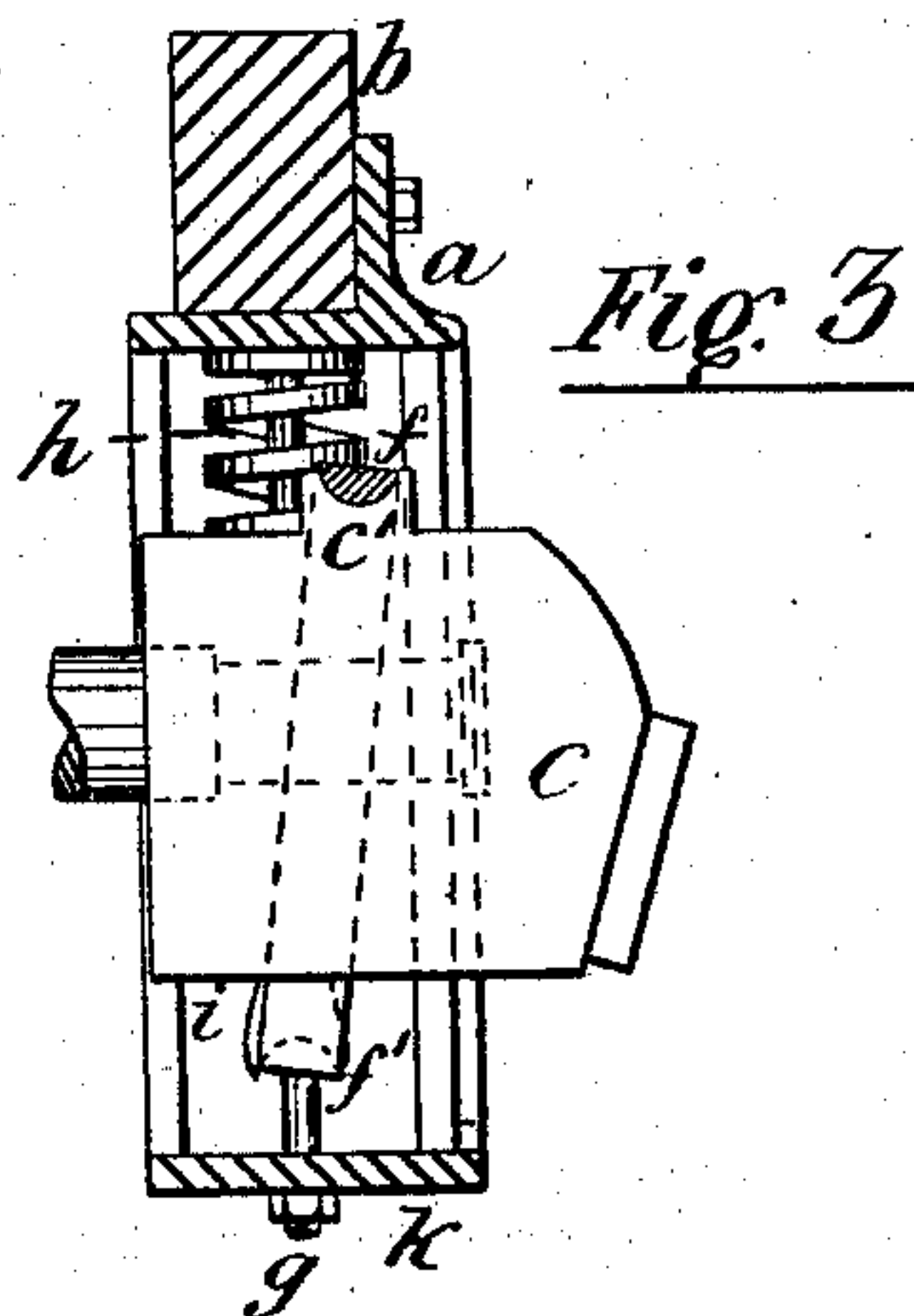
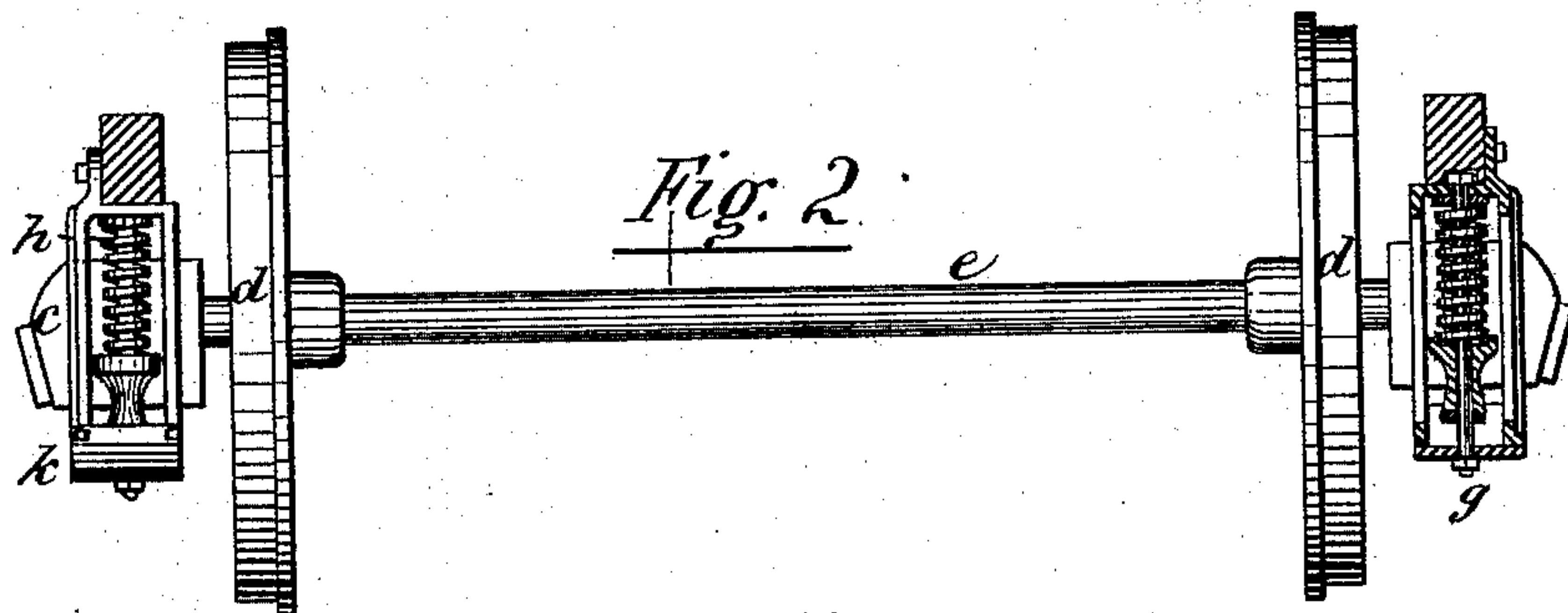
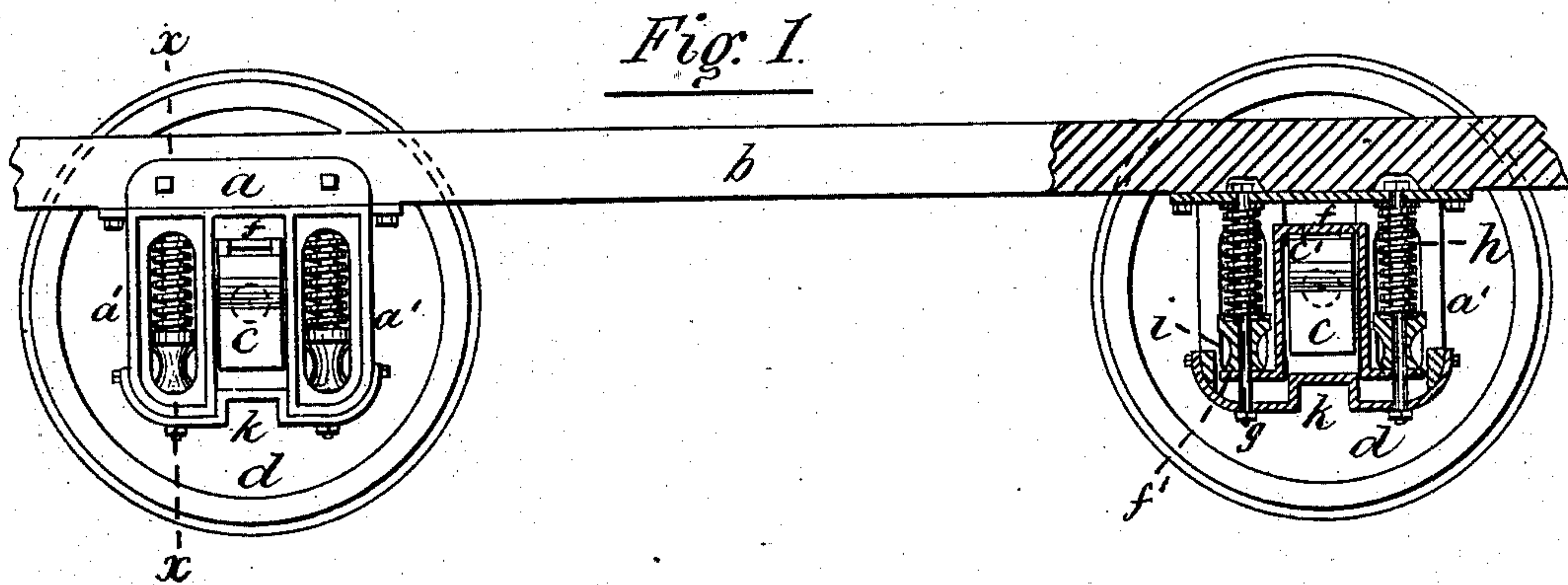


(No Model.)

E. R. ESMOND.
Car Axle Box.

No. 238,280.

Patented March 1, 1881.



Witnesses.

H. D. Williams.
John D. Theobald

C. Richard Esmond.
Inventor.
per Alfred Theobald atty.

UNITED STATES PATENT OFFICE.

E. RICHARD ESMOND, OF NEW YORK, N. Y.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 238,280, dated March 1, 1881.

Application filed August 23, 1880. (No model.)

To all whom it may concern:

Be it known that I, E. RICHARD ESMOND, of New York, county and State of New York, have invented a certain new and useful Improvement in Cars, of which the following is a specification.

This invention relates to that class of journal-boxes and pedestals for four-wheel cars in which the journal-boxes are fitted to move vertically between the horns of the pedestals, with saddles setting on the boxes and carrying springs at their lower ends, arranged in the interior of the pedestal-horns, and upon which the car-body rests.

It consists in making the part of the saddle over the journal-box rounded to fit into circular supports or bearings on the top of the box, and the lower ends rounded to fit into circular recessed spring-seats under the springs, so that the journal-boxes, with the axles and the pedestals secured to the car-body, are free to move laterally relatively to each other, the lower ends of the saddles moving with the pedestals and car-body at points which would be the centers of their rounded lower ends, and the upper parts of them moving with the boxes and axles at a point which would be the center of their rounded upper parts fitting into the circular supports on the top of the journal-boxes.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of the wheels and part of the pedestal-timber of a four-wheel car, showing one of the pedestals and its saddle in section. Fig. 2 is an end view of a pair of wheels, their pedestals, and boxes, with one of the pedestals in section, cut through the line *x x*, Fig. 1; and Fig. 3 is an enlarged transverse sectional view cut through the jaw of the pedestal.

The pedestal *a* is constructed and secured to the pedestal-timber *b*, which forms part of the frame of the car-body, in the ordinary manner. The axle-box *c* slides freely vertically and laterally in the jaw of the pedestal *a* between the pedestal-horns *a'*, and, with the exception of the circular recessed support or bearings *c'*, formed on its top, and the absence of lugs to prevent transverse movement in the pedestal-jaw, is of the ordinary construction.

d d represent the wheels, and *e e* the axles.

In the circular recessed supports or bearings *c'* on the top of the axle-box *c* rests the upper part of the saddle *f*, which is rounded so as to fit therein. The vertical parts of it hang down against the sides of the axle-box *c*, and are free to assume angular positions laterally to the axle-box. The lower ends, *f'*, of the sides of the saddle are bent at right angles to the vertical sides and fit over the spring guide-bolts *g g*, which pass vertically through the center openings of the horns *a'* of the pedestal *a*. The holes in the ends *f' f'* of the saddle, through which these bolts pass, are enlarged sidewise to allow the saddle to rock thereon, as shown in Fig. 3.

The car-body is supported on the bent ends *f' f'* of the saddle *f*, through the medium of the springs *h h*, which surround the guide-bolts *g g* and rest in the spring-seats *i i*. The under sides of these spring-seats have circular recesses formed therein to correspond to the rounded upper sides of the bent ends *f' f'* of the saddle *f*.

The axle-boxes are prevented from getting out of the jaws of the pedestals, when the weight of the car-body is by any cause taken off the springs and saddle, by means of the jaw-bits *k* being bent up into the jaws of the pedestal, as shown at Fig. 1, so that the bottom of the box comes in contact with the bent-up portion of the jaw-bits *k*, while the springs *h h* are under compression between the bent ends of the saddle *f* and the under side of the upper part of the pedestal, thereby keeping the saddle in the circular bearings on the top of the boxes by the downward pressure of the springs on the saddle.

I do not confine myself to lateral circular bearings, as the same may be made knife-edge bearings, if desired.

I am aware that the axle-boxes of cars have been connected to the frame or body of the car by means of suspension-links, (as illustrated in the United States Letters Patent to J. Eccles, No. 169,792, dated November 9, 1875, and R. Winslow, No. 115,261, dated May 23, 1871,) so I do not claim, broadly, such suspension of the car-body to the axle-boxes; but,

What I claim, and desire to secure by Letters Patent, is—

1. The saddle *f* of a car-axle box, constructed,

substantially as described, to rock at its lower ends in the horns of the pedestal *a*, and at its upper part on the top of the box *c*, in combination with the axle-box *c*, free to slide in the jaw of the pedestal both vertically and laterally, as and for the purpose hereinbefore set forth.

2. In combination, the axle-box *c*, provided with the bearings *c' c'*, the saddle *f*, round at its central portion and at its supporting ends, which are at right angles to its hanging sides,

and through which pass the spring guide-bolts *g g*, the guide-bolts *g g*, and the pedestal *a*, substantially as and for the purpose hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 14th day of August, A. D. 1880.

E. RICHARD ESMOND.

Witnesses:

JOHN D. SHEDLOCK,

H. D. WILLIAMS.