

W. J. CARROLL.
Car Truck.

No. 231,898.

Patented Sept. 7, 1880.

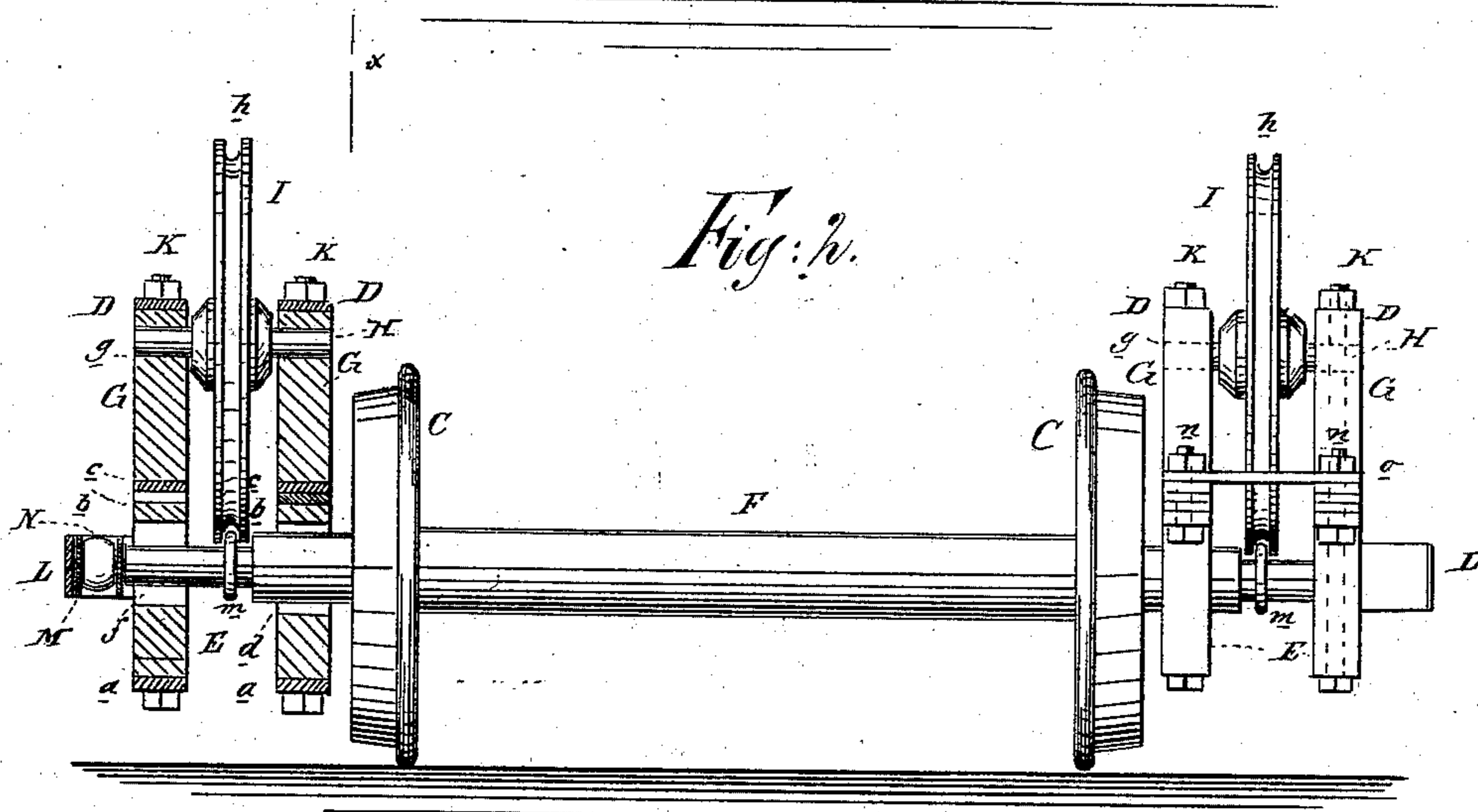
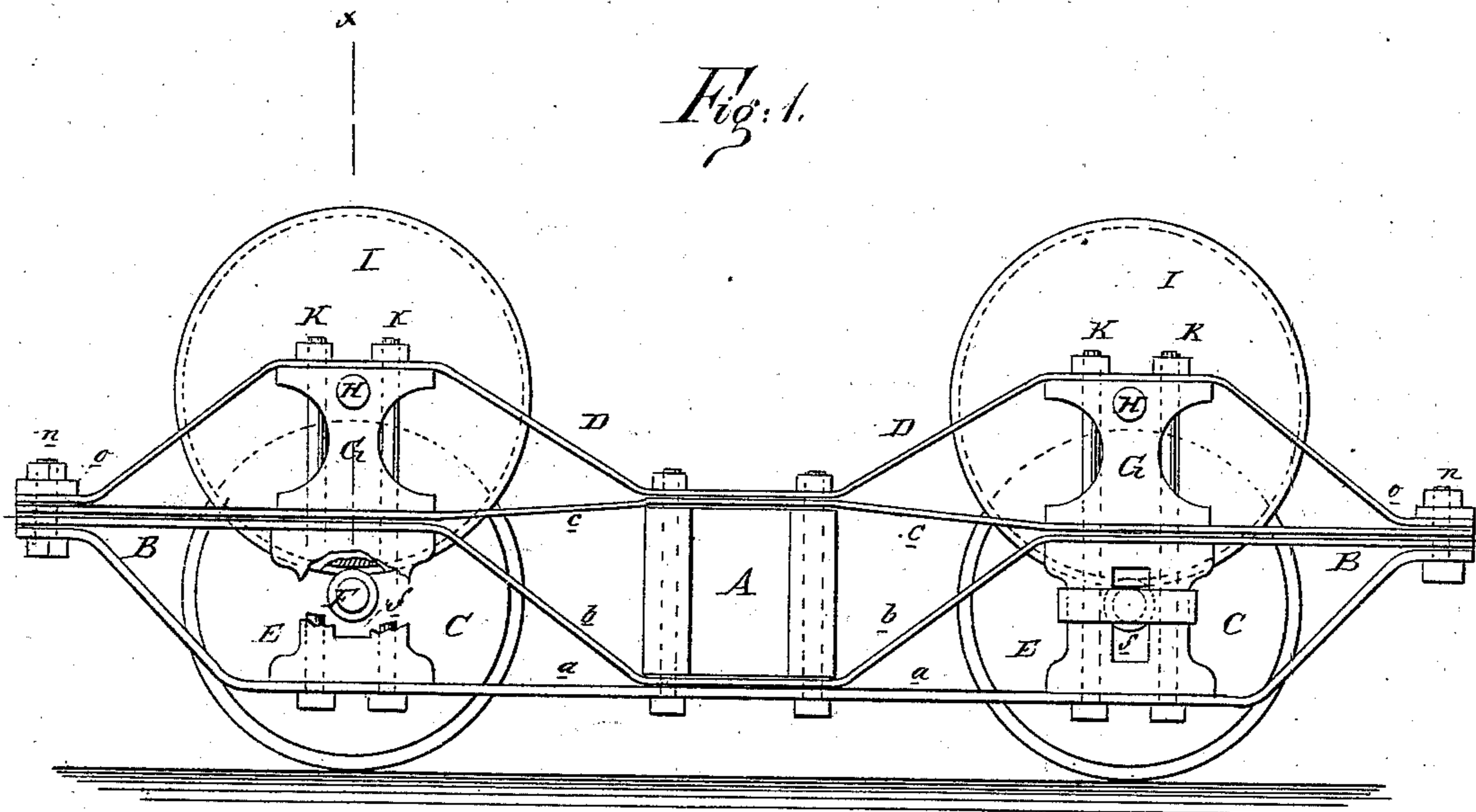
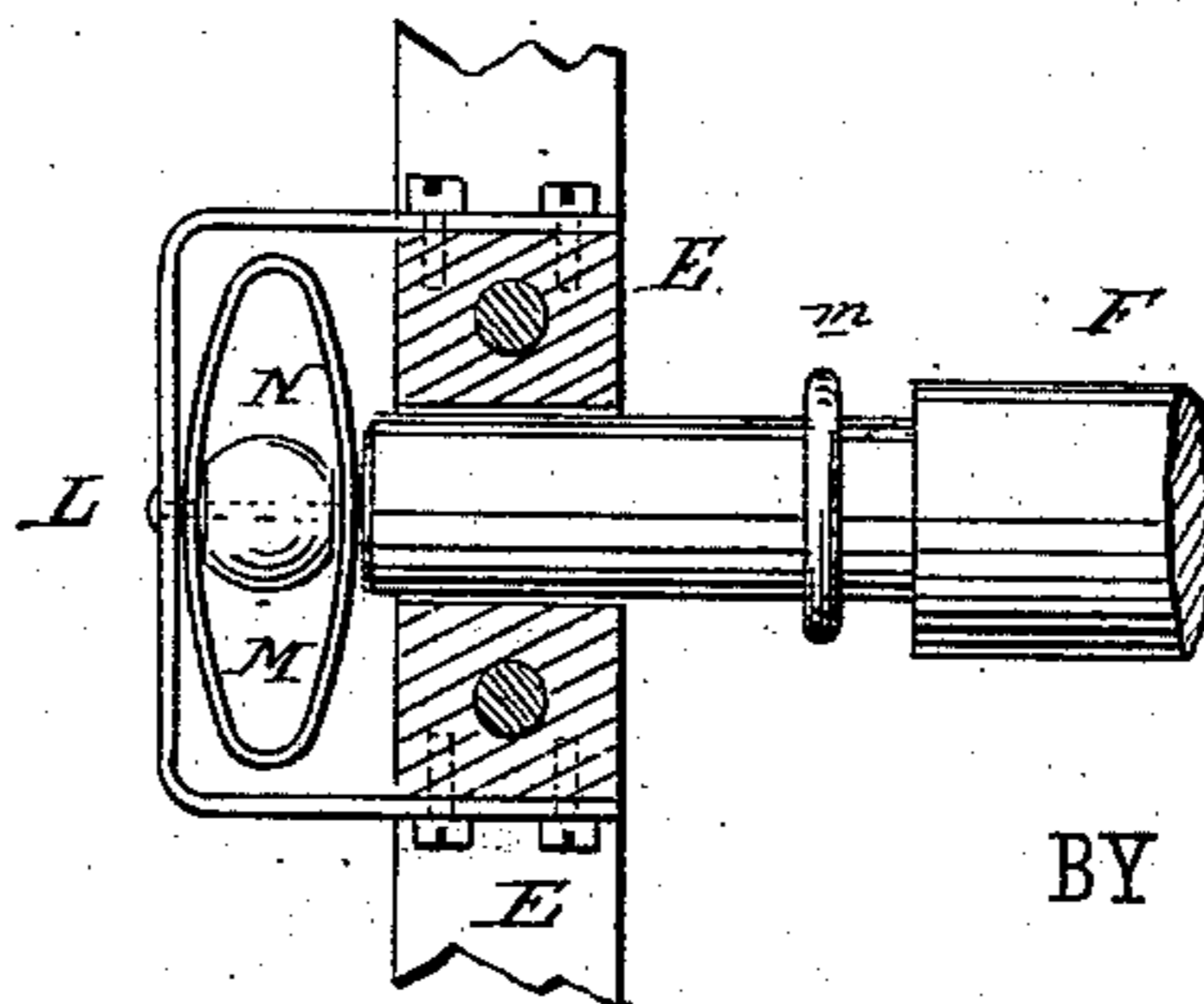


Fig. 3.



WITNESSES:

Chas. Nida.
C. Bengtson

INVENTOR:

W. J. Carroll

BY

Mum & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM J. CARROLL, OF NATCHEZ, MISSISSIPPI.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 231,898, dated September 7, 1880.

Application filed November 24, 1879.

To all whom it may concern:

Be it known that I, WILLIAM J. CARROLL, of Natchez, in the county of Adams and State of Mississippi, have invented a new and useful Improvement in Car-Axle Journals, of which the following is a specification.

Figure 1 is a partly sectional side elevation of the device. Fig. 2 is a transverse sectional elevation on line *x x*, Fig. 1. Fig. 3 is an enlarged plan view, partly in section, showing the device for receiving the thrust of the car-axles.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide a device that may be substituted for a car-axle box or waste-box, and thereby avoid the use of lubricants to the car-axle; and the invention further has reference to the relieving of the engine by diminishing the traction or draft force.

The invention consists of two gallows-frames supporting anti-friction wheels, whose grooved peripheries rest on rings or swells of the car-axle journals, said gallows-frames being firmly secured to the bearing-timbers of the car.

In the drawings, A represents the bearing-timbers of a car lengthened about a foot beyond their usual length. To these timbers A, and at right angles with them, are bolted two sets, B B, of three bars each, of common arch-bars, on each side of the car-truck and outside of the car-wheels C, and to each set B B is added a fourth bar, D, above the other three. On the lower bar or chord, *a*, and beneath the two bars *b c*, which compose the arch and the reversed arch, is placed a metal standard or bearer, E, in each of the bar structures. Through each of these metal bearers or standards E are elongated openings *d f*, the width of which is about two inches greater than the diameter of the journal of the car-axle F, which revolves in them. The unreduced shoulder of the car-axles F will pass nearly or quite through the inner standard or bearer E, next to the car-wheels C, while the journals of the car-axles F will occupy the opening *f* in the outer standards or bearers E.

Immediately above the standards E, and on top of the arch-bars B B and beneath the bars D D, other sets of metal standards or bearers, G G, are placed, two at each corner of the truck,

similar to those below, in each of which standards G is an opening, *g*, near the top, to receive the boxes in which the journals H of the grooved anti-friction wheels I I run. These anti-friction wheels I I are about four inches in breadth on their faces, in which faces are the grooves *h*, turned out to fit the swells or rings *m* on the journals of the car-axle F, upon which these wheels I I run.

On the inner ends of the journals of the axles F are the swells or rings *m*, which are a little deeper than the depth of the grooves *h*, but of less width than said grooves *h*. These swells or rings *m*, running in the grooves *h* of the wheels I I, are intended to prevent the wheels I I from embedding in the journals of the car-axles E, upon which they run.

The grooved anti-friction wheels I I must be hung so that they may oscillate with the car-axles F F.

K K are strong bolts, with heads and nuts, (double nuts are preferable,) which pass down through all the bars *a b c D*, and through grooves or openings in the front and back edges of the metal standards E E G G, thus securing the said bars and standards together and forming gallows, by which the entire weight of the car-bed is suspended on the journals of the anti-friction wheels I I, thus relieving the journals of the car-axles F from all friction resulting from weight, leaving them to endure only such friction as results from traction fore and aft. This fore-and-aft friction will be near the outer end of the journals of the car-axles F, and will be expended on brass bars that will be secured fore and aft of the said journals in the outer standards E E. These brass bars will be adjustable by plates of backings, and will serve to keep the journals of the axles F in exact vertical line with the journals of the axles of the grooved wheels I I.

The chuck resulting from the oscillation of the car-axles will be expended upon the strong metal bars L, standing across the ends of the car-axles F, and secured to the metal standards E E. The spaces between the inner sides of these bars L L and the outer ends of the axles F are occupied by elliptic springs M, re-enforced by the elastic cushions N between the said spring M and bar L.

The ends of the bars *a b c D* extend beyond

the metal standards E E G G, so that the ends of the bars *a b* may be brought up to the ends of the bar *c*, and the ends of the bar D be brought down to the same point. The bolts
5 *n*, that secure the ends of these bars *a b c D* together, also take a short bar, *o*, which ties the bars together.

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

1. In a car-axle bearing, a double-truss or gallows truck-frame, a double connected pedestal or carrier supported by said frame and having vertical slots in the pedestal-sections,
15 an axle-journal extending through said slots and provided with a bearing-collar between the sections of the frame, and a rotating bearing-wheel journaled in the upper part of the pedestal, between its sections, with its perim-

eter extending below the upper ends of the pedestal-slots, substantially as specified. 20

2. A double railway-car truss or gallows frame provided with pedestals or carriers having bearings in their upper ends for an anti-friction roller or wheel, and axle ends extend-
25 ing through vertical slots in the lower parts of the pedestals, and provided with collars adapted to bear against the perimeter of the wheel, and transferring the weight of the car to the said wheel, substantially as specified. 30

3. In combination with the standards E E and car-axles F F, the bars L L, springs M M, and elastic cushions N N, substantially as and for the purpose described.

WILLIAM J. CARROLL.

Witnesses:

THOS. R. QUARTERMAN,
WALTER MCCREA.