

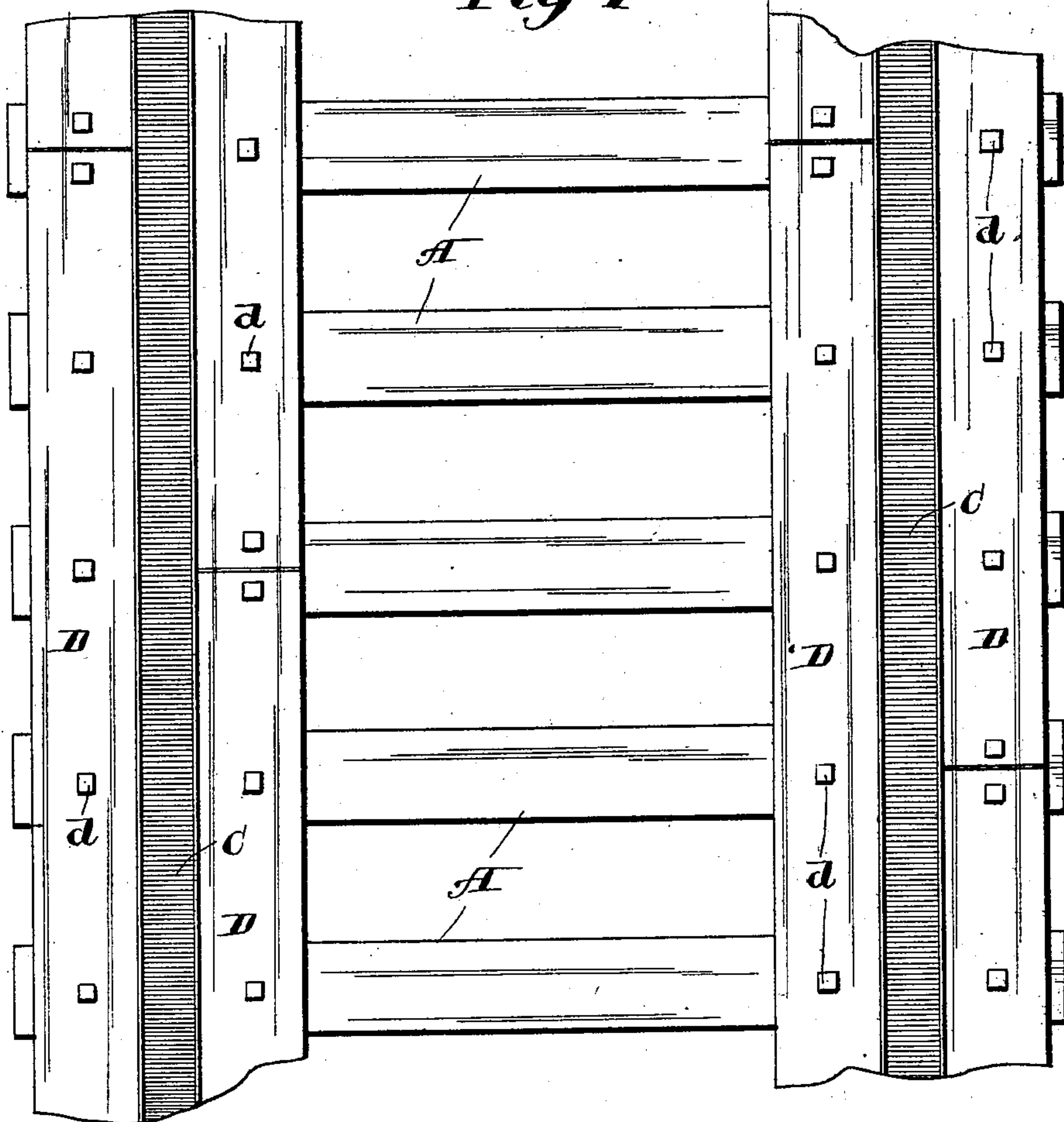
No. 731,119.

PATENTED JUNE 16, 1903.

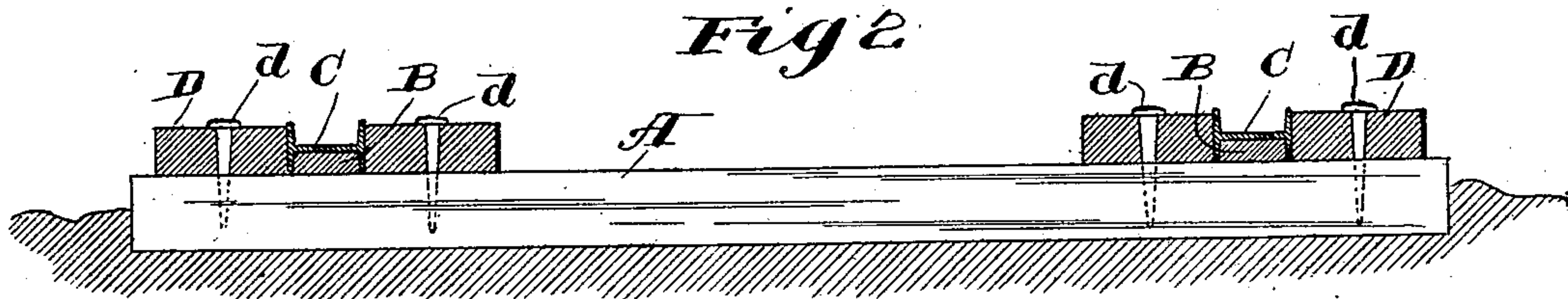
W. J. NEWMAN.  
TRAMWAY FOR VEHICLES.  
APPLICATION FILED JAN. 8, 1903.

NO MODEL.

*Fig 1*



*Fig 2*



*Witnesses:*

*Carl S. Crawford*  
*William H. Hall*

*Inventor:*

*William J. Newman*  
*by Porter & Brown*  
*his Attorneys*



## UNITED STATES PATENT OFFICE.

WILLIAM J. NEWMAN, OF CHICAGO, ILLINOIS.

## TRAMWAY FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 731,119, dated June 16, 1903.

Application filed January 8, 1903. Serial No. 138,236. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM J. NEWMAN, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful  
 5 Improvements in Tramways for Vehicles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked  
 10 thereon, which form a part of this specification.

This invention relates to improvements in roads or tramways for vehicles constructed to guide the wheels of the vehicle and to afford a solid continuous traction-surface therefor.

15 A road or tramway embodying my improvements is applicable for use in connection with horse or motor propelled vehicles, and is especially useful for transporting loaded vehicles over soft and yielding ground—such, for  
 20 instance, as the newly-deposited earth of a dumping-ground.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

25 In the drawings, Figure 1 is a plan view of a tramway made in accordance with my invention. Fig. 2 is a transverse section thereof.

As shown in the drawings, A A designate cross-ties or sleepers which support the rails  
 30 of the tramway.

B B designate parallel stringers laid on the cross-ties and separated a distance corresponding with the tread of the vehicles which travel over said road or tramway. Said  
 35 stringers B are made of hard wood, such as oak.

C C designate flanged beams which are laid on the stringers B and constitute the track-rails of the tramway, the wheels of the vehicle traveling on the web of said beam and the flanges at each side of the web constituting guides which confine the wheels on said rails. Said rails consist in the instance shown of I-beams. The stringers B are made of a  
 40 thickness approximately equal to the depth of the flanges of said beams below the webs thereof and fill the spaces between said flanges below the webs, thereby supporting the web throughout its width. The engagement of  
 45 the margins of the stringers with the flanges also prevents said flanges from bending inwardly under stress.

D D designate heavy planks or boards laid one row on each side of the beams C and secured to the ties by means of spikes *d*, as  
 55 shown in Fig. 2. Said boards when laid are forced tightly against the opposite sides of the I-beam rails and are made of practically the same thickness as the depth of the flanges, so as to engage the outer faces of said flanges  
 60 throughout their height. Said planks or boards D serve in connection with the stringers B, which closely fill the spaces between the lower flanges of the rails, to prevent lateral distortion of the flanges in a manner to  
 65 bend the upper flanges inwardly toward the center of the I-beam rails, such as would occur if the flanges were not laterally supported. In this manner I am enabled to use for the  
 70 same load a lighter beam than would be practicable if unsupported. For light loads I may employ in lieu of the I-beams shown channels-bars of a weight to give the desired strength to the roadway. The I-beams are  
 75 preferable, however, by reason of the fact that lateral flexure or distortion of the flanges is readily prevented.

The plank or boards D may be made of sufficient width to serve as a pathway for the animals drawing the wagon, and in this event  
 80 the center of the tramway need not be filled. Moreover, said boards serve to bind the supporting ties or sleepers together, so as to prevent displacement or twisting of the latter notwithstanding the fact that the tramway  
 85 may be laid upon soft or yielding ground. The maintenance of the parallelism of the rails may in this manner be assured.

At the entrance to the road suitable outwardly-curved guides will be located to direct the wheels of the vehicle to the grooved  
 90 or channeled rails, so that the driver of the vehicle need not exercise care to properly guide the vehicle on the track. Moreover, at curves it may be desirable that the track-rails be made considerably wider than those  
 95 in the straight parts of the track thereof to prevent binding of the vehicle-wheels against the upper flanges while passing around curves.

Certain of the structural details may be  
 100 varied without departing from the spirit of my invention, and claims not limited to the complete details are intended to cover the features therein set forth without regard to



the combination in which they are herein illustrated.

I claim as my invention—

1. A road or tramway for vehicles, comprising cross-ties or sleepers, parallel flanged metal beams laid thereover, the webs of which constitute the traction-surfaces for vehicle-wheels and the flanged guides therefor, and longitudinally-arranged boards attached to  
10 said cross-ties on each side of and pressed closely against said beams.

2. A road or tramway for vehicles comprising cross-ties or sleepers, parallel stringers laid on said ties, flanged metal beams laid  
15 over said stringers, the webs of which constitute traction-surfaces for vehicle-wheels and the flanged guides therefor, and longitudinally-arranged boards attached to said cross-ties on each side of and pressed closely  
20 against said beams.

3. A road or tramway for vehicle-wheels comprising cross-ties or sleepers, parallel

stringers laid on said ties, I-beams laid over said stringers, the webs of which constitute traction-surfaces for vehicle-wheels and the  
25 flanged guides therefor, longitudinally-arranged boards attached to said cross-ties on each side of and pressed closely against said beams.

4. A road or tramway for vehicles comprising cross-ties or sleepers, parallel stringers  
30 laid on said ties, I-beams laid over said stringers, said stringers filling the spaces between the flanges of said I-beams, and boards attached to said cross-ties on each side of and  
35 pressed closely against said beams.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 5th day of January, A. D. 1903.

WILLIAM J. NEWMAN.

Witnesses:

WILLIAM L. HALL,  
GERTRUDE BRYCE.