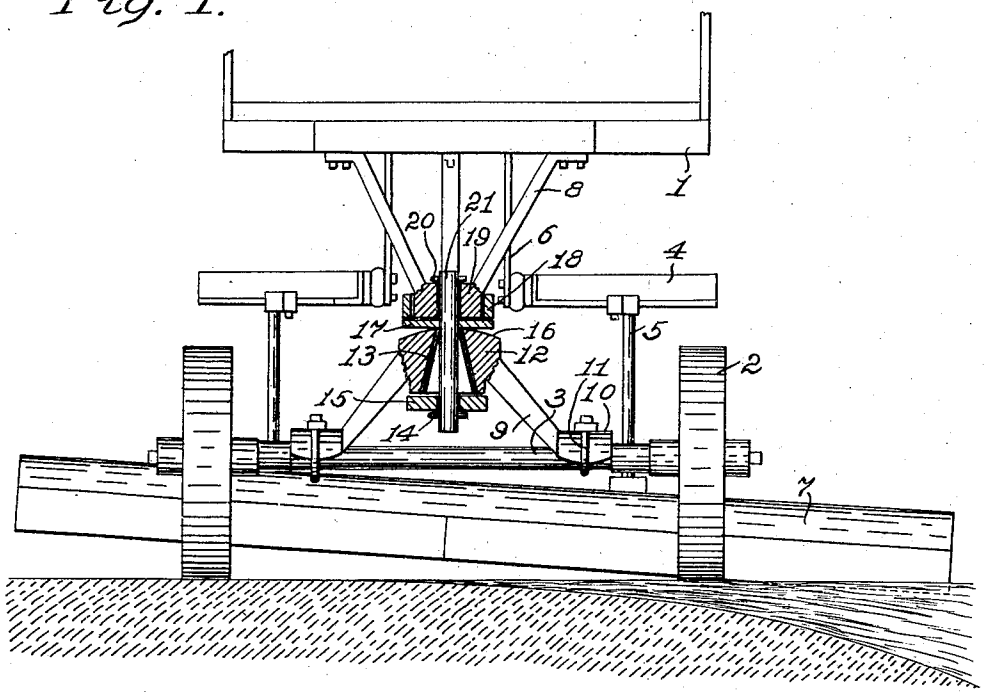
Jan. 14, 1930. J. R. ROYER 1,743,868

RUNNING GEAR CONNECTION FOR ROAD MAINTAINING MACHINES

Filed May 14, 1928

Fig. 1.



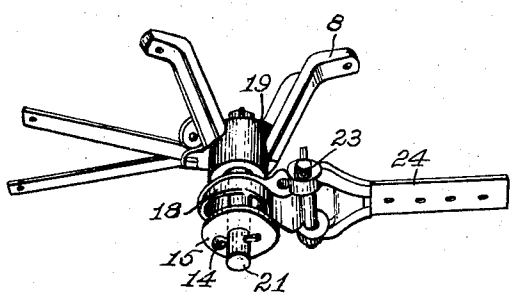


Fig. 2.

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UNITED STATES PATENT OFFICE

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RUNNING-GEAR CONNECTION FOR ROAD-MAINTAINING MACHINES

Application filed May 14, 1928. Serial No. 277,640.

My invention relates to improvements in running gear connections for vehicles, and the object of my improvement is to supply for vehicles, and particularly for road maintaining machines such as are employed in the grading, maintenance or building of roads or otherwise, running gear including means for permitting lateral tilting of an axle to allow tracking of the wheels thereon upon defective ways without tiltingly shifting the frame structure which is supported on such running gear or a grading blade set at a desired inclination to the general surface of the way.

This object I have successfully accomplished by the means which are hereinafter described and claimed, and which are illustrated in the accompanying drawings, in which Fig. 1 is a front elevation, in partial cross section, of my improvement as mounted between the front axle and the superposed frame structure of a vehicle of the road grader or maintainer type as conventionally represented with parts removed. Fig. 2 is a perspective view of the intermediate mountings with parts removed and other parts relatively spread apart.

It is to be understood that minor modifications of said mountings to effect the object sought may be made and yet be included within the scope of the appended claims.

In the conventional showing of a road maintaining machine of said Fig. 1, the numeral 1 denotes the frame structure having supported thereon in the rear depending hangers 4 which in turn have laterally spaced hangers 5 carrying an inclined and transverse blade 7 of the usual type for working roads and other ways.

The numeral 8 denotes a downwardly convergent pair of rigid hangers secured to the front part of the frame 1 and united integrally at their lower ends by a vertically apertured cross block 19 around which block is rockingly mounted a ring 18 forming a part of a draft connection shown in Fig. 2, in which a draft-bar 24 for connection to a tongue not shown has a hinge connection at 23 to said ring 18. In Fig. 2 the element 18 is shown as separated from about the lower cylindrical part of the block 19 after removal of a lower bearing element 12 to be described.

The numeral 21 denotes a king-pin seated loosely in a cylindrical vertically disposed central bearing opening in the block 19 and retained at the top therein by a split-pin 20. The numeral 9 denotes a pair of upwardly convergent arms united integrally at the top by a block 12. The lower outer parts 10 of these arms are cylindrically grooved in their lower faces to fit over the cylindrical axle 3 which has the front carrying wheels 2 mounted on its ends in the usual manner. U-bolts 11 fasten the terminal parts 10 upon said axle. The block 12 has a convex top 16, and an apertured wear-plate 17 is mounted on the king-pin 21 between the block 19 and the convex top 16 of the lower block 12, so that the convex top 16 may contactingly rock relative to the wear-plate.

The block 12 has a vertically disposed central aperture 13, which is widened laterally from top to bottom only laterally, the front and rear inner faces of the wall of the aperture being flat and parallel. Beneath the flat lower face of the block 12 is an apertured supporting disk 15 retained by a split-pin 14 in the king-pin, it being seen that both the block 12 and disk 15 are mounted on the king-pin.

Fig. 1 discloses that when the wheels 2 pass from a level surface of the way traversed to subside at one side into a depression, one wheel 2 will drop which tilts the axle 3 sidewise, the downwardly widening aperture or seat 13 in the block 12 permitting the block to rock vertically and laterally only to compensate for this downward displacement of the wheel 2, but without displacement or sidewise tilting of the frame structure 1 or of its blade 7, so that the latter can work during the forward progress of the machine without constant irregularities in its action as may occur when no provision is made as shown for the prevention thereof.

This invention may be used on other vehicles as desired, for like purposes.

It should also be noted that the forward draft is upon the upper block 19 to the frame 1 and blade 7, and not directly upon the king-

pin 21, which eliminates any possibility of improper alinement on the front axle assembly.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is:

1. A running gear connection for a road maintaining machine, comprising in combination with the frame of the machine, a front axle thereunder and wheels mounted on the axle, of a vertically apertured medial bearing-block mounted rigidly upon said axle whose aperture is widened downwardly laterally and having evenly spaced front and rear walls, the top of said bearing-block being convex, a frame bearing-block rigidly mounted on the frame and apertured in alinement with the said aperture of the axle bearing-block, a king-pin traversing said alined apertures, an apertured wear plate on said king-pin and supported on the convexity of the axle bearing-block, an apertured wear plate mounted on the king-pin below the axle bearing-block, means for releasably securing the king-pin in said positions, and a draft-connection rockingly mounted upon said frame bearing-block.

2. A running gear connection for a road maintaining machine, comprising in combination with the frame of the machine, a front axle thereunder and wheels mounted on the axle, of downwardly convergent rigid arms on said frame terminating with a vertically apertured cylindrical bearing-block, a draft-connection having an annular termination mounted rockingly upon said cylindrical block, upwardly converging arms rigidly mounted upon said axle terminating with a vertically apertured bearing-block alined with said frame bearing-block, the aperture in the axle bearing-block being widened transversely, a king-pin loosely traversing the apertures in said bearing-blocks, a wear-plate mounted on the king-pin between said blocks and supporting said draft-connection annular termination, a removable wear-plate mounted on the king-pin below the axle bearing-block, and means for releasably retaining said king-pin in said bearing-blocks.

In testimony whereof I affix my signature.

JESSE R. ROYER.