

No. 642,832.

Patented Feb. 6, 1900.

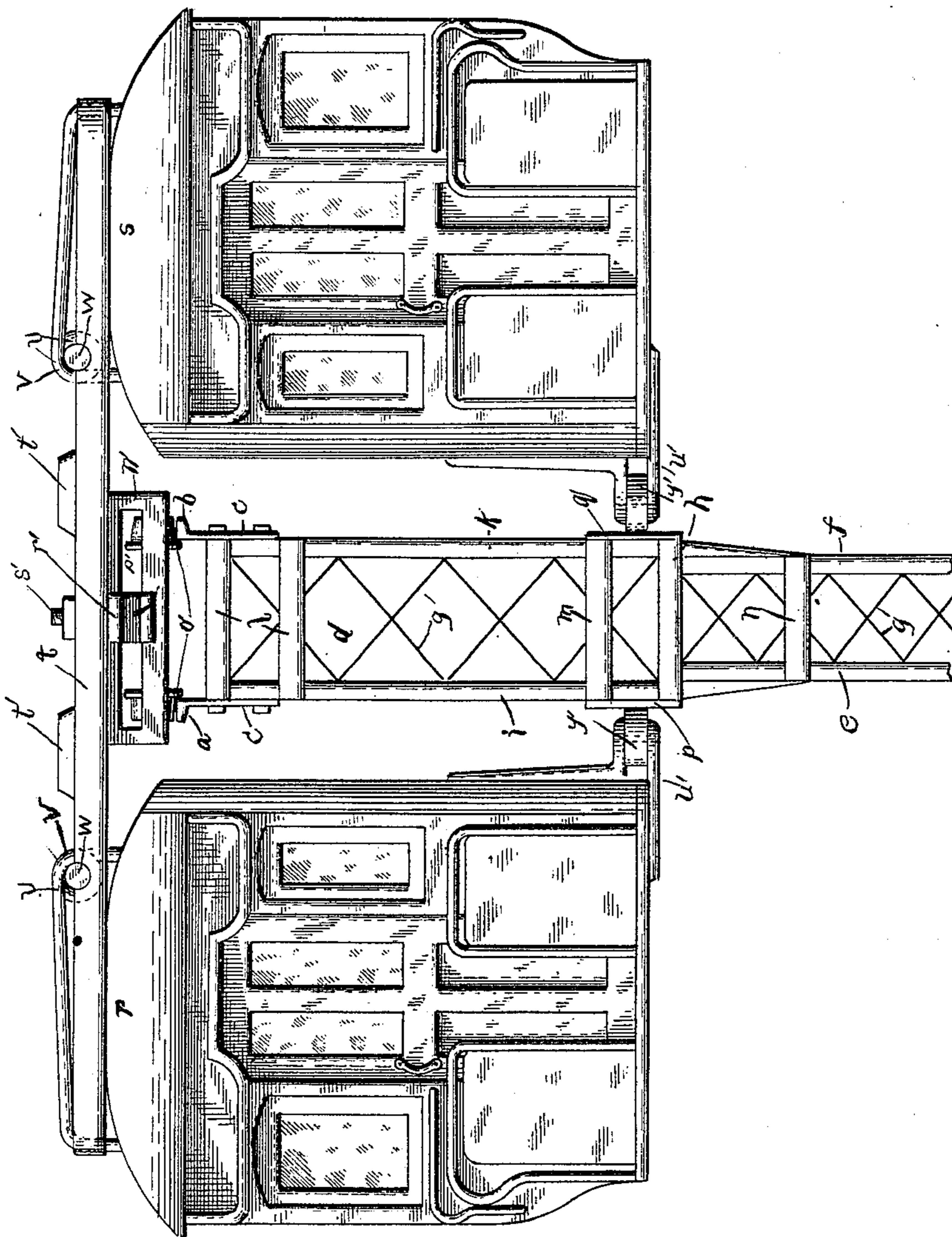
L. ANDERSON.
ELEVATED RAILWAY.

(Application filed June 15, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



Witnesses
L. M. Beckmeyer
E. Horsey

Inventor
L. Anderson
by *[Signature]*
Attorney

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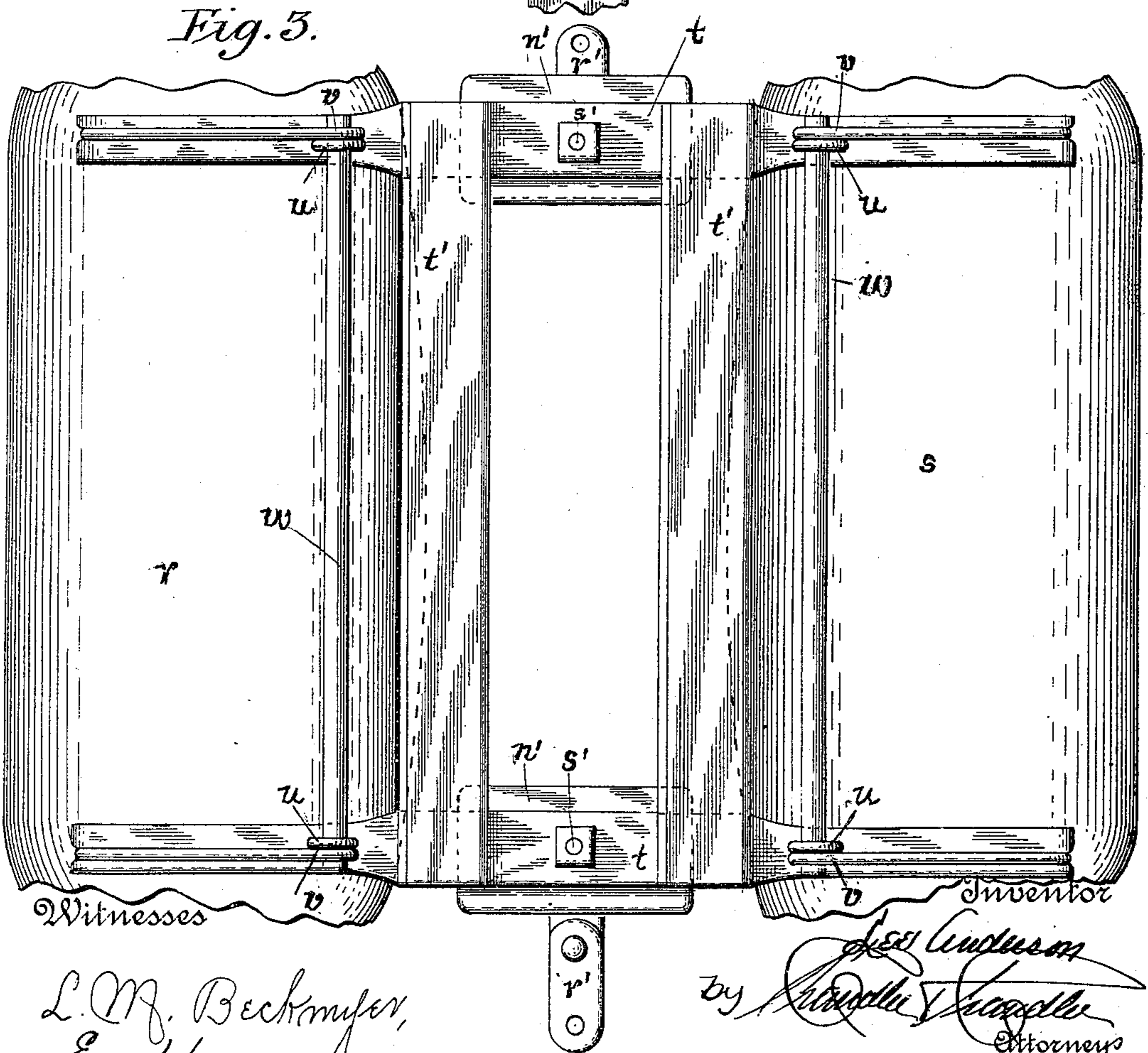
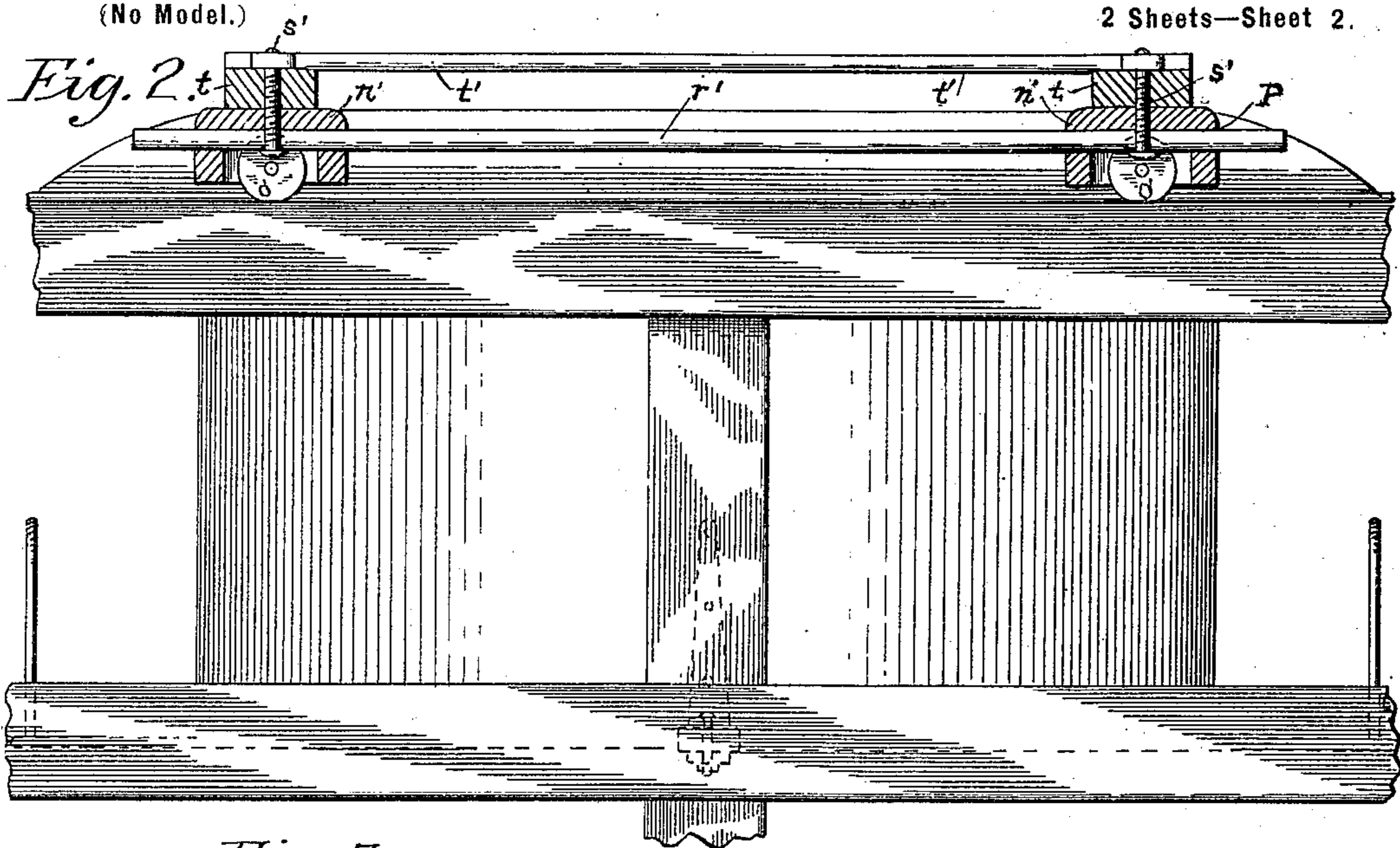
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2 Sheets—Sheet 2.



Witnesses
L. M. Beckmeyer,
E. Horsey

Inventor
L. Anderson
by *[Signature]*
Attorneys

UNITED STATES PATENT OFFICE.

LEE ANDERSON, OF PARIS, TEXAS, ASSIGNOR OF ONE-THIRD TO ROBERT P. MAYO, OF SAME PLACE.

ELEVATED RAILWAY.

SPECIFICATION forming part of Letters Patent No. 642,832, dated February 6, 1900.

Application filed June 15, 1899. Serial No. 720,727. (No model.)

To all whom it may concern:

Be it known that I, LEE ANDERSON, a citizen of the United States, residing at Paris, in the county of Lamar, State of Texas, have invented certain new and useful Improvements in Elevated Railways; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to railways in general and more particularly to that class known as "elevated" railways; and it has for its object to provide a cheap and efficient structure both of the trackway and cars, and one in which excessive bracing may be omitted, in which a single line of posts may be employed, and in which the usual heavy track-rail may be substituted by a lighter form, which will have the additional function of a stringer for the structure.

A further object of my invention is to dispense with the necessity of ties and to provide an arrangement and form of vehicle which will be adapted to curves and will be securely held in place while in motion.

In the drawings forming a portion of this specification, and in which like letters of reference indicate similar parts in the several views, Figure 1 is a transverse section of an elevated trackway constructed in accordance with my invention, the supporting-posts and vehicles thereon being in elevation. Fig. 2 is a side view of one of my cars, showing the inner side, which lies next the track-supporting structure, showing also the track-rails at one side of the structure and, in section, the bogies. Fig. 3 is a plan view of a pair of cars, showing their mutual connection.

Referring now to the drawings, in operating in accordance with my invention I erect a trackway comprising rails *a* and *b*, each of which consists of a straight vertical web *c*, the flange of each rail projecting beyond but one face of the web only, as shown. These rails *a* and *b* are supported at a distance of approximately two feet apart and parallel upon a single line of posts *d*, which may be solid or may be built up, as shown, in which latter event they each consist of a base portion comprising parallel uprights *e* and *f*, having

suitable bracing *g* and connected at their tops by means of cross-pieces *h*.

Extending upwardly from the uprights *e* and *f* and engaging the outer faces of their upper portions are additional uprights *i* and *k*, connected at their tops by means of cross-pieces *l* and adjacent their bottoms by cross-pieces *m*, which latter lies above the cross-piece *h*. The cross-piece *h* extends beyond the uprights *e* and *f* to engage uprights *i* and *k*, a final cross-piece *n* engaging the uprights *e* and *f* and the lower ends of uprights *i* and *k*.

The webs *c* of rails *a* and *b* are bolted against the outer faces of the upper ends of the uprights *i* and *k* with the flanges outwardly. The rails and their webs thus form stringers from one post to another, the height of the webs being such as to give a rigidity to the structure without the use of ties and similar expensive superstructure.

At a suitable distance below the rails *a* and *b*, and secured also against the outer faces of uprights *i* and *k*, are flat plates *p* and *q*, forming stringers from one post to the next, also bearing-rails for horizontally-rotating bearing-rolls hereinafter described.

Operating in connection with the trackway thus described is a series of cars *r* and *s*, connected in pairs, as shown in the drawings. Connecting the cars of each pair adjacent each end thereof is a cross-beam *t*. An eyebolt *u* is passed downwardly through the beam *t* and the car, and has its lower end connected with the bottom of the car to prevent withdrawal. One of these eyebolts *u* is arranged at each end of the car and adjacent the inner curved face thereof, as shown, a second eyebolt *v* being arranged adjacent each of the eyebolts *u*, with its eye in alinement with the eyes of said bolts, the bolts *v* lying against the upper faces of the beams *t* and being extended longitudinally thereof and then bent downwardly over the outer ends of the beams, from which points they are extended downwardly through the cars and are attached to the under sides of the latter. Passed through the alining eyes of the bolts just described and upon each car is a bar *w*, acting to tie the bolts together and prevent their withdrawal from the beams. Pivotaly connected with each beam *t* is the frame of a bogie-truck

n' , in which are journaled two wheels o' upon a common axle and adapted to run upon the rails a and b . The frames or casings n' of the bogies are slotted at p' in a horizontal
 5 plane, and through these slots is passed a draw-bar r' , which draw-bar is perforated to receive the lower ends of the pivots or king-bolts s' , through the medium of which the frames are pivotally connected with the beams
 10 t . It will be seen that the draw-bar is rigidly connected with the beams t on account of said draw-bar being bolted at each end to one of said beams. The frames being each secured by a single bolt are pivotally connected. In
 15 Fig. 3 a separate draw-bar is secured to each frame. This may be considered advisable under some conditions.

Extending longitudinally of the cars and having their ends connected with the cross-beams t are braces t' , located intermediate the bars w and the king-bolts of the bogies and adapted to prevent displacement of the cross-beams.

Journaled in suitable brackets u' upon the
 25 inner faces of the cars h' and i' and midway of the ends thereof are bearing-rollers y' , which rollers are so positioned as to engage the rails p' and q' and bear against them, said rails thus preventing excessive sagging of the
 30 cars and also the engagement of the inner face of either car when on the inner side of a curve.

It will be seen that my structure enables the employment of very short track-curves,
 35 that the inward swaying of the cars is prevented, that by dispensing with ties I materially cheapen the track structure, and that with my draw-bar the pull is applied directly to the frame from which the cars are sus-
 40 pended, thus allowing the wheels of the trucks to move easily over the rails and accommodate themselves to the variations and inequalities of trackage.

It will be readily understood that in the
 45 specific form of the supporting-posts I may depart from the construction herein shown and described, that I may alter the general

constructions and arrangements, and that I may employ whatever material may prove of advantage, without departing in any manner
 50 from the spirit of my invention.

Having thus described my invention, what I claim is—

1. In an elevated railway, the combination of a trackway and supporting means, of trucks
 55 adapted to the trackway, cross-beams pivotally connected with the trucks, and cars suspended from the ends of the cross-beams through the medium of eyebolts, one of which bolts is passed through the end of its respec-
 60 tive beam and downwardly through the car and with which the lower end is connected, the other eyebolt having its eye in alinement with that of the first-named bolt and being
 65 passed outwardly and downwardly from the end of the beam and through the car to connect with the lower portion thereof, and a rod passed through the alining eyes of the bolts of each car.

2. In an elevated railway, the combination
 70 of a trackway and supporting means, of trucks adapted to the trackway, cross-beams pivotally connected with the trucks, and cars suspended from the ends of the cross-beams
 75 through the medium of eyebolts, one of which bolts is passed through the end of its respective beam and downwardly through the car with which its lower end is connected, the
 80 other eyebolt having its eye in alinement with that of the first-named bolt and being passed outwardly and downwardly over the end of the beam and through the car to connect with
 85 the lower portion thereof, a rod passed through the alining eyes of the eyebolts of each car, supplemental rails carried by the trackway- supporting means, and rolls carried by the cars and adapted to engage the supplemental rails.

In testimony whereof I affix my signature in presence of two witnesses.

LEE ANDERSON.

Witnesses:

G. J. JOHNSON,
 J. B. KOHL.