

(No Model.)

W. T. BROWNE.  
Railway Car Truck.

No. 235,852.

Patented Dec. 28, 1880.

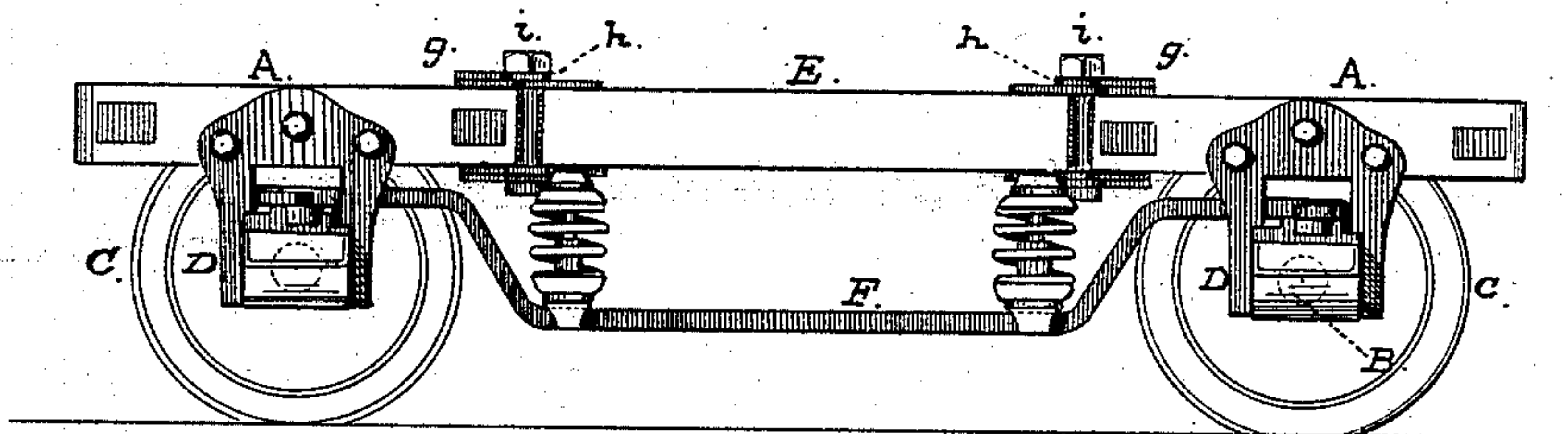


Fig. 1.

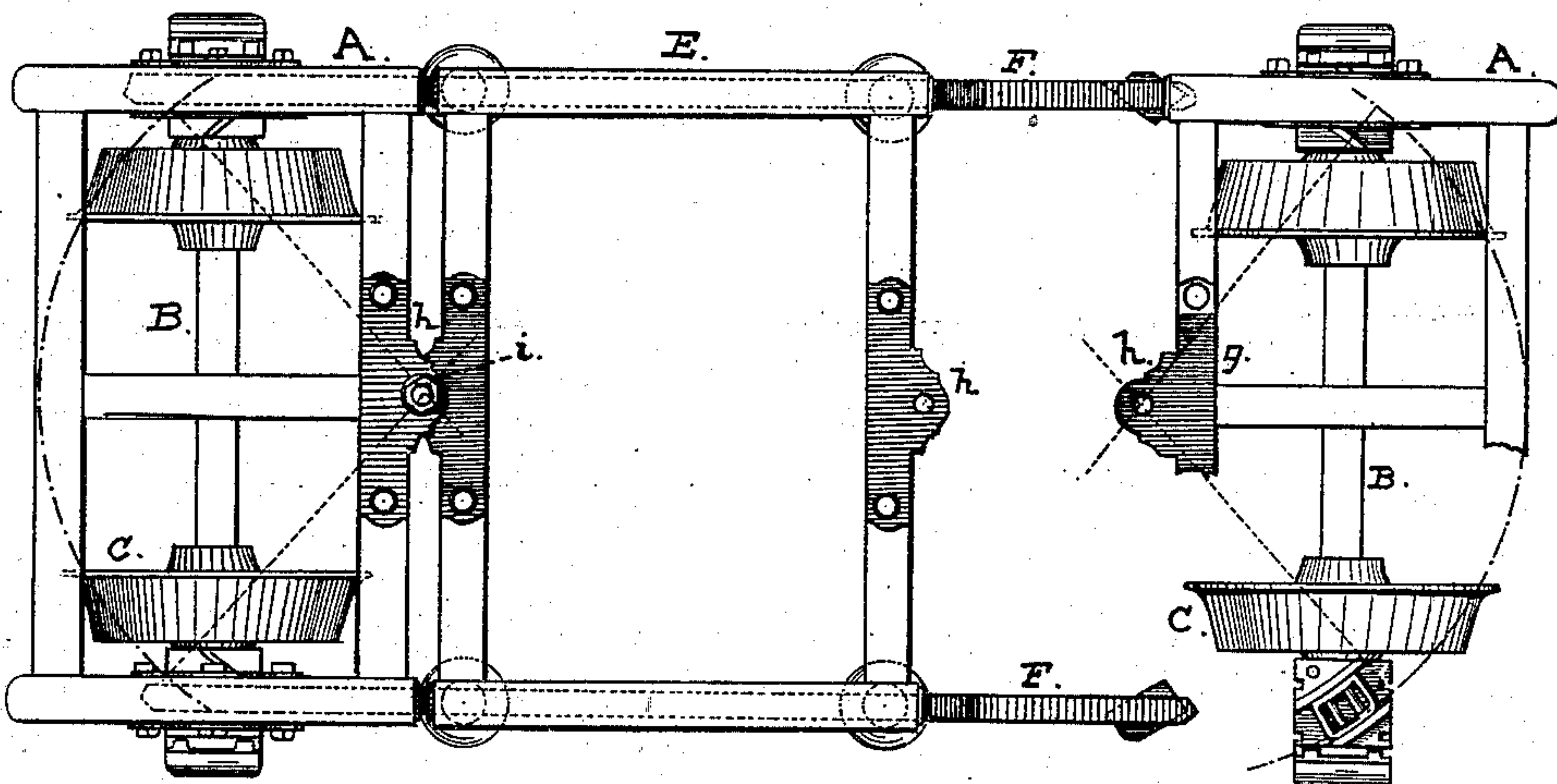


Fig. 2.

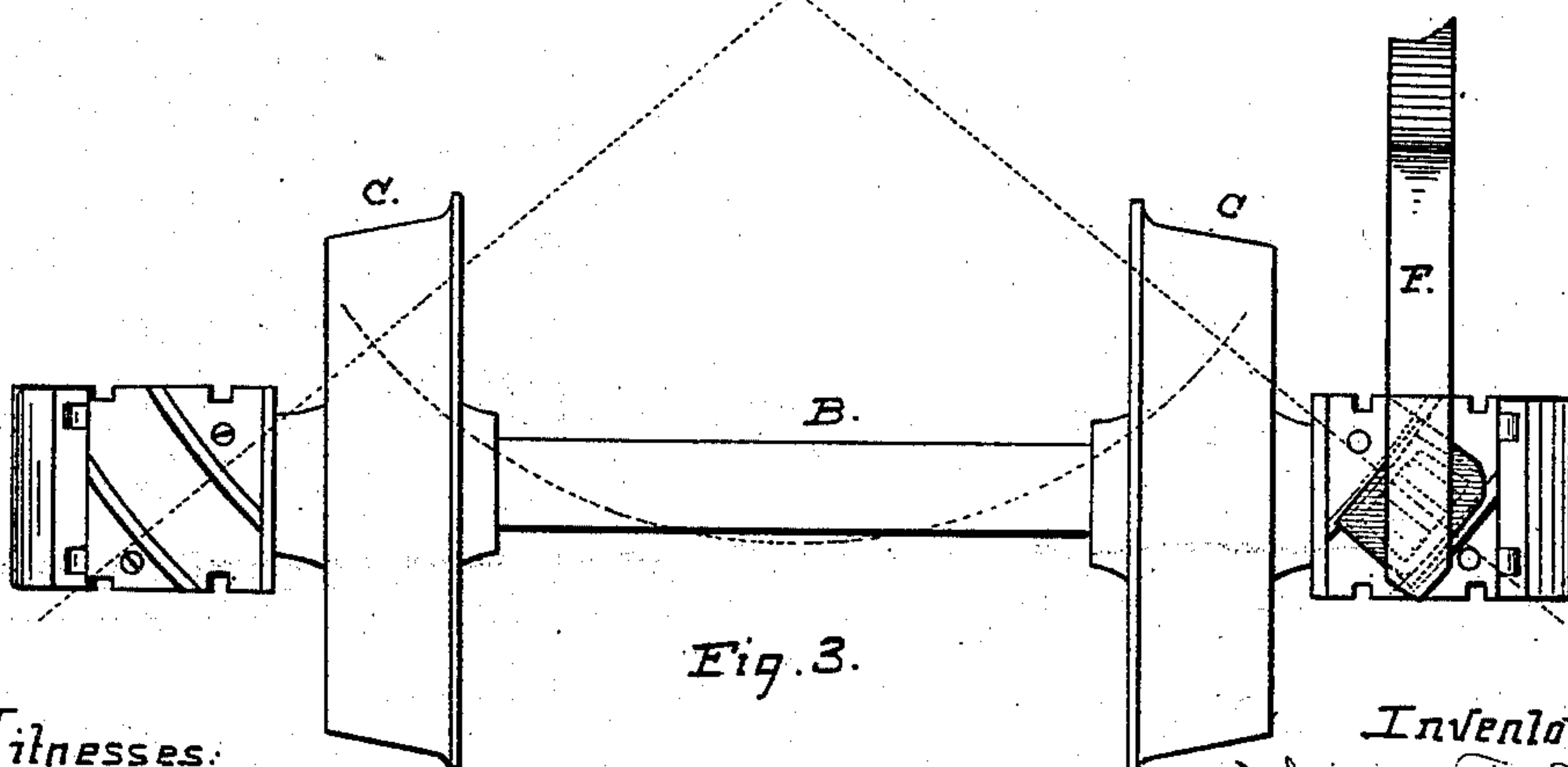


Fig. 3.

Witnesses:

Wm. S. Clark.  
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by his Atlys.,  
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# UNITED STATES PATENT OFFICE.

WILLIAM T. BROWNE, OF STOCKTON, CALIFORNIA.

## RAILWAY-CAR TRUCK.

SPECIFICATION forming part of Letters Patent No. 235,852, dated December 28, 1880.

Application filed June 17, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM T. BROWNE, of Stockton, in the county of San Joaquin and State of California, have invented certain new and useful Improvements in Railway - Car Trucks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention relates to an improvement upon the railway-car truck for which Letters Patent No. 225,741 were issued to me on the 23d day of March, 1880. In that arrangement a swiveling supplemental truck was mounted under each end of a main-truck frame, the swiveling point being located directly above the middle of the axle of each supplemental truck. The main frame, which supported the weight of the car, was borne upon side bars, called "equalizing-bars," the ends of which rested upon the journal-boxes, while the journal-boxes had a free vertical movement in the pedestals of the supplemental trucks, thus leaving the supplemental trucks and axles free to be turned a limited distance in either direction by the bearing and pressure of the cone-shaped tread of the wheels upon and against the rails of the track, so that the wheels would automatically adjust themselves upon the rails according to the line or sinuosities of the track.

I have discovered two defects in the construction of the said car-truck, as described and represented in my former patent. The first defect was in the arrangement of the main-truck frame above the supplemental trucks, whereby the height of the car from the ground was objectionably increased, and the other was that the pivotal point, about which the supplemental trucks swiveled, was directly in line with the bearing points of the wheels on the tracks, so that the swiveling operation was not as sensitive as it ought to be. My present invention remedies these defects by shortening the main-truck frame and dropping it between the two supplemental trucks, so that all these frames will be on the same level; also, in hinging the supplemental trucks to the main frame in a line with the middle of the axles, all as hereinafter more fully described.

Referring to the accompanying drawings, Figure 1 is a side elevation of my improved

truck. Fig. 2 is a top view, partly in detail. Fig. 3 is an enlarged view of one of the axles, its boxes, and the end of one of the equalizing-bars.

Let A A represent the frames of the swiveling trucks. Each of these frames carries an axle, B, with its wheels C, in slotted pedestals D, as described in my former patent.

Instead of making the main frame as long as the car-truck and mounting it above the supplemental trucks, as heretofore, I make a short main frame, E, which will fit in between the two supplemental frames A A, and I support this short frame from the equalizing-bars F F in the same manner that I supported the long frame. This brings the upper sides of the three frames on a level, so that the car is lowered the thickness of the main frame. I then couple the middle of each truck-frame with the middle of the main frame by a suitable connection that will let the supplemental frames swivel horizontally.

In the present instance I have represented a plate, g, secured upon the top and bottom of the meeting-timber of each frame, each of which plates has a projecting extension, h, at its middle. This extension projects out from the timbers a short distance, and has a hole in it, so that when the frames are in position the extensions will overlap each other, so that a pin or bolt, i, can be passed down through the holes, and thus couple the frames together. The extensions h are long enough to separate the meeting-timbers slightly, so that the frames of the swiveling truck can move horizontally far enough to accommodate the wheels and axles on the shortest practical curves; or, in other words, the arrangement provides a flexible truck that will accommodate itself to the shortest curves. In this case I do not require any independent stops for limiting the horizontal motion of the trucks, as the ends of the frames serve as stops. The weight of the car will be supported on the middle or main frame, E, equalizing-bars F, and anti-friction bearings on the axle-boxes, leaving the truck-frames A free to swivel horizontally. The coupling or joint by which the swiveling frames are connected with the main or central frame is thus brought nearer the center of the main frame and out of line with the bearing-points of the

wheels on the track, so that I secure the additional advantage of utilizing the pressure of the flanges of the wheel against the inside of the rail to adjust the wheels to the proper position to follow the track, the position of the pivot or coupling rendering the swivel-frames sensitive to slight lateral pressure on the wheels.

The cone shape of the wheels will be a decided factor in adjusting the swivel-frames on the track, as described in my former patent, but the pressure of the flanges against the rails acting on the pivot or coupling will render the action positive and quick when the wheels strike a curve.

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

In a car-truck, the combination, with the supplemental truck-frames A A, having the journal-boxes D, provided with curved ways, between which move bearings, and equalizing-bars F, with their ends resting and secured upon said bearings, of the intermediate frame, E, mounted upon springs supported upon the bars F, and having at each end plates with perforated extensions or projections pinned or bolted to perforated extensions on similar plates of the truck-frames, substantially as and for the purpose set forth.

In witness whereof I have hereunto set my hand and seal.

WILLIAM T. BROWNE. [L. S.]

Witnesses:

JNO. H. WEBSTER,

ALFRED B. TREADWELL.