(No Model.)

E. CLIFF.

PEDESTAL AND AXLE BOX FOR CAR TRUCKS.

No. 526,857. Patented Oct. 2, 1894.

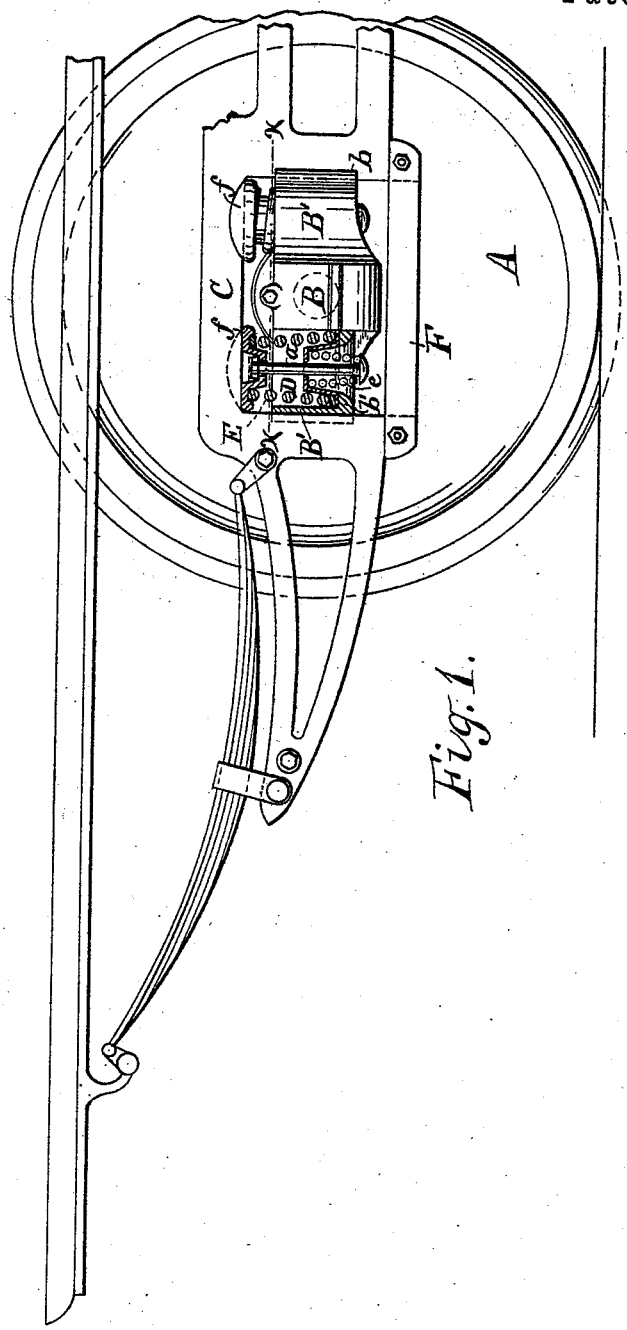

Fig. 1.

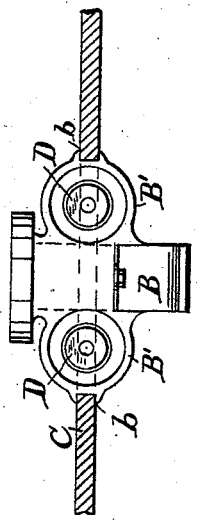

Fig. 2.

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UNITED STATES PATENT OFFICE.

EDWARD CLIFF, OF NEWARK, NEW JERSEY.

PEDESTAL AND AXLE-BOX FOR CAR-TRUCKS.

SPECIFICATION forming part of Letters Patent No. 526,857, dated October 2, 1894.

Application filed April 4, 1894. Serial No. 506,241. (No model.)

To all whom it may concern:

Be it known that I, EDWARD CLIFF, of Newark, in the county of Essex, in the State of New Jersey, have invented new and useful Improvements in Car-Pedestals and Axle-Boxes, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in pedestals and axle-boxes for street railway car-trucks and the object is to provide an easier riding car and to prevent undue vibrations of the frame which soon cause the same to loosen and rattle at the joints.

To this end my invention consists in the combination with the axle-box and the pedestal or yoke in the frame, of a cylindrical casing on each side and integral with the axle-box, grooves in said casings for the sides of the pedestal to slide in, a partition in each casing dividing the same into two compartments, a spiral spring in each case between the partition and the pedestal, a spiral spring below the said partition, and a bolt extending through both springs and connected to the pedestal, and my invention consists in certain other combinations of parts hereinafter described and specifically set forth in the claims.

In the drawings accompanying this specification and forming a part hereof, Figure 1 is a side elevation of the pedestal and axle-box partly in section to show the partition and springs, and Fig. 2 is a top plan view of the axle-box, and a portion of the pedestal or frame in section on line *x*, *x*, of Fig. 1.

Referring specifically to the drawings, A is a wheel; B, the axle box, and C the pedestal or yoke which is preferably made integral with the frame of the truck. Heretofore the vertical sides of the yoke worked directly on the sides of the box, B, but in my invention said vertical sides are separated widely to receive cylindrical casings B′, B′, which are located one on each side of the box and integral therewith. Vertical grooves, *b*, in the outer sides of the said casings receive the vertical sides of the yoke or pedestal which slide therein. The upper sides of each of the casings are open but the bottom is provided with an inwardly extending flange, *b*′. On this flange is supported the partition, D, which divides the casings B′ into two parts. The partition is conically formed and provided with an outwardly extending flange at its base which rests on the upper side of the flange *b*′. The partition is concentric with the inner walls of the casings, B′. Its top is flat to provide a bearing surface on its inner side for a weaker spiral spring, and its center is perforated to receive the vertical bolt, *a*, which passes through the said aperture and springs.

Above each cylindrical casing, B′, on the lower side of the upper horizontal member of the yoke is fixed a bearing *f*, for the upper end of a spiral spring. The bearing is depressed and perforated at its center to receive the bolt and nut, *a*, and allow the head to lie between the bearing and the yoke. The said bolt extends to or somewhat below the lower side of the casing, B′, and is provided on its lower end also with a head or nut for a bearing for the lower end of a graduated spiral spring, *e*, which lies between the upper side of the said head of the bolt, *a*, and the lower side of the partition D. The smallest end of the spring bears on the head of the bolt.

E is a larger and stronger graduated spiral spring which lies between the upper side of the outwardly extending flange of the partition, D, and the bearing, *f*, the smallest end of this spring being in contact with the bearing.

It will be apparent that the bolt, *a*, passes through both springs, and, that both casings B′ are similarly constructed and equipped.

F is a detachable retaining piece extending horizontally between the sides of the yoke and below the axle-box which can be detached for the purpose of removing the box from the yoke or frame.

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

1. The combination with an axle-box and pedestal, of a cylindrical casing on each side and integral with the box, grooves in said casings to receive the vertical sides of the pedestal, a partition in each casing, a spiral spring between the partition and the upper horizontal portion of the pedestal, a spiral spring below the said partition, and a bolt carrying a bearing for the lower spring and extending vertically upward through the par-

tition and springs and secured at its upper end to the pedestal, as and for the purpose described.

2. The combination with an axle-box, and a pedestal arching over the same and provided with vertical sides connected together below the axle-box, of a casing on each side of and integral with the axle-box, and between the said vertical sides of the pedestal, and adapted to slide on said vertical sides, and a spring within each casing and between the same and the upper horizontal portion of the pedestal, as set forth.

3. The combination with an axle-box and pedestal, of a casing on each side of the axle-box and engaging with the sides of the pedestal, a partition in each of the casings, a spiral spring in the casing above the partition and bearing upon the pedestal, a spiral spring below the partition, a bolt carrying a bearing on its lower end for the lower spring and connected at its upper end to the pedestal, as set forth.

4. The combination with an axle-box and pedestal, of a casing having cylindrical inner walls on each side of the axle-box and engaging with the vertical sides of the pedestal which slide thereon, a partition in each of the casings, a spiral spring in the casing above the partition and bearing upon the pedestal, a spiral spring below the partition, and a bolt carrying a bearing on its lower end for the lower spring and connected at its upper end to the pedestal, as set forth.

5. The combination with an axle-box and pedestal, of a casing having cylindrical inner walls, on each side of the axle box and engaging with the vertical sides of the pedestal, a cylindrical partition in each of the casings, a graduated spiral spring between the partition and the pedestal, a graduated spiral spring below the partition, and a bolt connecting the lower spring with the pedestal as and for the purpose described.

6. The combination with an axle box and pedestal, of a casing having cylindrical inner walls on each side of the axle-box, grooves in the outer sides of the casings engaging the vertical sides of the pedestal, a cylindrical partition in each casing concentric with the walls of the latter, an inwardly extending flange at the upper end of the partition, an outwardly extending flange at the lower end of the partition and resting on a flange extending inwardly from the lower side of the casing, a bearing above each casing on the lower side of the upper horizontal portions of the pedestal, a spiral spring within the casing in contact with the bearing, a spiral spring below and within the partition, and a bolt connecting the lower end of the lower spring with the said bearing, as described and shown.

7. The combination with an axle-box and pedestal, arching over the same of a support for a spiral spring on each side of the axle-box and between the axle box and the vertical sides of the pedestal the vertical sides of said pedestal adapted to slide on said supports, and spiral springs between the said supports and the upper horizontal portion of the pedestals, substantially as described and shown.

8. The combination with an axle-box and pedestal, of a support for a spiral spring on each side of the axle-box and engaging with the vertical sides of the pedestal to slide thereon, spiral springs between the said supports and the upper horizontal portion of the pedestals, spiral springs below the said supports and bolts passing through the springs and connecting the lower springs with the said horizontal portion of the pedestal, substantially as described and shown.

In testimony whereof I have hereunto signed my name.

EDWARD CLIFF. [L. S.]

Witnesses:
E. L. TODD,
V. J. GOETZ.