(No Model.)

B. C. WILSON.

RUNNING GEAR FOR RAILWAY CARS.

No. 252,918. Patented Jan. 31, 1882.

Fig. 1

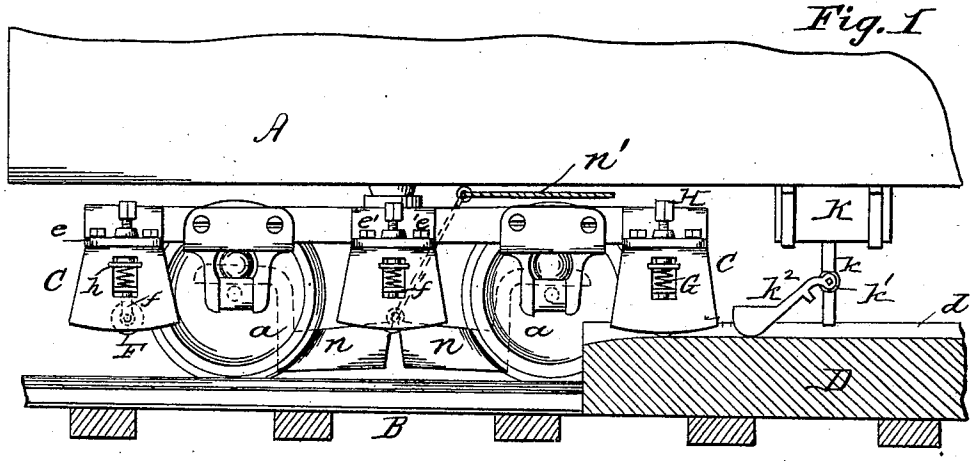
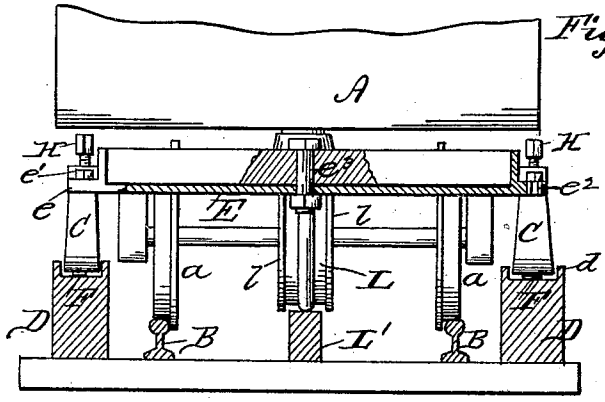


Fig. 2



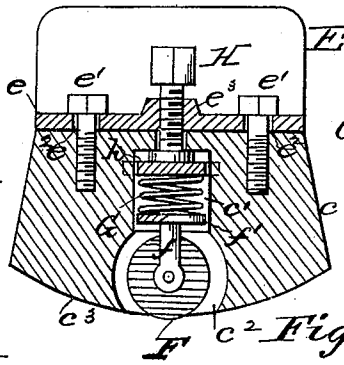


Fig. 3

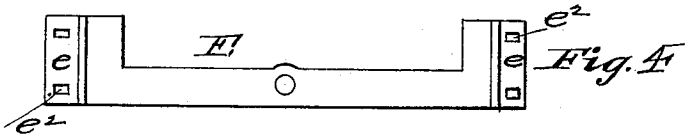


Fig. 4



Fig. 5

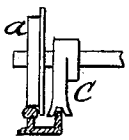
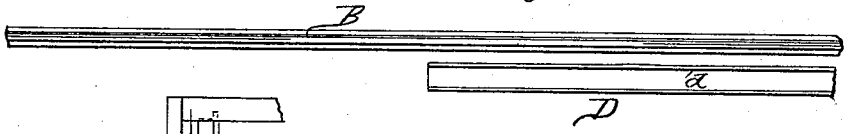


Fig. 6



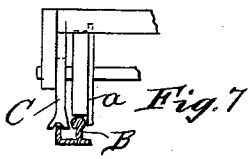


Fig. 7

WITNESSES:

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UNITED STATES PATENT OFFICE.

BENNET C. WILSON, OF PHILADELPHIA, PENNSYLVANIA.

RUNNING-GEAR FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 252,918, dated January 31, 1882.

Application filed June 20, 1881. (No model.)

To all whom it may concern:

Be it known that I, BENNET C. WILSON, a citizen of the United States, residing in the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Running-Gear for Railroad-Cars, of which the following is a specification, reference being had to the accompanying drawings, wherein—

Figure 1 is a side elevation of a section of a car with my improvements shown as applied thereto, the slide-rail being in section. Fig. 2 is an end elevation, partly in section, of the same. Fig. 3 is a longitudinal vertical section of one of the glides. Fig. 4 is a plan of the bar to which the glides are secured. Fig. 5 is a plan of a portion of the tracks suitable for my improved running-gear, and Figs. 6 and 7 are elevations illustrating modifications of my improvement.

My invention relates to that class of railroad-cars which are supported and run upon glides or slides; and it has for its object to provide a car with two sets of running-gear, one of which is the ordinary wheel-gear, and the other consists of glides so constructed and attached to the car that when the latter is caused to travel upon specially-formed rails it will ride upon the glides or upon the wheels, as hereinafter set forth.

My invention has for its further object to provide glides for railroad-cars so constructed that the amount of friction between the glides and their rails may be regulated or adjusted to the weight of the cars. Thus, for instance, in cars heavily laden the friction of the glides on their rails would be considerable, thereby requiring increased power to propel the cars to which they are attached. With my improved glides the amount of such friction is controllable, and by proper manipulation of devices affixed to the glides said friction is decreased or increased as circumstances may dictate.

My invention has for its still further object to provide an automatic oiling apparatus for the glide-rails, such apparatus being opened and closed by means of a lever moving onto or off of the glide-rails.

My invention accordingly consists of cars provided with the ordinary wheel-gear and with glides or slides, whereby at determined intervals or places along the track the cars run on their wheel-gear and travel on their glides on the remaining portions of the track; second, of the provision of glides or slides for railroad-cars, having friction-rollers which are capable of being projected beyond or withdrawn above the lower or riding surface of the glides, whereby the friction between the glides and their rails may be varied, as hereinafter more fully set forth, and, in combination therewith, a roadway for the cars, consisting of the usual T-rails and of glide-rails, which latter are discontinued at intervals or places along such roadway, whereby when a car provided with wheel-gear and glides is caused to travel over said tracks it will ride on the glides at the unbroken parts of the glide-rails and will run on its wheels when the discontinued parts of the glide-rails are reached; third, of the provision of an oil-receptacle secured to the car, and from which proceed pipes the ends whereof are in line with and located just above the glide-rails, said receptacle being provided with a cock having an operating-lever designed to rest upon one of the glide-rails during the travel of the car thereon, whereby said lever is lifted to open said cock and permit oil from the receptacle to flow onto the glide-rails to lubricate the same, said lever, riding on said rail as long as the glides travel thereon, continuing to hold said cock open to provide for a continuous supply of oil for said rails; but as soon as the glides leave their rails said lever drops by gravity and cuts off said oil-supply; fourth, of certain details of construction, as hereinafter more fully explained.

Referring to the accompanying drawings, A represents a car provided with the usual wheel-gear, as shown at *a a*, which travel upon the customary T-rails, B B.

C C represent glides or slides, which may be secured to the truck or may be placed upon the body of the car at any desired location, either at the bottom or at the top of the same.

D D designate the glide or slide rails, which may, if desired, be formed integral with the

T-rails; or they may be separate therefrom and laid parallel with said T-rails and adjacent thereto, the latter being within or between the glide-rails. Such construction is shown in Figs. 1 and 5, and I deem it the preferable one. The glide-rails may be of any suitable formation, but I have illustrated them as being made with flanges *d d* to retain the glides thereon, and prevent the cars running off the tracks when traveling on said glides. The glide-rails are not continuous throughout the entire length of the roadway, but are discontinued at intervals or at places where it is desired to run the cars on their wheel-gear, such places being at the stations, curves, and depots. The reason whereof is that when such localities are reached by a train it is necessary to apply the brakes to stop or "slow down" the train. Consequently at such places the cars must then move on their wheels; but between the stations and curves the cars move along on their glides. The latter are placed on either side of the cars, and if attached to the trucks, as shown in Fig. 1, three or more may be used on each side thereof. Such glides consist of a body, *c*, having a central opening, *c'*, and a recess, c^2, extending from opening *c'* to the under surface, c^3, of said glides. The bodies *c* are secured to flanges *e* on the bar E by screws *c' e'*, which pass through slots e^2 e^2 in said flanges, so as to permit the glides to have a lateral oscillating movement to allow the same to turn as they pass over curves or other like places along the roadway. The bars E are pivoted at e^3 to the truck, so as to vibrate on said pivotal point to still further facilitate the lateral movement of said glides.

F F are friction-wheels placed within the recesses c^2 of the glide-bodies *c*, and are journaled to rods *f*, having supports *f'*, upon which rest springs G G in the openings *c'*.

h h are plates loosely fitted in opening *c'*, so as to have an up-and-down motion therein when caused to move in such directions by manipulating the screw H, which screws into a threaded opening in bosses e^3 on flanges *e* of bars E, so that as said screws are rotated to depress plates H and springs G G the friction-wheels F F are caused to move downwardly until their peripheries project beyond the under surfaces of the glides, as shown in Fig. 1. Consequently when said glides travel on their rails the under surfaces of the glides will not be fully in contact with the rails, but only partially so, as the friction-wheels then come into play and relieve the glide of the weight of the car. Hence there will be less friction generated between the glides and their rails as the former travel over the latter. Therefore less power is required to propel cars having my improved glides than would otherwise be the case if the glides were without the friction-wheels.

K is an oil-tank, secured at any suitable place on or beneath the car-body, one being provided for each car, if deemed necessary. Said tanks are provided with pipes *k k*, which have their ends extending directly over and above the glide-rails.

k' is a valve common to both said pipes *k k*, and is provided with a weighted operating-lever, k^2, which is so arranged that as the cars move on the glides said lever will ride up on and rest upon one of the glide-rails, and when so lifted to such position it opens valve *k'*, and oil from tank K then flows through pipes *k k* to the glide rails. The latter are thereby lubricated, and the glides will move over the same without generating undue heat or friction. As soon as the glides pass off from their rails at the discontinuations of the latter, the lever k^2 falls by gravity, and thereby closes valve *k'* to cut off the oil-supply, as there is then no need for such oil, the cars then traveling on their wheels. The operation of lubricating the glide-rails is thus rendered automatic.

To relieve the glides of the entire weight of the cars, I employ the central rubber or other elastic tired wheels, L, which are loosely secured to their respective car-axles, and are held in position thereon by collars *l l* on either side of said wheels, as shown. Said wheels ride upon the rail L', which may be of metal, wood, or other suitable material, and is cut away or discontinued to correspond with the broken-away parts of the glide-rails, so that when the cars ride upon their ordinary wheel-gear the wheels L will not touch or travel upon the rail L'. By such construction I obtain a noiseless railroad, especially adapted for elevated railroads, the cars of which can be stopped by applying brakes to the wheels, as in the usual manner.

If it is desired to stop the cars when they are traveling on their glides, the brakes *n n* (shown in Fig. 1) may be employed. They are designed to be let down so as to jam between the wheels *a* and the T-rail; and a cord or chain, *n'*, may be used for that purpose.

If the glides are attached to the upper part of the cars, the glide rails will be elevated on columns; or other suitable means may be employed to produce such elevation.

What I claim as my invention is—

1. A railroad-car provided with double running-gear consisting of wheels and glides, the latter being provided with mechanism, substantially as shown and described, whereby the friction between the glides and their rails may be varied, substantially as set forth.

2. A railroad-car provided with wheels and glides, in combination with a wheel or wheels arranged upon the axle for relieving the friction between the glides and the rails, substantially as shown and described.

3. A glide for railroad cars, provided with a friction-roller and means for protruding the periphery of said roller beyond the lower or riding surface of the glide, substantially as shown and described.

4. In combination with a car, the cross-bars E, pivoted thereto or to its trucks, and the glides C C, pivotally secured to said cross-bar, where-

by said glides are capable of a lateral oscillating movement, substantially as set forth.

5. In combination with a car provided with wheels and glides, the oil-tank K and mechanism between said tank and glide-rail whereby the glide-rails are automatically lubricated, substantially as shown and described.

6. The glides C C, formed with recess c^2 and opening c', in combination with roller F, pivoted to bar *f*, spring G, and screw H, substantially as shown and described.

In testimony whereof I have hereunto set my hand this 7th day of May, A. D. 1881.

BENNET C. WILSON.

Witnesses:
CHAS. C. SHERF,
THOMAS WILLIAMS.