to claim 1, characterized in that the pressure exerting members are arranged on free

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ends of holders which are movable in a vertical plane, so as to be adjustable in height.

5. Apparatus according to claim 4, characterized in that the holders are arranged on the wheel frame of a rail vehicle.

No references cited.

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