

L. I. FLEMING. Improvement in Car Trucks.

No. 123,163.

Patented Jan. 30, 1872

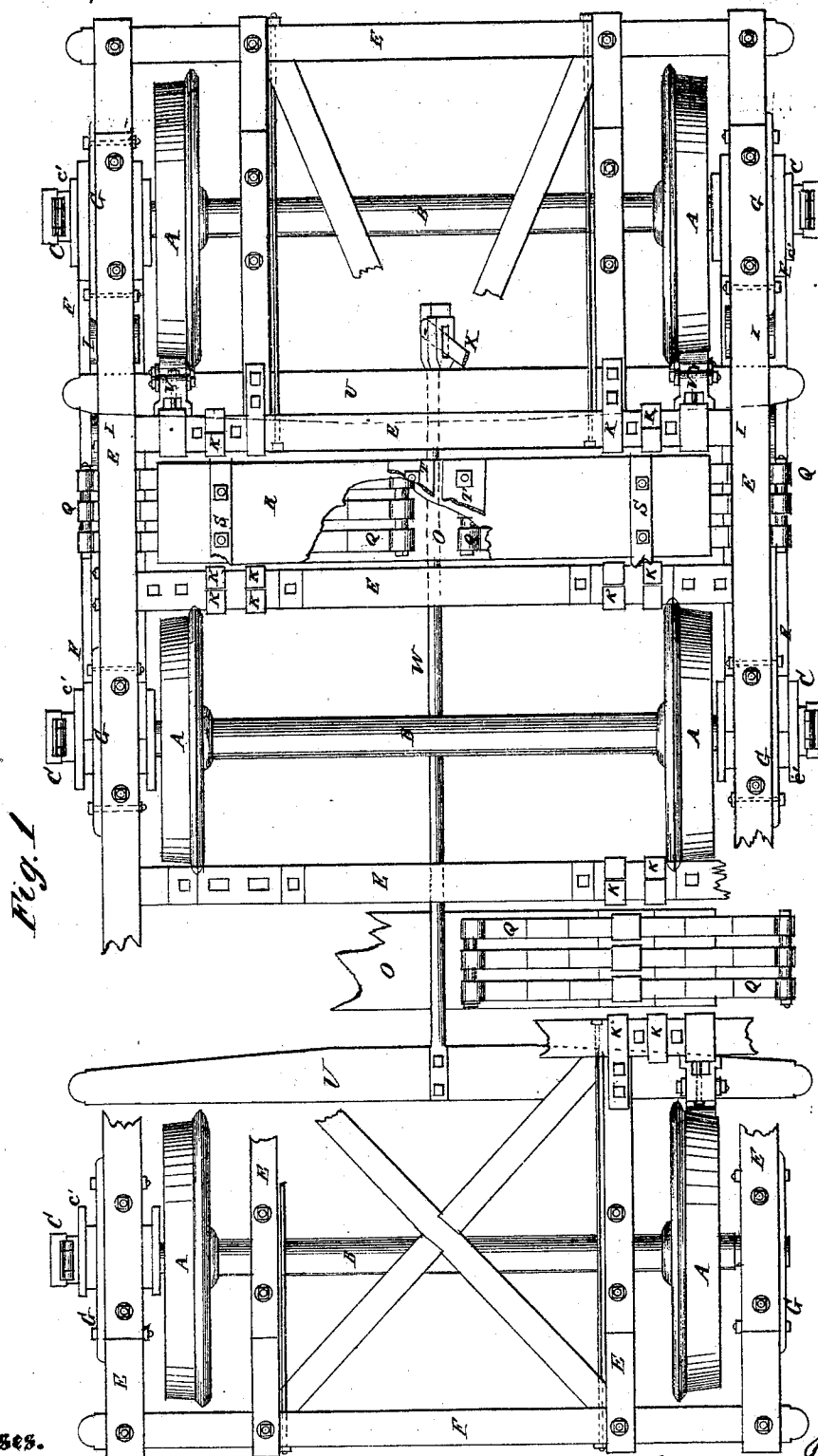


Fig. 1

Witnesses.

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Fig. 2

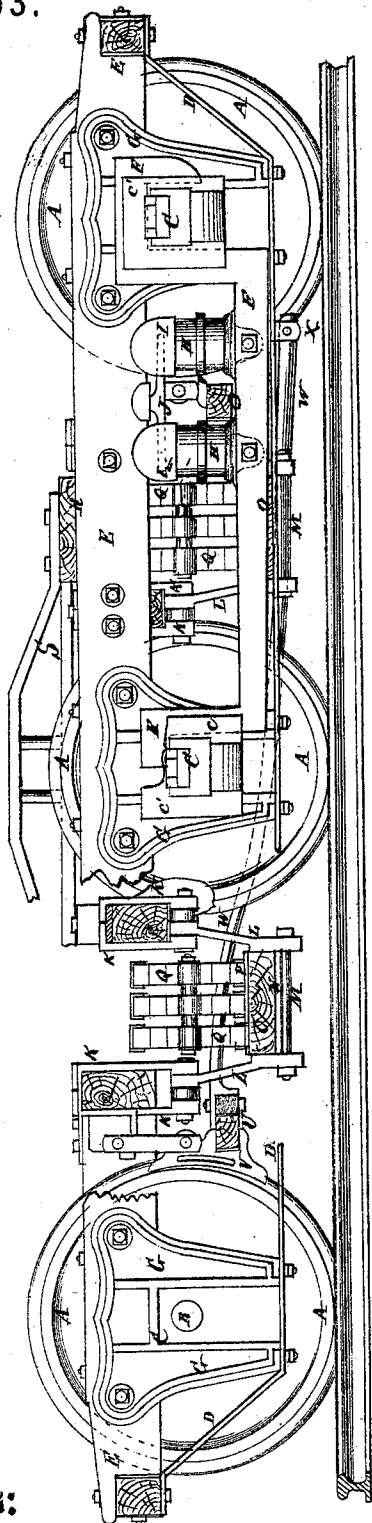


Fig. 3

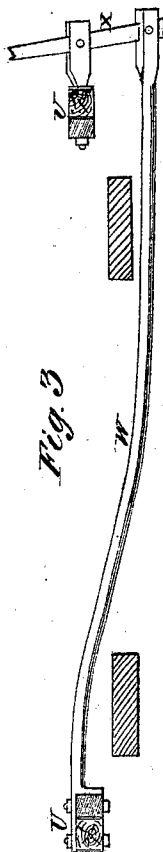


Fig. 4

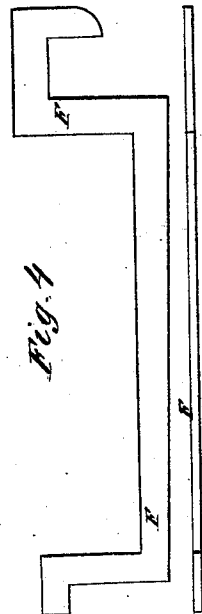


Fig. 5

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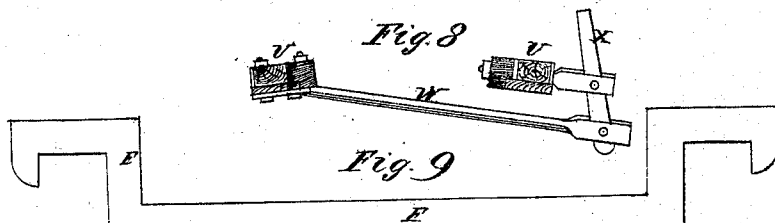
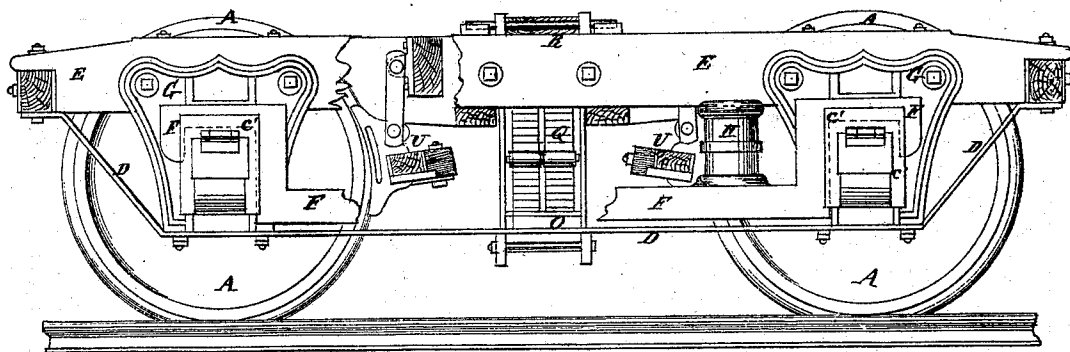
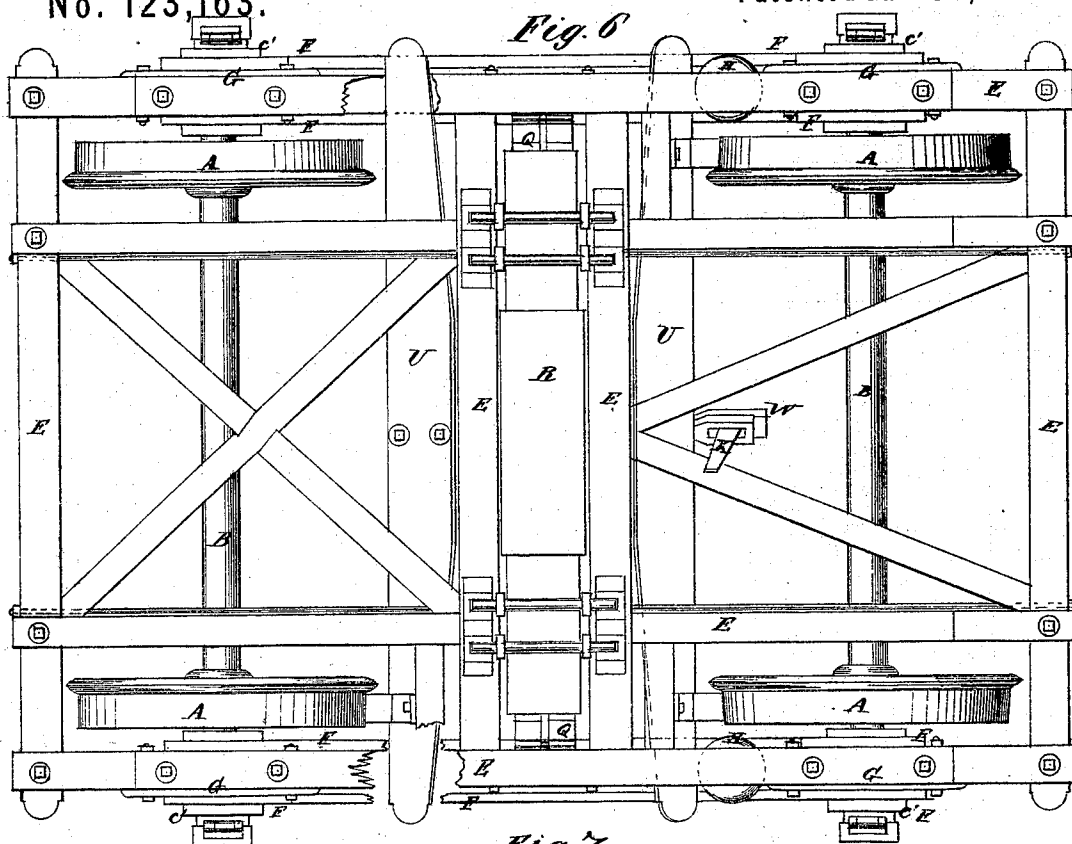
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UNITED STATES PATENT OFFICE.

LEMUEL I. FLEMING, OF MOBILE, ALABAMA.

IMPROVEMENT IN CAR-TRUCKS.

Specification forming part of Letters Patent No. 123,163, dated January 30, 1872.

Specification describing certain Improvements in Railway Car-Truck, invented by LEMUEL I. FLEMING, of Mobile, in the county of Mobile and State of Alabama.

Figure 1, Sheet I, is a top view of a six-wheel car-truck to which my improvements have been attached, parts being broken away to show the construction. Fig. 2, Sheet II, is a side view of the same, parts being broken away to show the construction. Fig. 3, Sheet II, is a detail view illustrating the arrangement for operating the brakes. Fig. 4, Sheet II, is a side view of one of the equalizers. Fig. 5, Sheet II, is a top or edge view of the same. Fig. 6, Sheet III, is a top view of a four-wheel truck to which my improvements have been attached, parts being broken away to show the construction. Fig. 7, Sheet III, is a side view of the same, parts being broken away to show the construction. Fig. 8, Sheet III, is a detail view illustrating the arrangement for operating the brakes. Fig. 9, Sheet III, is a side view of one of the equalizers. Fig. 10, Sheet III, is a top or edge view of the same.

Similar letters of reference indicate corresponding parts.

My invention has for its object to improve the construction of railroad car-trucks in such a way as will make them stronger and better than the trucks constructed in the ordinary manner, and will prevent the possibility of the brake-bars falling upon the track, and at the same time will allow the truck-frame to have a free vibration; and it consists in the construction and combination of various parts of the truck, as hereinafter more fully described.

A represents the wheels of the truck, which are constructed and secured to the axles B in the ordinary manner. The journals of the axles B revolve in the journal-boxes C in the ordinary manner. The journal-boxes C are secured to and between and are supported by the bars D and the side bars of the frame E. The ends of the bars D are bent or inclined upward, and are securely bolted to the end parts of the said bars of the frame E. F are the side equalizers, which have square hooks formed upon their outer ends to hook over the tops of the journal-boxes C, where they are kept in place by flanges c', cast upon said journal-boxes or by screw-bolts. The inner ends of the equalizers

F, in the case of six-wheel trucks, are made with half hooks, to rest upon the central journal-boxes, as shown in Figs. 2 and 4. In the case of four-wheel trucks the equalizers F are made with a square hook upon each end, as shown in Figs. 7 and 9. The equalizers F are placed one upon the inside and one upon the outer side of the pedestal G, as shown in Figs. 1 and 6. H are the springs, the lower ends or seats of which rest upon and are secured to the equalizers F, and are placed at such a distance apart as to receive the ends of the brake-bars between them. The upper ends of the springs H are provided with flanged caps I, to receive the side bars of the truck-frame E, and upon which rest the ends of the cross-bars or subordinate equalizers J. The cross-bars or subordinate equalizers J have rounded transverse projections formed upon the middle part of their upper sides, which rest in bearings attached to the under sides of the side bars of the truck-frame E. By this arrangement the weight of the car is equalized, so as to bear equally upon all the wheels, whether six or four wheels be used. To the cross-bars of the frame E of six-wheel trucks are attached hook-bar K, which rest upon castings or plates attached to said cross-bars, and to the lower ends of which are pivoted the upper ends of the swinging arms L, the lower ends of each pair of which are connected by bolts M, upon which rest bearings N attached to the lower sides of the cross-beams O. Upon plates or seats P, attached to the upper sides of the cross-beams O, rest the sets of springs Q, two sets resting upon each beam O. Upon the tops of the springs Q rest seats, which are attached to the under sides of the cross-beams R. In case of six-wheel trucks two sets of the beams O R and their springs Q are used, which are placed one upon each side of the central wheels. The upper beams R are connected near their ends by bars S, the middle parts of which are raised, as shown in Fig. 2, for the car-body to rest upon. The middle parts of the upper beams R are connected by bars T, to the middle parts of which is attached the bearing for the king or pivoting bolt that connects the car-body to the truck-frames. This construction also distributes and equalizes the weight among all the wheels of the truck. In the case of four-

wheel trucks only one set of the cross-beams O R and their springs Q are used, and the car-body is pivoted to the middle part of the upper beam R. U are the brake-beams, to which are attached the brake-shoes V. The brake-beams or bars U are made long, so as to pass between the springs H, and project above the equalizers F, as shown in Figs. 1 and 6, so that, should the brake-hangers, safety-chains, &c., break, the brakes cannot drop to the track, but will be received and will rest upon the said equalizers F. The two brake-beams U are connected by a rod, W, and lever, X, as shown in Figs. 3 and 8, so that the movement of the said lever X will move the brake-beams U in opposite direction to apply the brakes to or remove them from the wheels. In the case of a six-wheel truck the central wheels are made of a less diameter than the outer wheels, as shown in Fig. 2, to give the requisite vertical play to the said central wheels. If desired, the side beams of the truck-frame E of a six-wheel truck may be cut away over the boxes of the outer wheels for one-half its depth, as there will be but little strain outside of the point of support of the subordinate equalizers or pivoted bars J.

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

1. The two equalizers F, one upon the outside and the other upon the inside of the pedestals, upon each side of the truck and between each pair of wheels, substantially as herein shown and described, and for the purpose set forth.

2. The subordinate equalizers or pivoted bars J, in combination with the side bars of the truck-frame E, the two springs H, and the two equalizers F, to distribute the weight in a six-wheel truck between the central and outer wheels, substantially as herein shown and described, and for the purpose set forth.

3. The two springs H in a six-wheel truck, arranged between the central and outer wheels, and in connection with the brake-beams U, equalizers F, and subordinate equalizers J, substantially as herein shown and described, and for the purposes set forth.

4. The brake-beams U, made sufficiently long to project between the springs H and above the equalizers F, and arranged to operate, in connection with said springs and equalizers, substantially as herein shown and described, and for the purposes set forth.

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