

P. BANNING.
CAR-TRUCKS AND WHEELS.

No. 175,266.

Patented March 28, 1876.

Fig. 1.

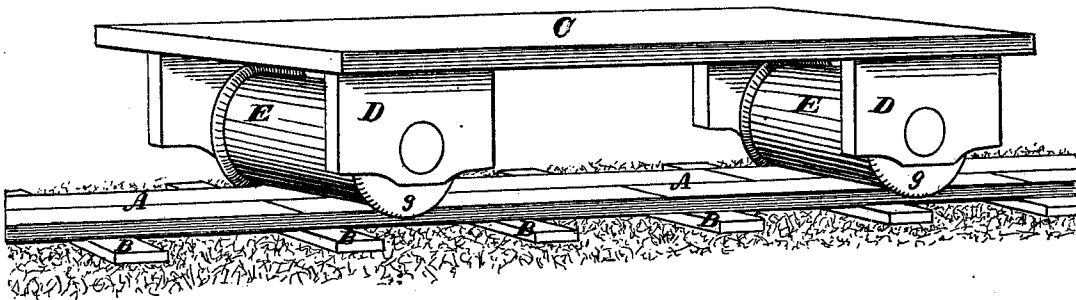
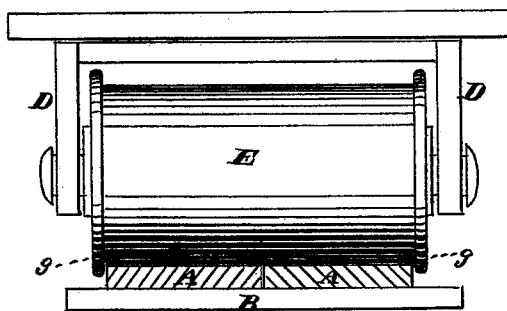


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

PHINEAS BANNING, OF WILMINGTON, CALIFORNIA.

IMPROVEMENT IN CAR TRUCKS AND WHEELS.

Specification forming part of Letters Patent No. **175,266**, dated March 28, 1876; application filed December 14, 1875.

To all whom it may concern :

Be it known that I, PHINEAS BANNING, of Wilmington, Los Angeles county, State of California, have invented Improvements in Railways and Carriages for Transporting Freight, and for other purposes; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvement without further invention or experiment.

My invention relates to certain improvements in railway-carriages, by which I am enabled to lay a line of road and operate it over a country where but little grading is necessary, so cheaply that it can be made available for the transportation of freight, lumber, and in some cases passengers, in thinly-settled districts, where an ordinary line would be too expensive.

It consists mainly in the construction of the carriages, which will be more fully described by reference to the accompanying drawings and the letters of reference marked thereon, in which—

Figure 1 is a perspective view of the car and track. Fig. 2 is an end view of car and transverse section of track.

My improved road is designed to be constructed where timber is plenty, and for this purpose a portable saw-mill may be first transported into the forest, when I cut the timber into planks A A, about three inches in thickness, and of any suitable width. I prefer them to be about fifteen inches in width, when the timber will serve, and of any convenient length, and these serve as a track when laid. I also cut similar timbers B B, but of such a length as to serve for cross-ties.

Usually these can be made of the outside slabs sawed from the logs, and they are laid upon the road-bed, which is then filled up with earth and tamped so as to be level with these ties.

About two thousand of these ties may be employed per mile, and the planks A are then laid two in width, side by side, and breaking joints, so that my track, when laid, will pre-

sent a solid surface from twenty-four to thirty inches in width.

The lumber of the track should be preferably cut so that when laid the grain of the wood shall stand nearly vertical, to reduce the wear to a minimum.

My carriage C, which is intended to be used in combination with this road, is made in any form suitable for the load it is to transport, and is mounted upon trucks D.

The wheels or rollers E which I employ upon my road are of peculiar construction, and are intended to be employed especially in combination with my peculiar road. These rollers may be made of wood or iron and have flanges *g* at their outer edges, by which they are prevented from leaving their track. The axles of these rollers may be extended so as to carry cranks beyond their journals, and the driving-engines will be connected to these cranks in any suitable manner so as to drive them.

It will be readily seen that in some cases the drivers or rollers E might be made in pairs upon the same axle and sufficiently separated to allow the cranks to be formed between them; but slight modifications of this sort will readily suggest themselves to those who construct the road.

It may be found desirable in some cases to cover the rollers with rubber or other elastic substance.

The rate of speed to be obtained will be low, and this road is only intended to be constructed over sandy or heavy land which is tolerably level and to be graded at a low expense, and where the expense of a wagon or railroad would be large.

If a pine forest is easily accessible at either end or near the proposed line, the lumber can be produced at from five to ten dollars per thousand feet, and by utilizing the outer slabs of the logs for the cross ties, about fifty or sixty thousand feet per mile will be amply sufficient for the construction of the road, which would thus cost only from three to five hundred dollars per mile, exclusive of rolling stock, &c.

If desired, the road when finished, may be coated with asphaltum or other suitable

surface, but this is not essential to its success.

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

The cars or carriages, having the wheels E with their flanges, constructed to have a

tread the entire width of the road-bed, substantially as and for the purpose herein described.

PHINEAS BANNING.

Witnesses:

GEO. H. STRONG,
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