T. WEST.

Car Truck.

No. 47,143. Patented Apr. 4, 1865

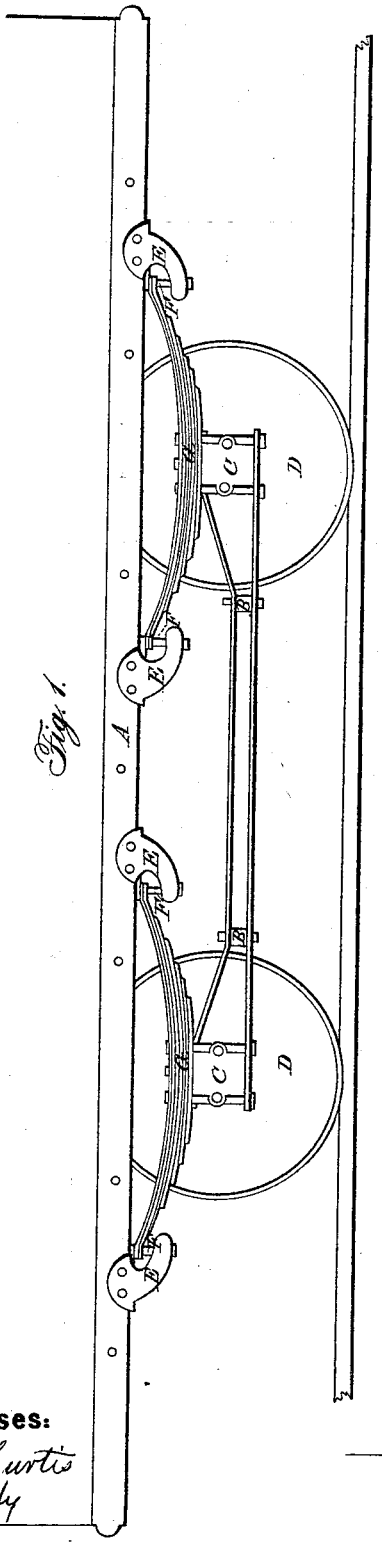

Fig. 1.

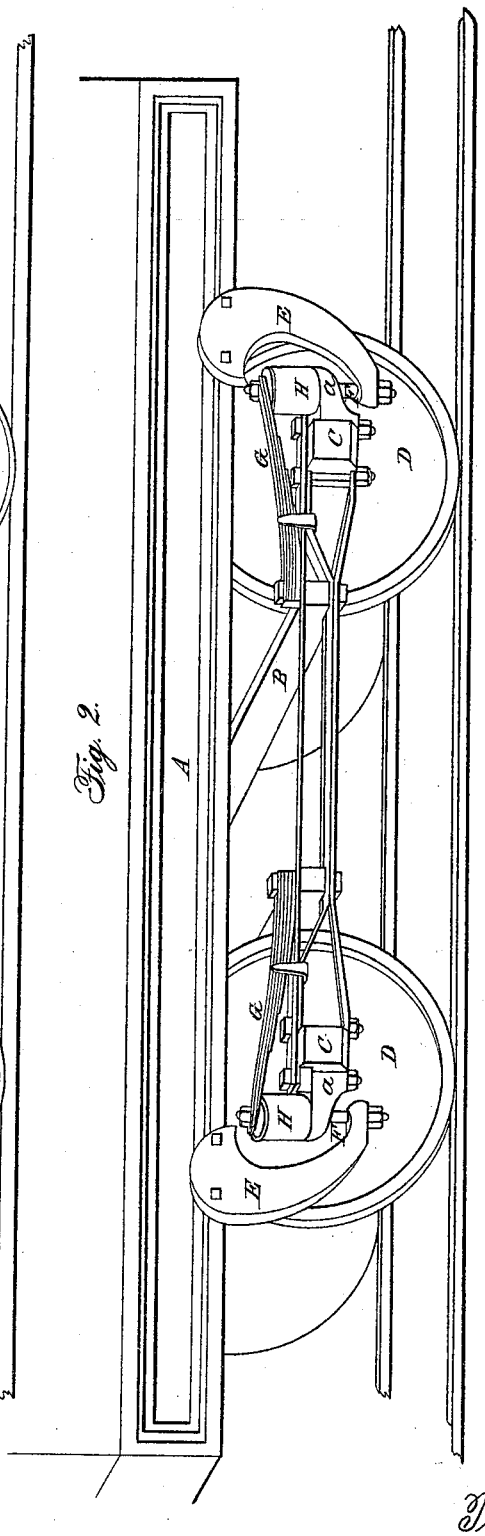

Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

TURE WEST, OF ROXBURY, MASSACHUSETTS.

IMPROVEMENT IN RAILWAY-CARRIAGES.

Specification forming part of Letters Patent No. **47,143**, dated April 4, 1865.

To all whom it may concern:

Be it known that I, TRUE WEST, of Roxbury, in the county of Norfolk and State of Massachusetts, have made a new and useful invention, having reference to Horse-Railway Carriages; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 denotes a side elevation of a carriage truck and platform as provided with my improvement.

The nature of my invention consists in the combination and arrangement of four struts, four pendulous rods or hangers, and two semi-elliptical springs disposed on each side of the truck-frame, with such frame and the axle-boxes thereof, and the platform of the carriage-body, the whole being substantially as hereinafter described. The purpose of the said arrangement of springs, struts, and pendulous rods or hangers relatively to the truck-frame, its axle-boxes, and the platform or car-body being not only to support the platform or body at points between the axle boxes, as well as outside or beyond them, in order that it may not sag at its middle, but to accomplish the same in such manner as not only to allow lateral sway or movements of the body irrespective of the springs, but so distribute the pressure of the springs on the axle-boxes as at the same time to prevent any tendency of such pressure to arch or curve the truck-frame.

Fig. 2 of the drawings exhibits a perspective representation of a mode now in use for applying a car-body to its truck-frame by means of two struts, two hangers, and certain india-rubber and steel-plate springs, such combination being my invention and termed "Alfred Bridge's mode of connecting a railway-car body with its truck." It is here referred to and introduced for the purpose of clearly exhibiting the differences and the advantages of my present invention with respect to it.

In the said Fig. 2, A denotes the car platform or body, while B is the truck or truck-frame; C C, the axle-boxes; D D, the wheels; E E, the struts; F F, the pendulous hangers or rods; G G, what are termed "half-steel springs;" H H, india-rubber springs. In this case there are but two of the springs G G which are bolted to the truck-frame, the hangers F F being suspended from the free extremities of such springs, and going through the cylindrical rubber springs H H, which are supported on projections *a a*, extended from the truck-frame. In this arrangement or mode of supporting the car-body on the truck-frame not only has the body no supports extending from it between the axle-boxes, but the strain on the truck-frame is such as to bend or curve it upward, and thus, while the carriage may be in use, there is not only a liability of its body sagging in the middle, but there is also a constant tendency to disarrangement and wear of the parts composing the truck-frame.

In carrying out my improvement, which is shown in Fig. 1, the car body or platform A has four struts, E E E E, projecting down from each side of it, and arranged with respect to the truck-frame B and the axle-boxes C C of the two wheels D D in manner as represented in such figure. In this arrangement two of the struts are between the axles-boxes, while the other two are outside of them, the pair of struts to each axle-box being situated at equal distances from it. The axle-boxes fastened to the truck-frame B, or making part of it, have two semi-elliptic springs, G G, resting on them and fastened to the truck-frame by bolts. Each spring rests at its middle on the axle-box, and projects in opposite directions therefrom, the two free ends of the spring having two hangers or pendulous rods, F F, suspended from them. These rods go down through the two adjacent struts E E, which rest on the lower heads of such rods. Each of the rod-holes of the springs and the struts should be somewhat larger in diameter than the part of the rod which may go through it, in order that the car-body, as well as the rods, may swing laterally or longitudinally, as circumstances may require, the lateral movement of the body being necessary to obviate the disagreeable effect to passengers which would otherwise result while the car might be running on a curved track.

With my invention it will be perceived that the lateral swing of the car-body can take place, the body will be supported between the axle-boxes as well as outside of them, and the pressure on the axle-boxes is such as to

counteract any tendency to twist or bend up or curve the truck, and thus strain the connections of its parts.

I am aware that it is not new to place a semi-elliptic spring centrally over each axle-box and support its extremities in "pockets." Therefore I do not claim such, nor do I herein claim as my present invention the arrangement shown in Fig. 2 of the drawing. Nor do I herein claim hanging the car-body by a spring or yielding connection extending from the pedestal to the truck-frame, and acting in the manner and for the purpose and being arranged as set forth in Letters Patent No. 38,726, granted June 2, 1863, to Alfred Bridges.

What I claim as my invention or improvement is—

The combination and arrangement of the four struts E E E E, the four pendulous rods or hangers F F F F, and the two semi-elliptic springs G G, disposed on each side of the truck-frame B, with the said frame, the axle-boxes C C thereof, and the platform or carriage-body A, the whole being substantially as represented in Fig. 1 of the drawings, and as hereinbefore explained.

TRUE WEST

Witnesses:
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