No Printed Specification Available

7375X

J. P. FAIRLAMB.

Car Truck.

Patented Jan. 19, 1833.

Fig. 2.

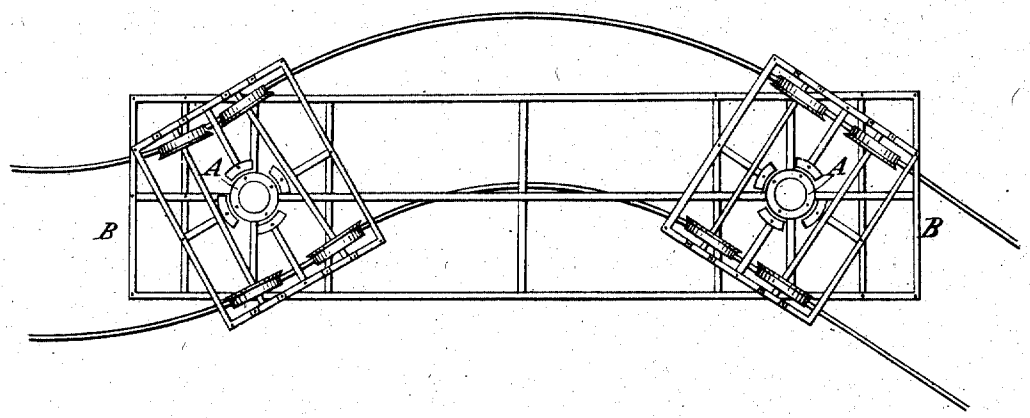


Fig. 1.

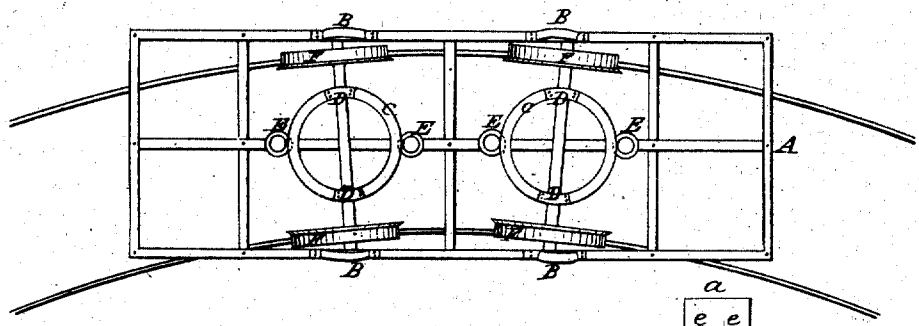
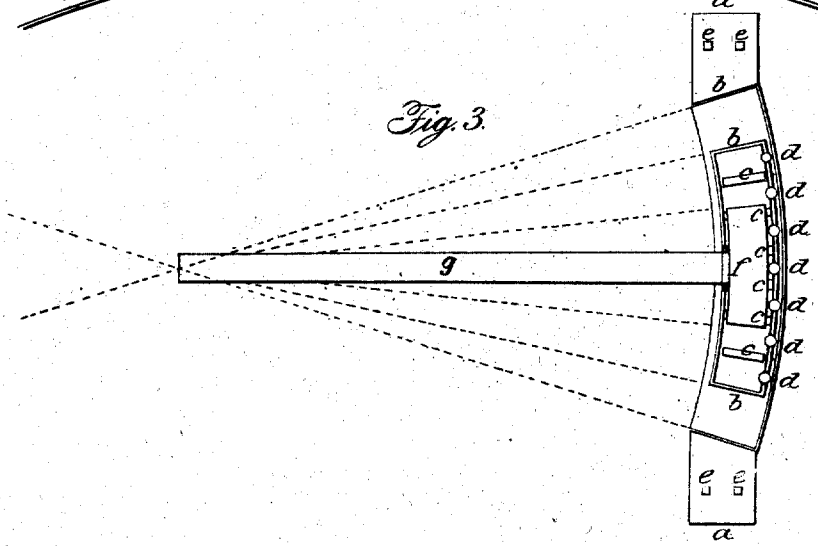


Fig. 3.



1/19/1833 7375X

June 19 1833 97.

James P. Fairbank of Philadelphia Pennsylvania

Letters Patent.

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said James P. Fairbank himself of his improvement in constructing Rail Road Cars.

To all to whom these presents shall come. Be it known that I James P. Fairbank of the City of Philadelphia in the State of Pennsylvania have invented a new and useful improvement in cars for running on Rail or other Roads, and that the following is a full and exact description of the construction and operation of the said Car reference being had to the annexed drawings making part of this specification.

The frame or what is generally called the under part of the car is similar to those in common use with the exception of a piece of timber or other substance of sufficient strength extending lengthwise of the car at equal distances from each side and of convenient height from the axles to meet or attach the journal bearing rollers hereafter mentioned. I provide the following described boxes, plates and bearings for the journals of the axles to move in to wit. Plates of iron or other strong substance of sufficient width, length, and thickness with circular flanges on the one side or outer edge thereof extending downwards a sufficient distance to contain the journal bearing horizontal friction rollers and moveable bearings or bearings in which the journals of the axles move. The radii of the inner and convex sides of these circular flanges being half the length of the axle or shaft on which the wheels are fastened. These plates I attach or fasten to the frame of the car in their proper places to suit their corresponding journals of the axles by means of sufficient strength. I provide for each bearing two horizontal rollers of sufficient diameter length and strength which I form in a strong frame each of said frames being fixed of a cone. The centre of which is the middle distance between the ends of the axles and their planes is near horizontal as the curves will admit. I also provide vertical rollers two or more for each of said horizontal rollers. confined in the inner or outer part of the same frame, and of the same diameter as the largest diameter of the horizontal rollers. The journals of all the rollers being so moved by a [illegible] that the respective rollers as to admit the frame

to wheels freely with the rollers without friction by coming in contact either with the underside of the aforesaid horizontal plate or inside of the said circular flange thereof, against which plate and flange the periphery of the rollers bear, their planes forming a horizontal circular groove or rabbet for each box, in which groove I place a moveable box resting against the periphery of the rollers in which box the journal of the axle turns, at or near the ends of the aforesaid plates. A form vertical flanges to prevent the said plates from vibrating further than necessary, and to enable me to enclose the whole box rollers and journals, and thereby keep out the dust and to contain therein a sufficient quantity of oil which I supply through an aperture in the upper plate. I provide two horizontal circular plates or rings of iron thereon the distance between the wheels on their corresponding axles, the centres of these two circles or rings are the middle distance from the ends of the axles in shafts These circles I confine to their proper place by boxes connecting them with their respective axles and the axles passing through and revolving in these boxes. To the first mentioned piece of timber or other material of sufficient strength I attach two vertical friction Rollers for each of said circles to rest against, and roll when acted on by the cone of the wheels and vibrating of the axles. The middle distance between each end of the axle is common to the vertex of the conical rollers, and the cones formed by them at each end of the axle and to the centres of the two horizontal circles in which the vertical rollers are placed. The operation of this Cone is as follows. The wheels being conical with their centres of motion will always adjust the axles at right angles with the rail way, crooked, or straight, while at the same time the cones never become. They have no tendency to draw the track on a curve, and prevent the flanges of the wheels from pressing against the inside of the rails and the wheels with the above arrangement and construction of boxes and horizontal circles, conical and vertical rollers operates freely with an immense saving of friction on curves. To apply any of my improved Engines already made without effecting the Engine I let the wrought axle have a permanent solid and loose one wheel. I hereby claim the exclusive right to the invention of the construction of the above boxes rollers and circular plates or rings as applied by me to any travelling rail or other roads and all the parts of the above mentioned

7375x

99.

and described does not heretofore exist or is known. In witness whereof I have
hereunto set my hand this 29th day of December Anno Domini one thou-
sand Eight Hundred and thirty two.

1832. 1832.

Witness
J. Shepherd
John Adcock

J. F. Fairbairn

(Dr in portfolio)

928 (1957)