

(No Model.)

M. G. HUBBARD.
CAR GEAR.

No. 450,726.

Patented Apr. 21, 1891.

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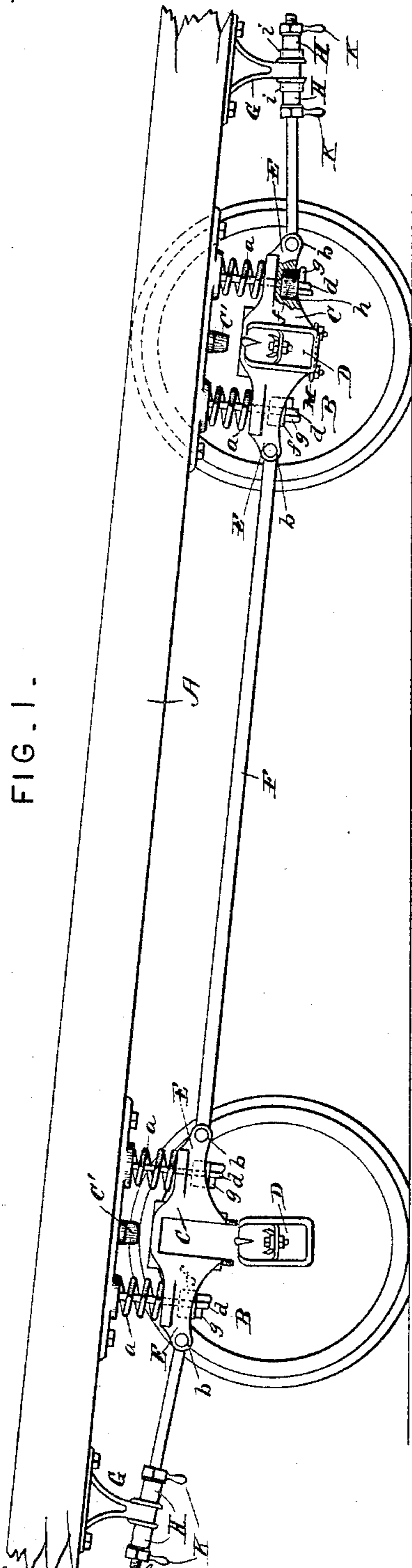
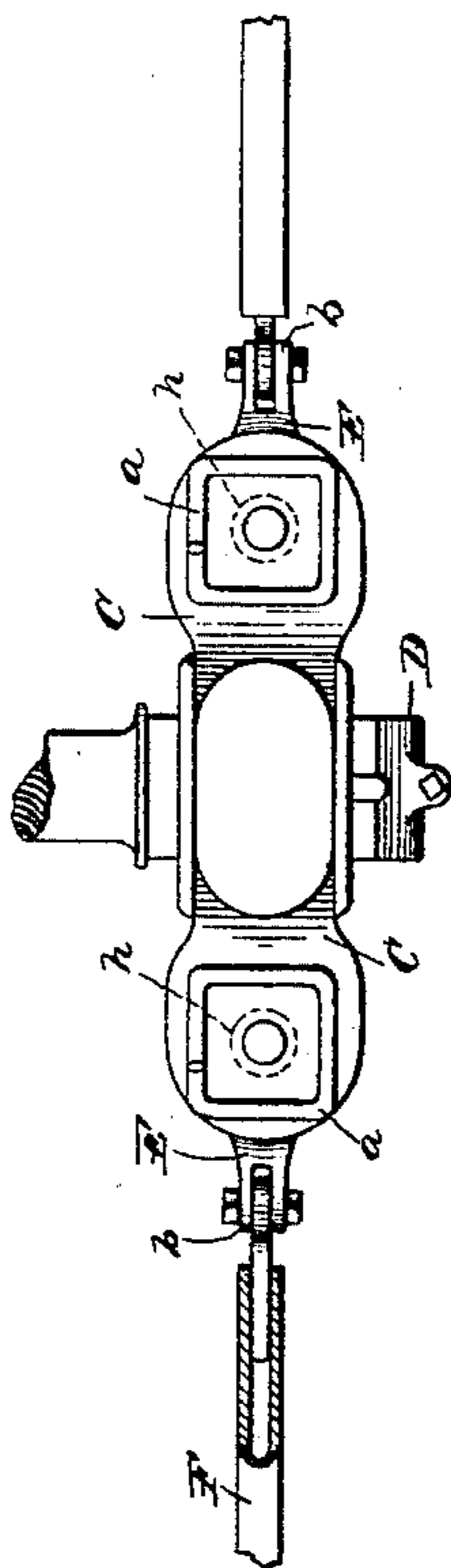


Fig. 2.



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UNITED STATES PATENT OFFICE.

MOSES G. HUBBARD, OF CHICAGO, ILLINOIS.

CAR-GEAR.

SPECIFICATION forming part of Letters Patent No. 450,726, dated April 21, 1891.

Application filed March 5, 1890. Serial No. 342,724. (No model.)

To all whom it may concern:

Be it known that I, MOSES G. HUBBARD, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented a new and useful Improvement in Car-Gear, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to an improved car-gear for street-cars; and it consists in a novel construction of independent yoke-pedestals having arms on each end, on which the springs are mounted and adapted to embrace and hold each a removable journal-box.

It further relates to the combination of the draft-links with said independent yoke-pedestals for permitting their movement independent of the car-body, and to certain details of construction and arrangement of parts as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side view showing a portion of a car-body at one end mounted on my improved independent car-gear and at the other end the manner of removing an axle, journal-box, and wheels therefrom without removing the pedestals. Fig. 2 shows a top view of one of my improved independent pedestals mounted on an axle-journal detached.

In Fig. 1, A is a section of a car-body.

a a a a are the springs mounted on the independent yoke-pedestals on one side of the car, the car-body being mounted on the springs alike on both sides of the car.

B B are the wheels on one side.

C C are the yoke-pedestals, which are not bolted to the car-body, but are independent thereof.

D D are the journal-boxes.

E E are the arms projecting from the pedestal for mounting and supporting the car-springs.

F is a pivoted bar connecting the independent yoke-pedestals on the same side of the car. This bar is constructed of gas-pipe, in the ends of which wrought-iron eyes are welded, suitably formed to be pivoted between ears *b b b b* on the ends of the arms which project from the yoke-pedestals. This construction of the connecting-bars is necessary to prevent their being bent by careless em-

ployés stepping up on to them to wash the cars.

To the ends of the arms which project from the opposite ends of said independent pedestals I pivot the draft-links patented by me September 22, 1885, Serial No. 326,652, and the other ends of said draft-links are pivoted in the brackets *G G*, which are attached to the car-body. These pivots I form by passing the ends of the draft-links through the loosely-fitting brackets and locate a rubber spring on each side of the bracket, as shown at *H H*, and these springs are properly compressed by the handle-nuts *K K*. This arrangement attaches the wheels, journal-boxes, and pedestals to the car-body in such manner that they can vibrate in all directions independently thereof and allow the journal-bearings to conform more perfectly to the journals of the axles.

To prevent overstraining the springs and the arms which support them vertically, I locate a rubber concussion-spring *C* directly over the pedestal, which, when excessive strain is exerted vertically, will come down into contact with the top of the pedestal and relieve the springs and their supports.

By the arrangement above described an axle and wheels can be removed without disconnecting any of the attachments, except the small iron strap *M*, which is bolted to each of the lower ends of the pedestals and secured under the journal-box for the double purpose of holding them in the yokes of the pedestals and also to strengthen the pedestals against the upward vibrations of the car-body. This is a convenience that will be highly appreciated in street-cars, as the usual construction of independent car-gears requires the uncoupling of many parts to remove an axle journal-box and wheels, while with my improved construction, as above described, an axle journal-box and wheels can be removed as easily as from the old style of yoke-pedestal attached permanently to the car-body and embracing the journal-box.

To hold the car-body down to the gearing, check-rods *d d d d* are pivoted to the under side of the spring-caps, which are bolted to the under side of the car-body, and they extend down inside of the springs and pass loosely through the spring-supports and

through rubber springs *ffff*, located on the under side of the spring-supports, and these rubber springs are held up against said spring-supports by the keys *g g g g*. The lower ends of these check-rods being thus adapted to slide freely through, and also to swing laterally in the spring-supports, as the springs yield and vibrate under the varying weight upon them. I have found it quite difficult to keep said ends from rattling against the sides of the holes through the spring-supports, and have only succeeded in doing so by surrounding the rubber springs by rings *h h h h*, cast on the bottom of the spring-supports and which fit the springs closely enough to hold them and the check-rods passing through them from any considerable lateral vibration. This effectually stops the rattling here, and also the same device, cast on each side of the brackets at *i i i i*, through which the draft-links pass, holds the draft-link springs, and thereby the links, from rattling in the brackets.

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

1. An independent yoke-pedestal adapted to embrace and hold the removable journal-box, said pedestal having its ends extended into arms on which to mount and hold the springs on which the car-body is mounted and connected to the latter without posts, braces, or other rigid auxiliary support to allow it to vibrate independently of the car-body, substantially as described.

2. The combination, with the car-body and its supporting-springs, of the independent

yoke-pedestals adapted to move or vibrate independently of the car-body both vertically and laterally, the journal-boxes removable from said pedestals, and the connecting-bars and yielding draft-links connected to said independent yoke-pedestals, substantially as described.

3. The independent yoke-form pedestals embracing the journal-boxes and having arms projecting from their sides to mount the car-supporting springs, in combination with the said springs mounted on said arms and the concussion-springs located directly over the car-journals, substantially as and for the purposes specified.

4. The small rubber springs applied to the loose ends of the check-rods of a car-truck and surrounded by and in combination with permanent rings surrounding said springs to prevent rattling, substantially as described.

5. The yoke-shaped independent pedestal constructed with spring-arms projecting from its ends for mounting the springs on, substantially as described, in combination with the removable journal-box, and the iron strap bolted to and extending across from one of the lower ends of the yoke of the pedestal to the other for the double purpose of giving increased strength to the pedestal and facilitating removal of the journal-box, substantially as described.

In testimony whereof I have hereunto set my hand this 21st day of February, A. D. 1890.

MOSES G. HUBBARD.

Witnesses:

REX. M. SMITH,
H. J. ENNIS.