J. H. SMITH.

TRUCK.

APPLICATION FILED JAN. 20, 1915.

1,152,564.

Patented Sept. 7, 1915.

4 SHEETS—SHEET 1.

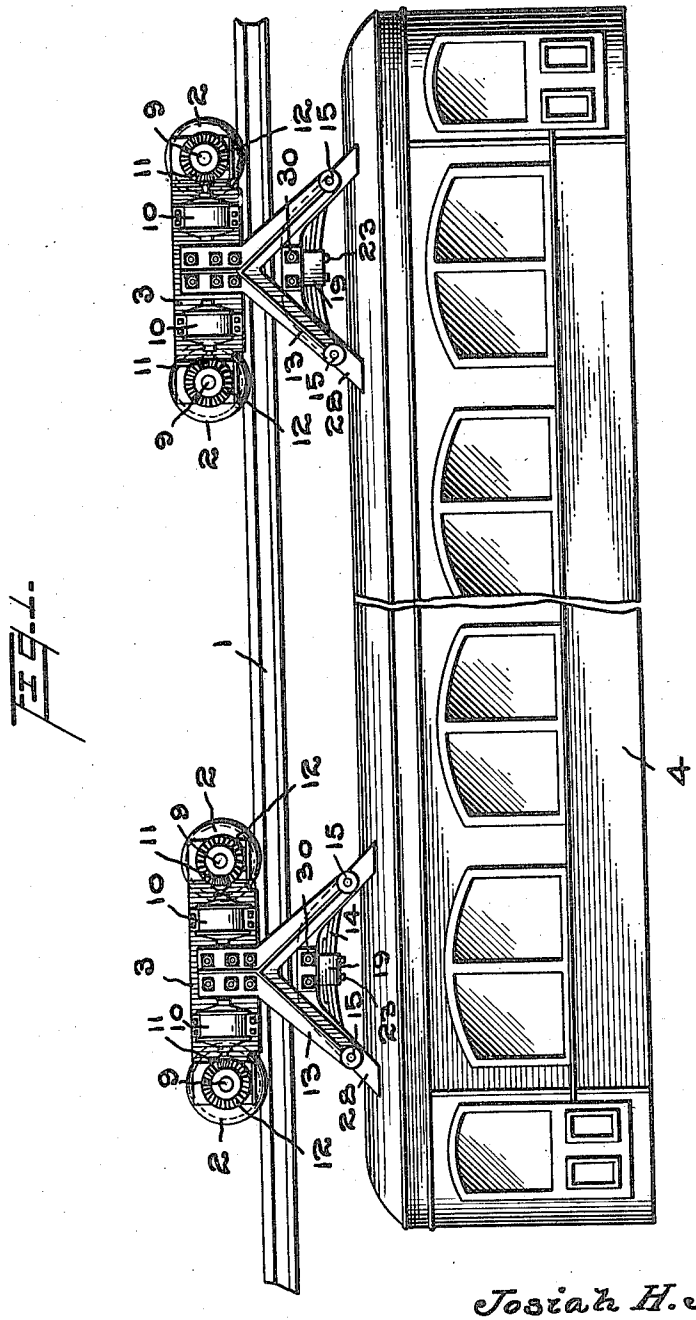


FIG. 1.

Witnesses

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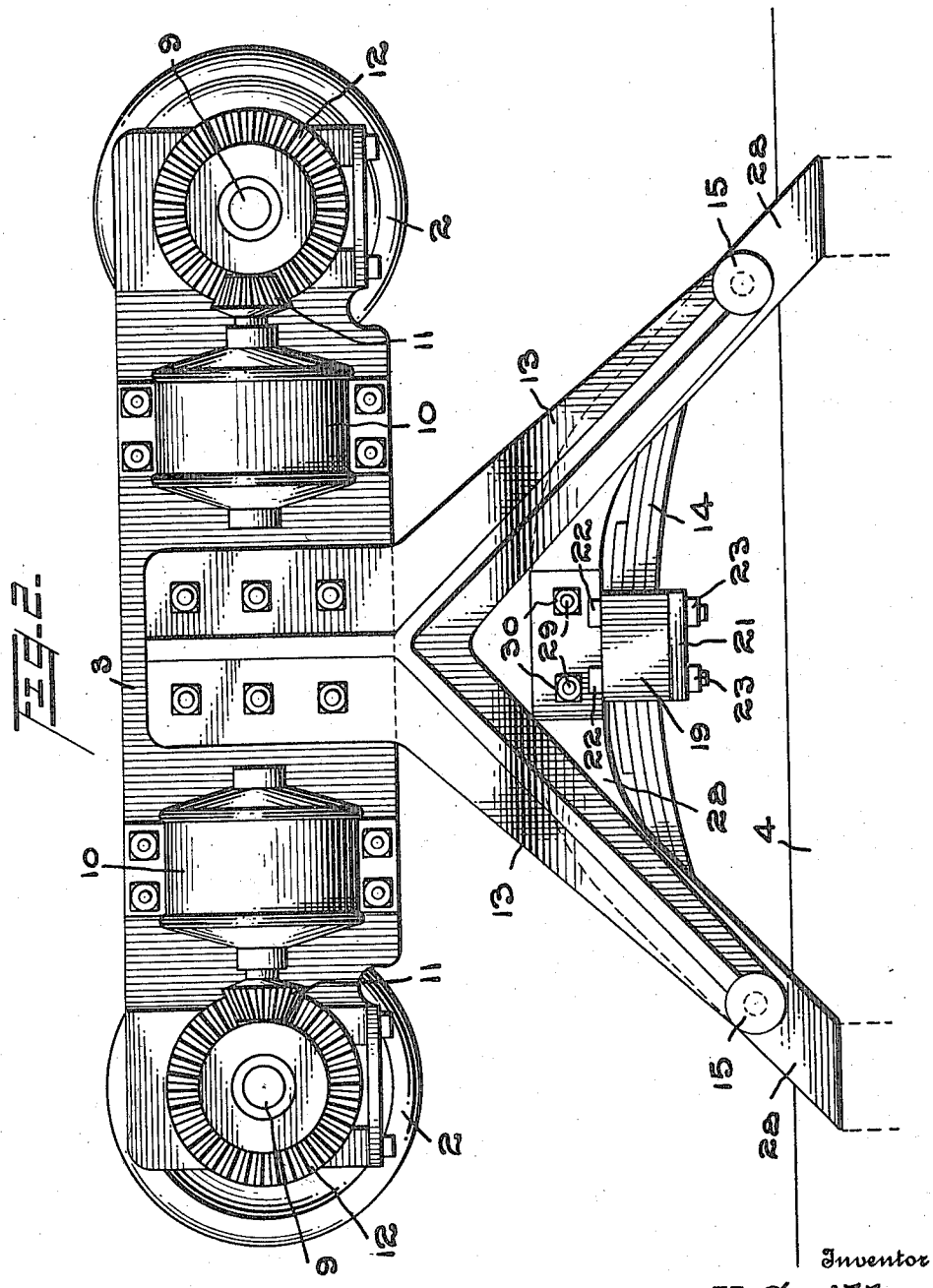
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4 SHEETS—SHEET 2.



Witnesses

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4 SHEETS—SHEET 3.

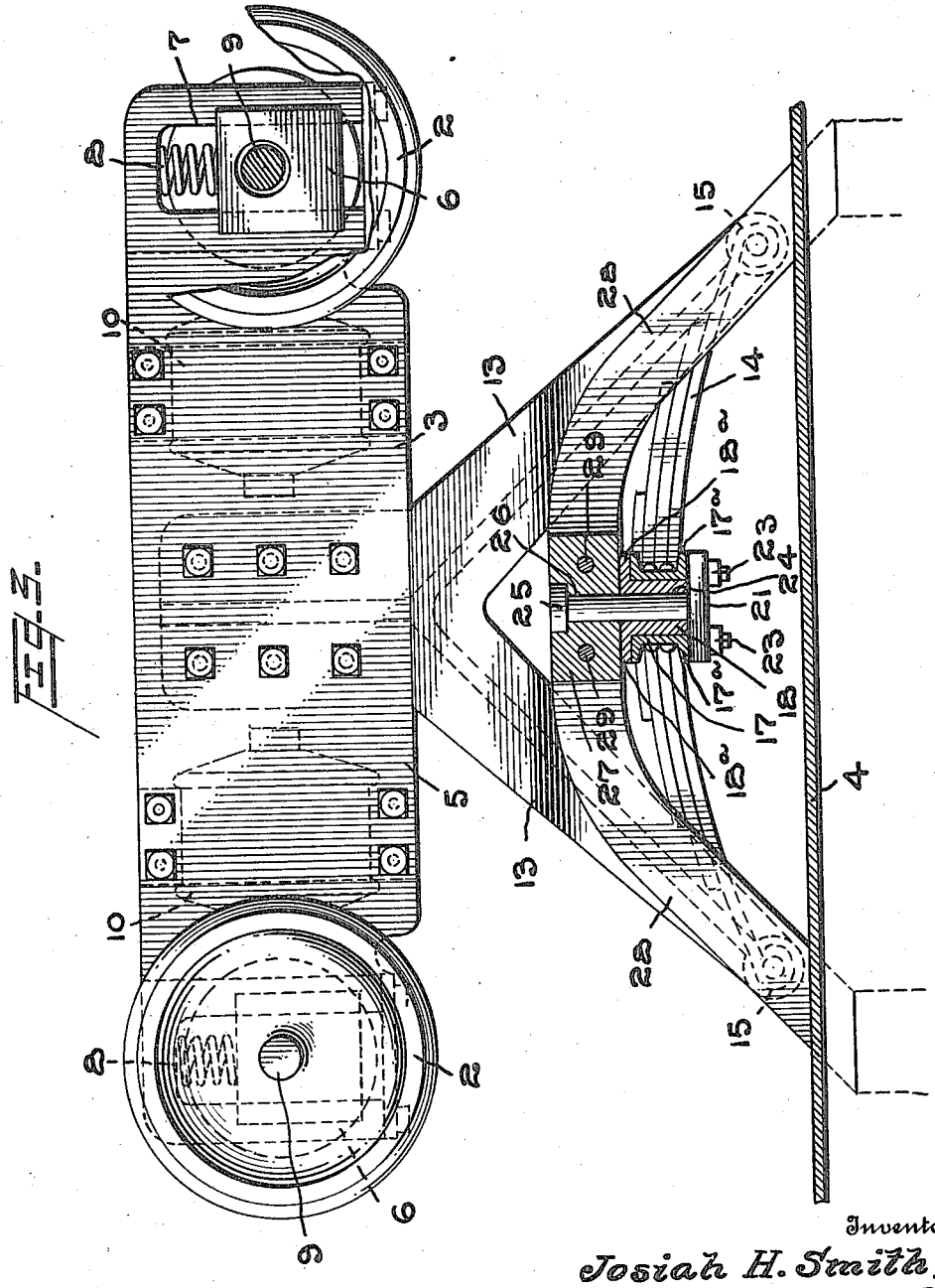


FIG. 2.

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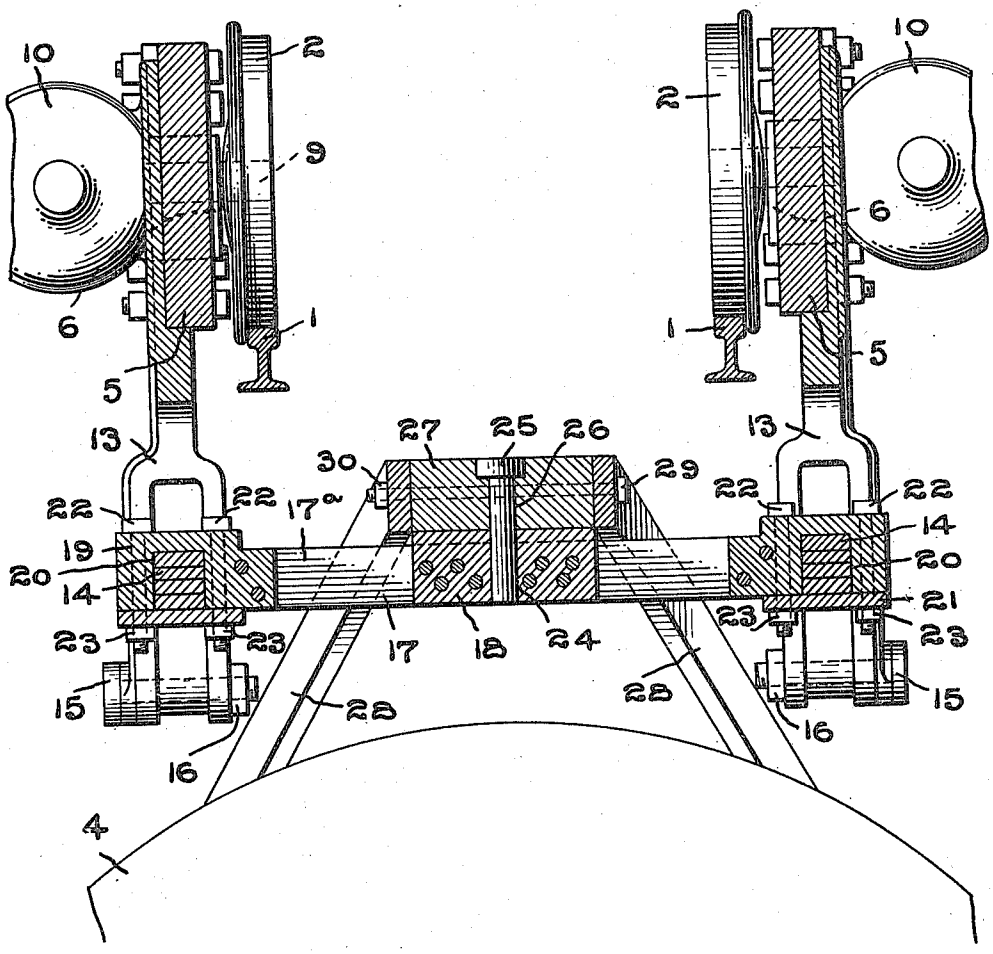
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4 SHEETS—SHEET 4.

FIG. 4.



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UNITED STATES PATENT OFFICE.

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TRUCK.

1,152,564. Specification of Letters Patent. Patented Sept. 7, 1915.

Application filed January 20, 1915. Serial No. 3,292.

To all whom it may concern:

Be it known that I, JOSIAH H. SMITH, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Trucks, of which the following is a specification.

My invention relates to improvements in trucks, and more particularly to trucks for supporting suspension railway cars, the object of the invention being to provide a truck of the character stated which will cushion the car, yet prevent lateral swinging and excessive vibration.

A further object is to provide an improved truck which will so support the car as to permit the truck to freely pivot in rounding curves, and which will be extremely strong and durable in use.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1 is a view in side elevation illustrating my improvements. Fig. 2 is a view in side elevation on an enlarged scale showing one of my improved trucks. Fig. 3 is a view in vertical longitudinal section through the center of the truck, and Fig. 4 is a view in vertical transverse section through the center of the truck.

1, 1 represent parallel rails supported in any approved manner, and on which the wheels 2 of my improved trucks 3 are mounted to run, and which support a car 4 suspended therefrom. The trucks 3 are precisely alike, and hence the description hereinafter of one will apply alike to both.

Each truck 3 has parallel side frames 5, 5, spaced apart and mounted on journal boxes 6 mounted in guides 7, and upon which coiled springs 8 are positioned and support the side frames 5. Stub axles 9 are located in the journal boxes 6, and the wheels 2 secured to their inner ends and mounted to run on the rails 1. An individual motor 10 is provided for each wheel, and each motor drives a beveled pinion 11, meshing with a beveled gear 12 on the stub axle 9. Forked hangers 13 are secured to the side frames 5, and are bifurcated at their free ends to receive the ends of longitudinally positioned bow springs 14, the ends of the springs being secured in the ends of the hangers by bolts 15 and nuts 16. A transverse beam 17 is supported on and secured to the springs 14. This beam comprises two parallel channel bars 17^a having a center block 18 and end blocks 19 securely riveted between them. The end blocks 19 are recessed as shown at 20 to receive the springs 14, and plates 21 are secured by bolts 22 and nuts 23 to the end blocks 19 below the springs to effectually tie the parts together. The center block 18 has a central opening 24 to receive a king pin 25 projected through an opening 26 in a pivot block 27. The block 27 is secured between forks 28 and the latter are secured to and support the car 4. It will be noted that the forks 28 extend over the beam 17, and are flared apart so as to allow the trucks to freely pivot in rounding curves and said forks 28 are removably secured to the block 27 by bolts 29 and nuts 30 which permit the ready substitution of a new block when worn. Furthermore, it will be noted, particularly by reference to Fig. 3, that the center block 18 has flanges 18^a at both sides projecting over the channel bars 17^a to provide a firm support for the pivot block. The springs 14 sustain at their intermediate portions, the pressure of the beams 17, and as the latter support the car, the springs give an elastic or cushioning mounting which will permit the car to run smoothly and without undue vibration.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

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

1. A suspension railway truck, comprising side frames, wheels supporting the side frames, longitudinally positioned springs supported in the side frames, a transverse beam supported on the springs, and a car support located above and pivotally connected to the beam, substantially as described.

2. A suspension railway truck, comprising side frames, wheels supporting the side frames, longitudinally positioned springs supported in the side frames, a transverse beam supported on the springs, a pivot block above the beam, a king pin connecting the pivot block with the beam, and a car support connected to the pivot block, substantially as described.

3. A suspension railway truck, comprising side frames, wheels supporting the side frames, longitudinally positioned springs supported in the side frames, a transverse beam supported on the springs, a car support positioned above the center of the beam, and a king pin pivotally connecting the car support and the beam, substantially as described.

4. A suspension railway truck, comprising side frames, wheels supporting the side frames, hangers on the side frames, longitudinally positioned springs supported in the hangers, a transverse beam supported on the springs, a center block secured to the beam, a pivot block above the center block, said blocks having registering openings therein, a king pin in said openings, and a car supported on the pivot block, substantially as described.

5. A suspension railway truck, comprising side frames, wheels supporting the side frames, hangers on the side frames, longitudinally positioned springs supported in the hangers, a transverse beam supported on the springs, a center block secured to the beam, a pivot block above the center block, said blocks having registering openings therein, a king pin in said openings, forks secured to opposite sides of the pivot block, and a car suspended from said forks, substantially as described.

6. A suspension railway truck, comprising side frames, wheels supporting the side frames, forked hangers secured to the centers of the side frames and having bifurcated ends, longitudinally positioned bow springs, bolts securing the springs at their ends in the bifurcated ends of the hangers, and a car supported on the springs, substantially as described.

7. A suspension railway truck, comprising side frames, wheels supporting the side frames, forked hangers secured to the centers of the side frames and having bifurcated ends, longitudinally positioned bow springs, bolts securing the springs at their ends in the bifurcated ends of the hangers, and a transverse car supporting beam mounted on and secured to said springs, substantially as described.

8. A suspension railway truck, comprising side frames, wheels supporting the side frames, forked hangers secured to the centers of the side frames and having bifurcated ends, longitudinally positioned bow springs, bolts securing the springs at their ends in the bifurcated ends of the hangers, a transverse beam supported on the springs, and a car pivotally connected to the center of the beam, substantially as described.

9. A suspension railway truck, comprising side frames, wheels supporting the side frames, forked hangers secured to the centers of the side frames and having bifurcated ends, longitudinally positioned bow springs, bolts securing the springs at their ends in the bifurcated ends of the hangers, a transverse beam supported on the springs, a center block secured to the beam, a pivot block above the center block, said blocks having registering openings therein, a king pin in said openings, and a car supported on the pivot block, substantially as described.

10. A suspension railway truck, comprising side frames, wheels supporting the side frames, forked hangers secured to the centers of the side frames and having bifurcated ends, longitudinally positioned bow springs, bolts securing the springs at their ends in the bifurcated ends of the hangers, a transverse beam supported on the springs, a center block secured to the beam, a pivot block above the center block, said blocks having registering openings therein, a king pin in said openings, forks secured to opposite sides of the pivot block, and a car suspended from said forks, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSIAH H. SMITH.

Witnesses:
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S. W. FOSTER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."