

(No Model.)

S. T. WILLIAMS.

CAR BRAKE.

No. 322,337.

Patented July 14, 1885.

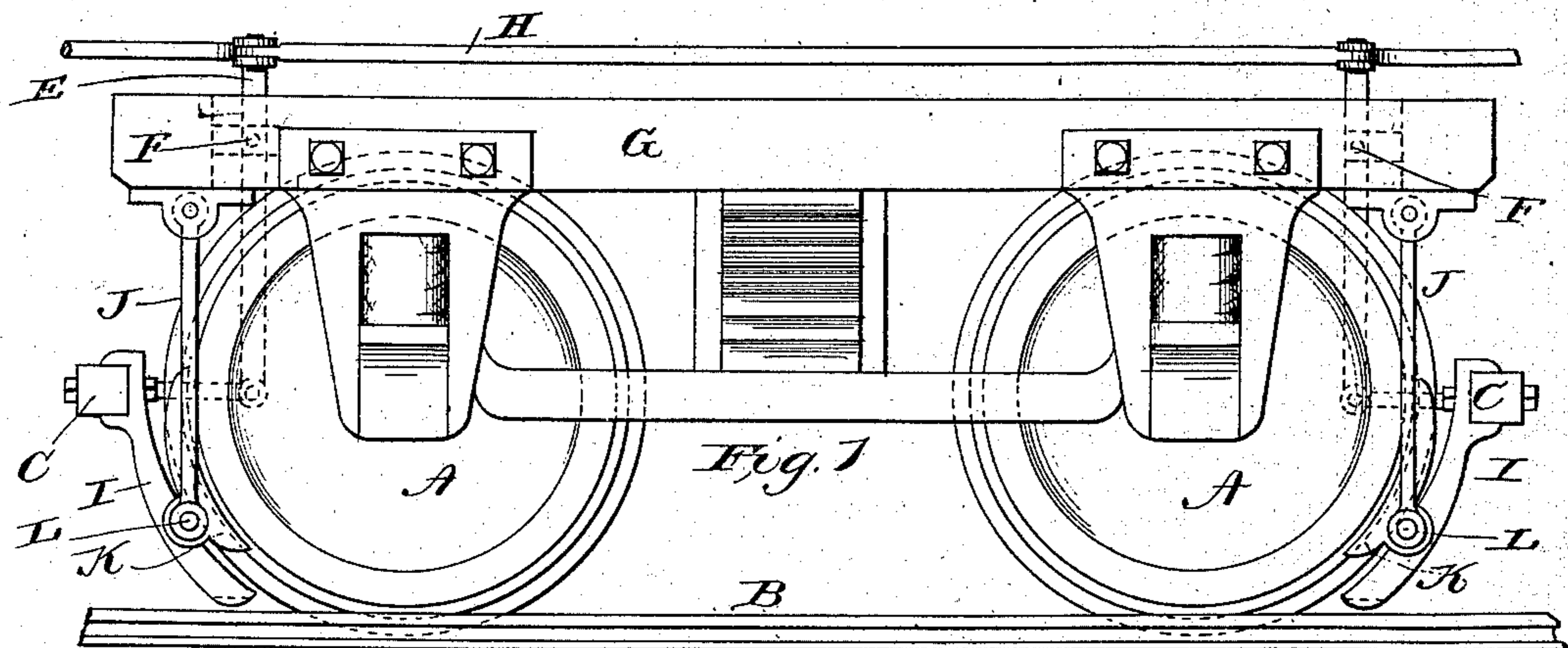


Fig. 2.

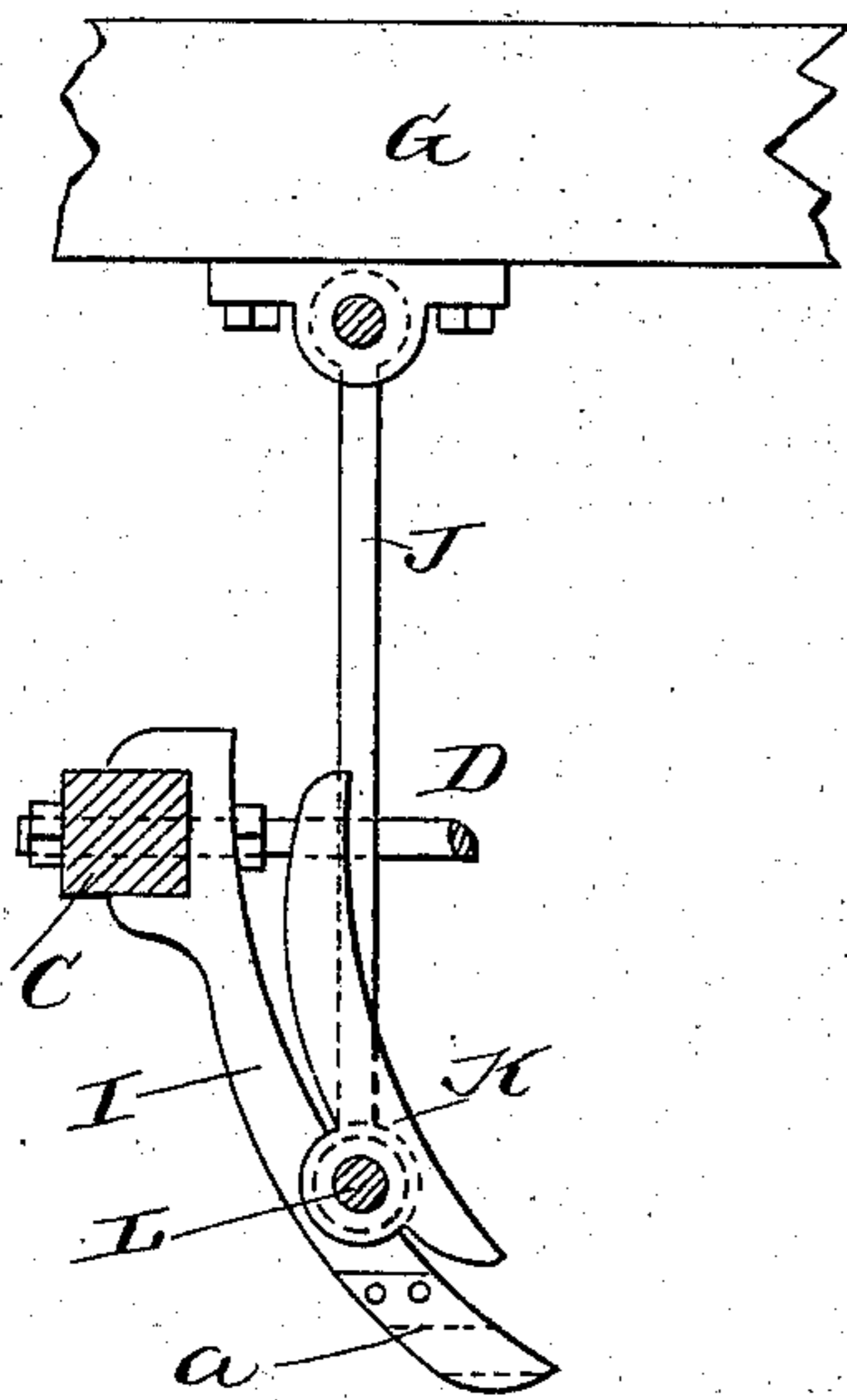


Fig. 3.

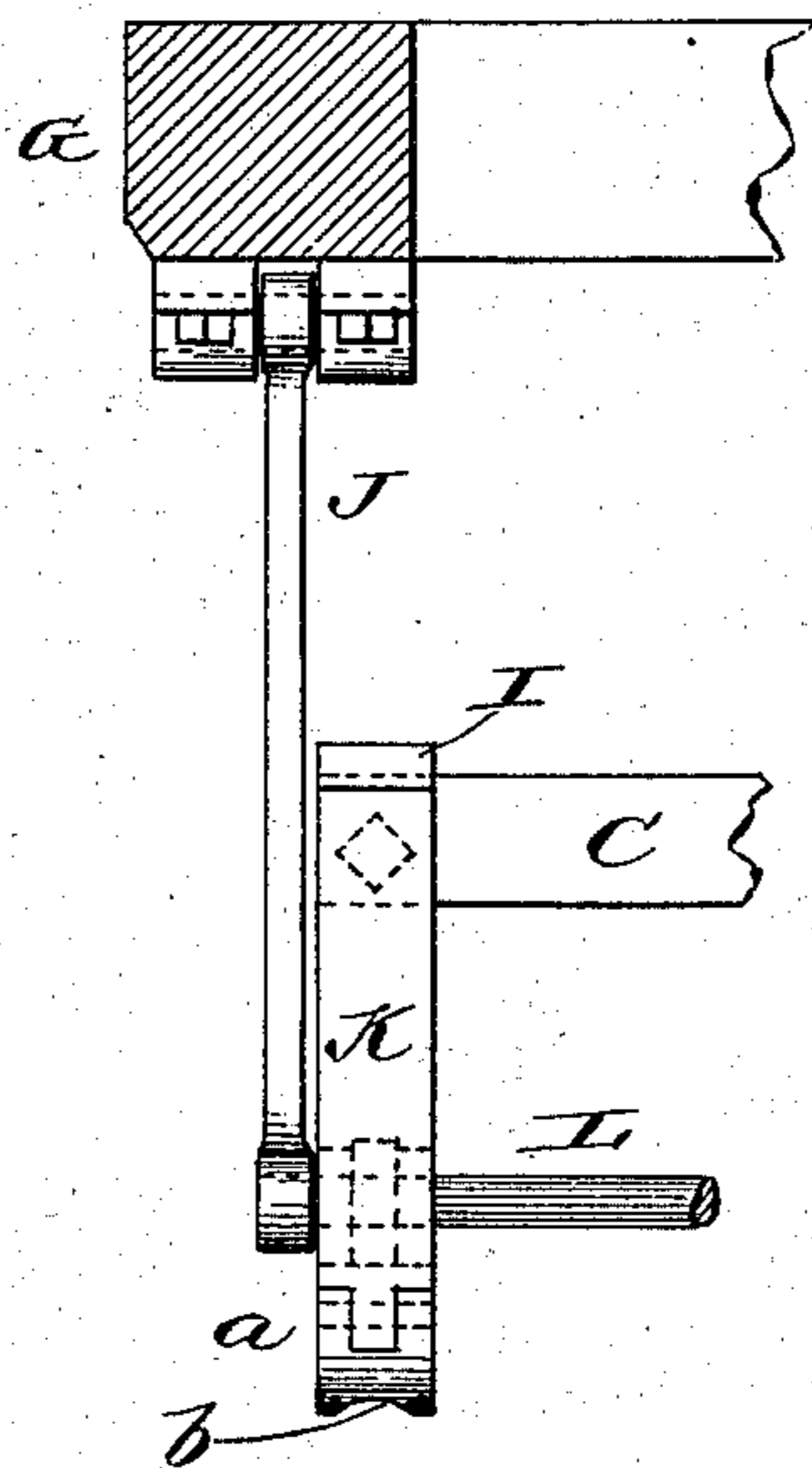
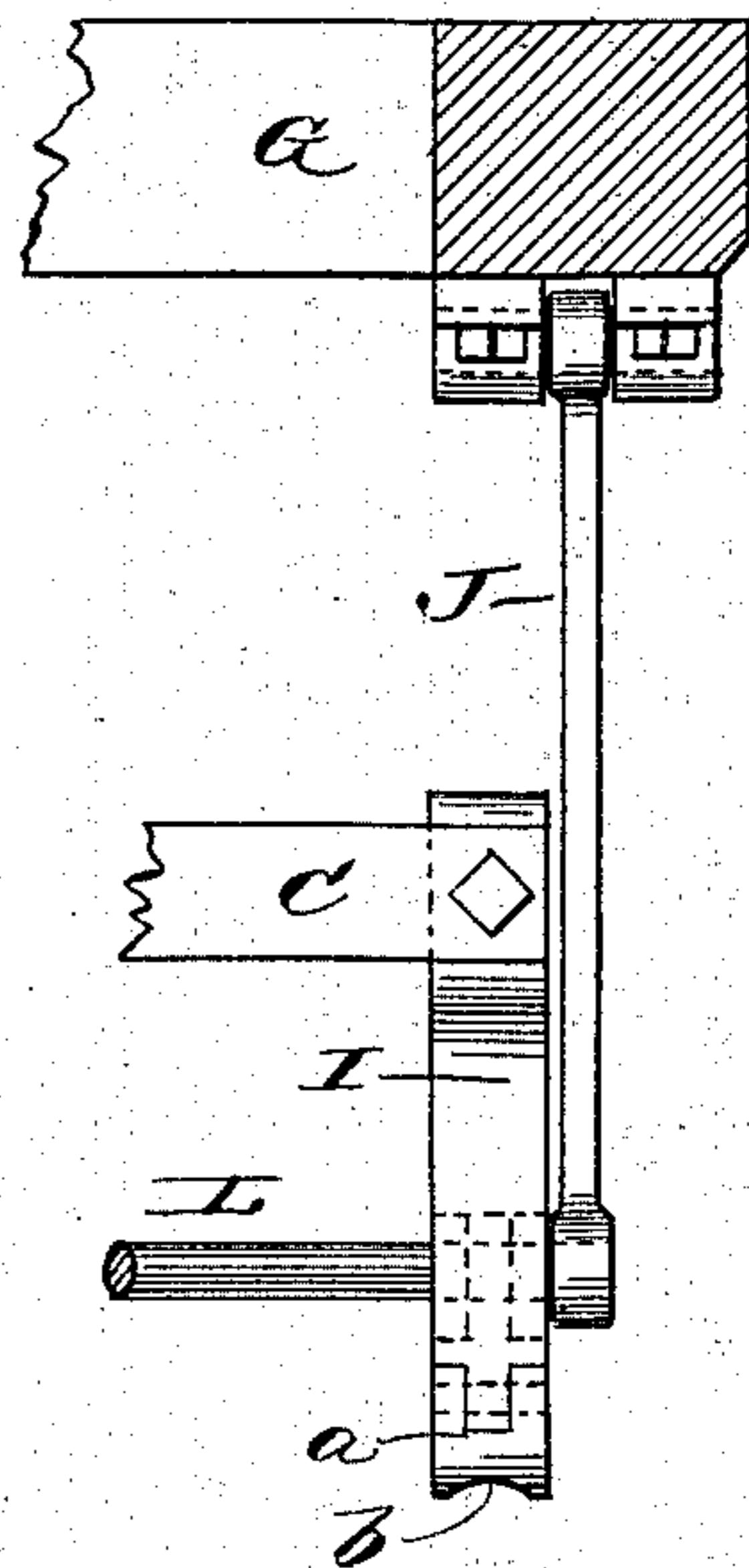


Fig. 4.



Witnesses:

A. L. Giraud.

E. A. Finckel.

Inventor:

Samuel T. Williams

By Ernest C. Webb
Attorney

UNITED STATES PATENT OFFICE.

SAMUEL T. WILLIAMS, OF RED BANK, NEW JERSEY.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 322,337, dated July 14, 1885.

Application filed November 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL T. WILLIAMS, a citizen of the United States, residing at Red Bank, in the county of Monmouth and State of New Jersey, have invented certain new and useful Improvements in Car-Brakes, of which the following is a full, clear, and exact description.

The object of this invention is to render the application of a brake more instantly effective than heretofore; and to this end the invention consists in a brake-beam pivotally connected to the timbers of a car-frame, and suspended from such timbers by radius bars, and provided with a duplex brake-shoe, one member of which acts against the rail and the other against the tread of the wheel when the brakes are "put on," thereby gaining a two-fold foot-hold in arresting the motion of the car, substantially as hereinafter particularly set forth.

In the accompanying drawings, in the several figures of which like parts are designated by similar letters of reference, Figure 1 is a side elevation of one truck of a car; Fig. 2, a vertical section through one brake-beam, and Figs. 3 and 4 front and rear views, respectively, of the parts shown in Fig. 2.

The car-truck is shown of ordinary construction with my novel brake mechanism applied thereto. I will describe the mechanism in connection with one pair of wheels A only, and for convenience of illustration I have shown a single rail, B, of the track. The brake-beam C is provided at each end with horizontal posts D, secured therein, and these posts are jointed to vertical levers E, which are pivoted at F to the timbers of the frame G, and such levers at opposite ends of the truck and at both ends of the car are connected by bars H, the connection of the levers with the bar being by movable joints, and the said bar being connected to a brake-wheel or other brake-operating mechanism in any usual manner to move said bar longitudinally of the car to operate the brake. To the brake-beam is attached a heel-piece, I, of a length sufficient to reach nearly to the rail when the brake is in the normal position of disuse.

The lower end of this heel-piece is preferably shod with a piece of friction material, *a*, such as is usually employed on brake-shoes, and which is here shown as hollowed out at *b* to conform to the shape of the tread of the rail. If the piece *a* is separate from the heel-piece I, it may be attached thereto by a groove and tenon and bolts, as indicated, or otherwise. This heel-piece is connected to the frame G by radius-bars J, which are jointed both to the heel-piece and to the frame. A brake-shoe, K, is pivoted to the heel-piece preferably by the bolt L for connecting the radius-bars thereto, and this pivotal connection of the shoe to the heel-piece is near the lower end of the former.

The operation is as follows: Movement of the bar H longitudinally of the car to apply the brake will move the levers E, and consequently tilt the brake-beam and the heel-piece on the radius-bar J, throwing the part *a* of the said heel-piece down upon the rail and into forcible contact therewith, and at the same time throwing the brake-shoe K forcibly against the tread of the wheel, thereby arresting the motion of the car very quickly.

What I claim is—

1. A brake mechanism comprising a brake-beam suspended from the car by radius bars, a heel-piece attached to said beam to engage the rail, a shoe pivoted to said heel-piece to engage the tread of the wheel, and a lever pivoted to the car-frame and jointed to the brake-beam, and means to operate said lever to tilt the brake-beam and heel-piece, substantially as described.

2. The combination of the brake-beam jointed to a lever pivoted in the car-frame, a heel-piece rigidly affixed to said beam, a radius-bar jointed to the heel-piece and car-frame, and a brake-shoe pivoted to said heel-piece, substantially as set forth.

In testimony whereof I have hereunto set my hand this 6th day of November, A. D. 1884.

SAMUEL T. WILLIAMS.

Witnesses:

ARTHUR C. WEBB,
ERNEST C. WEBB.