

(No Model.)

2 Sheets—Sheet 1.

J. S. NAERY.

CAR BRAKE.

No. 316,562.

Patented Apr. 28, 1885.

fig. 1.

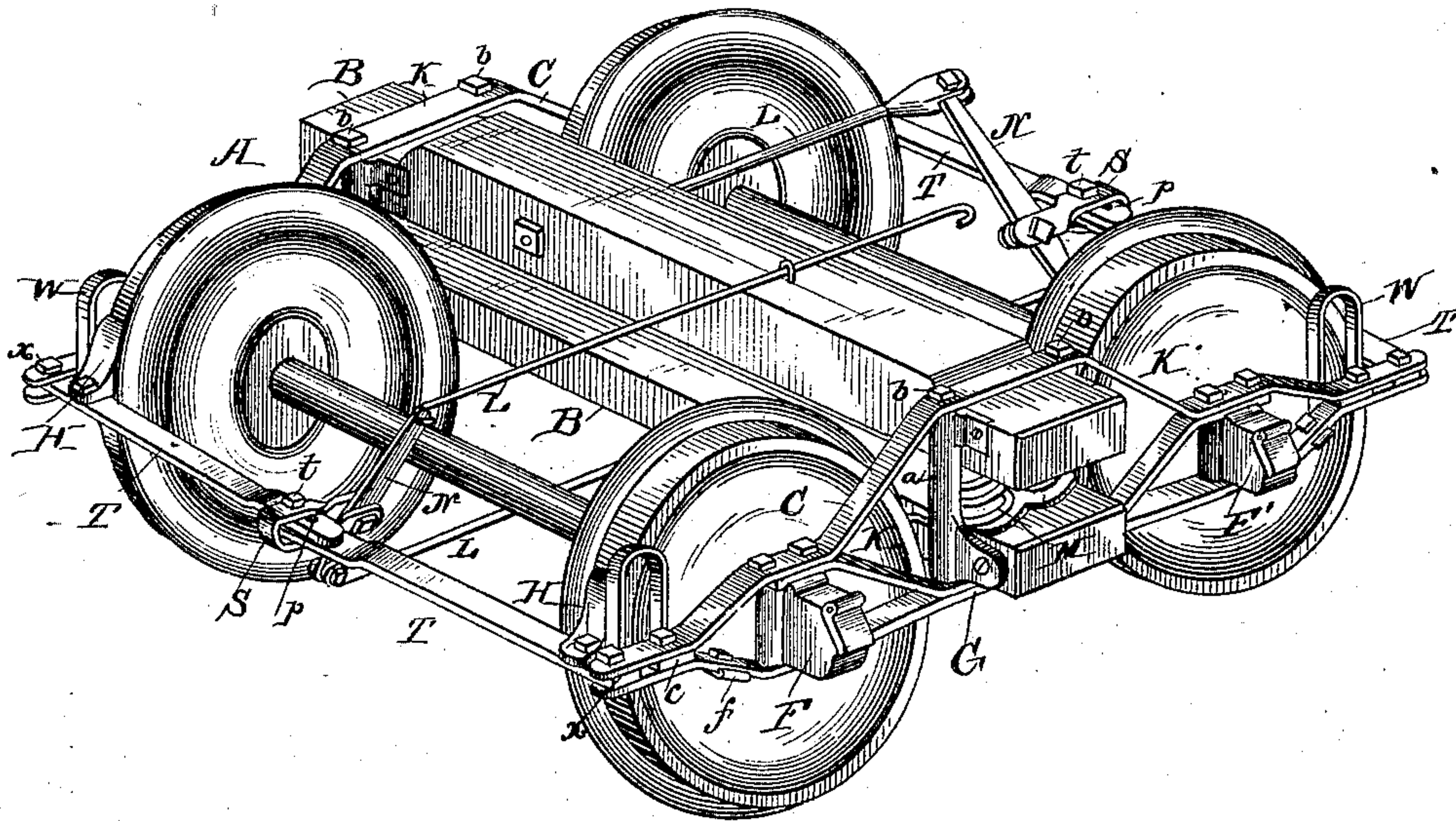
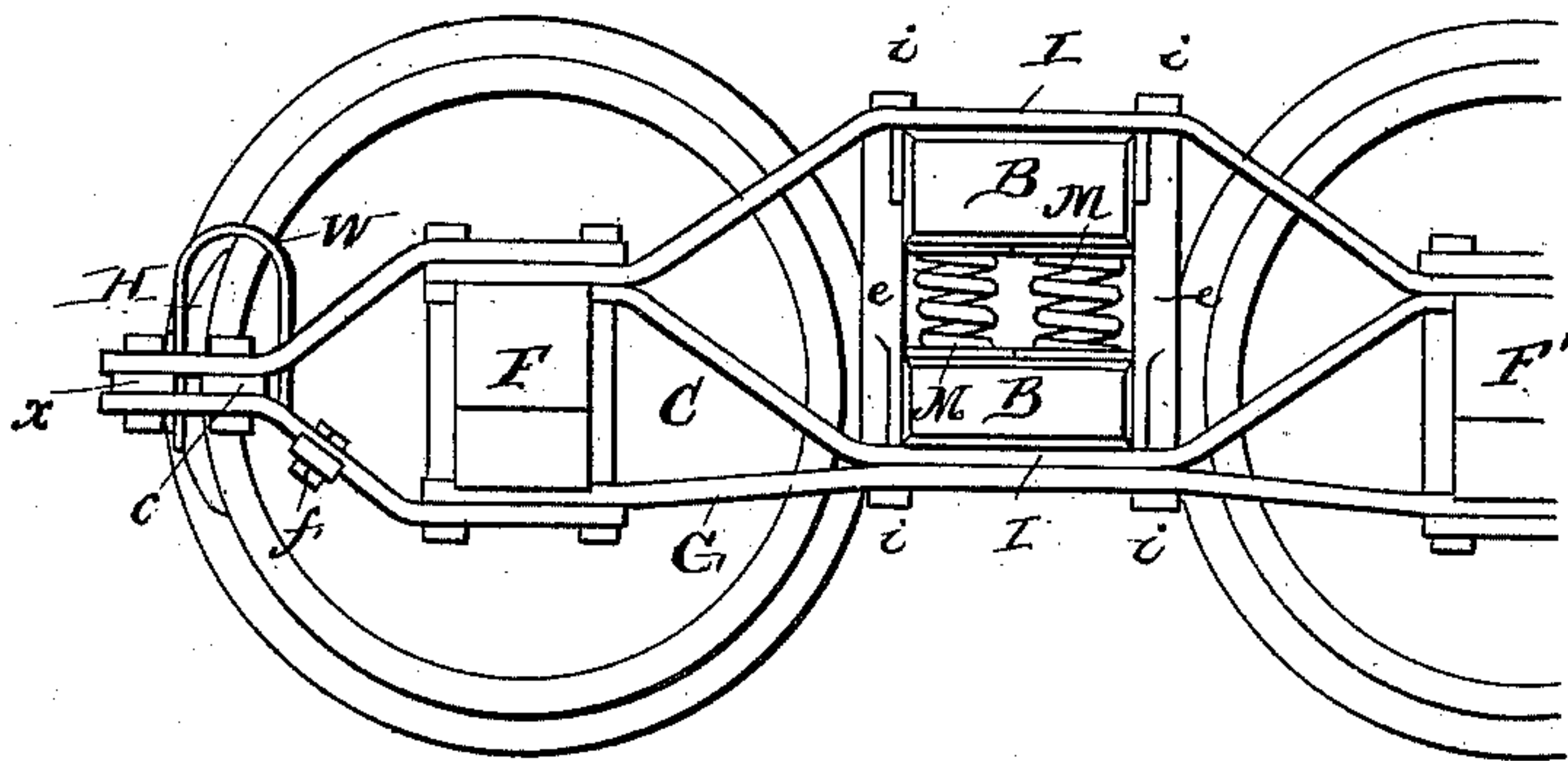


fig. 4.



Witnesses:

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Jm. F. Jayers.

Inventor:
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(No Model.)

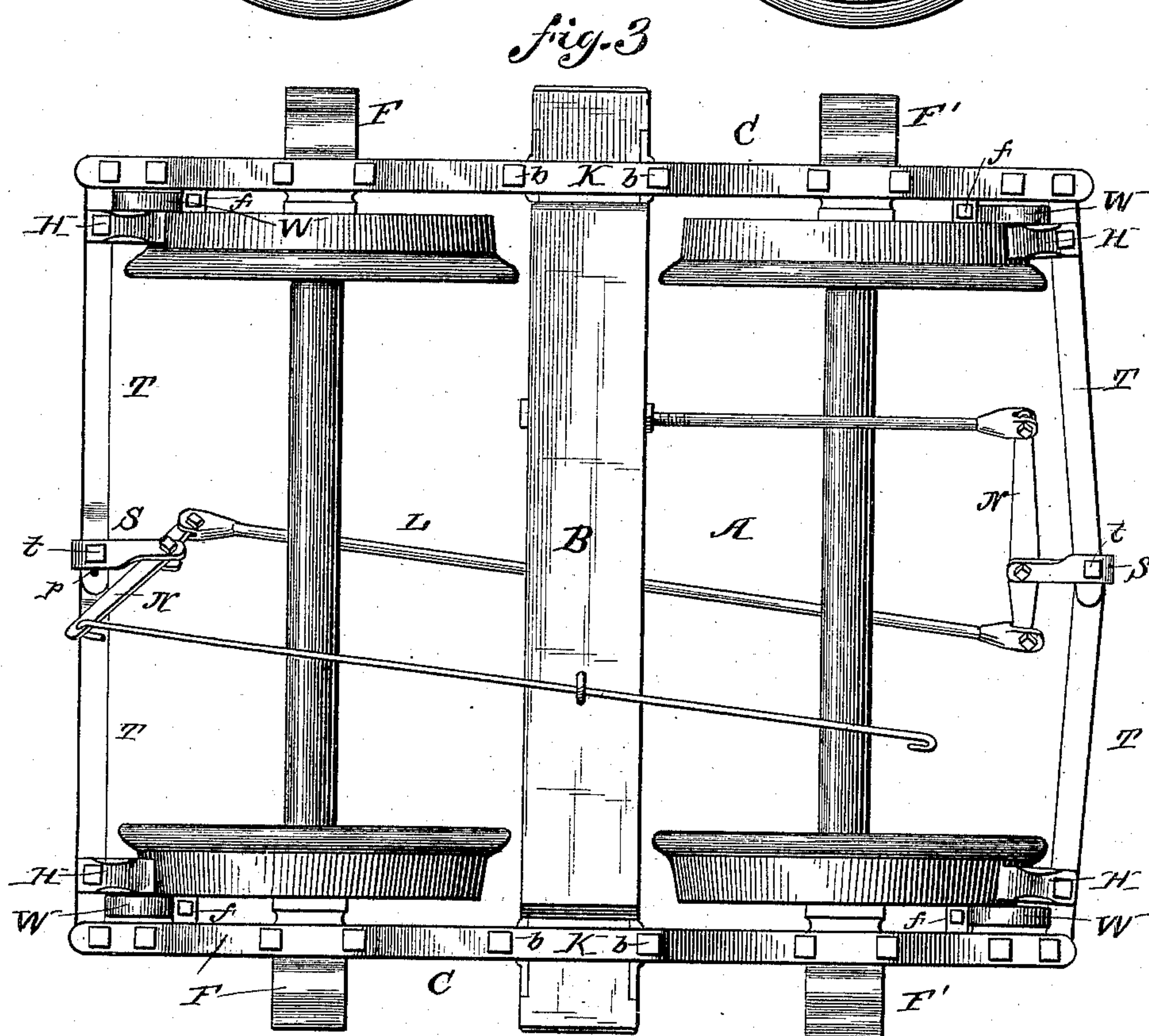
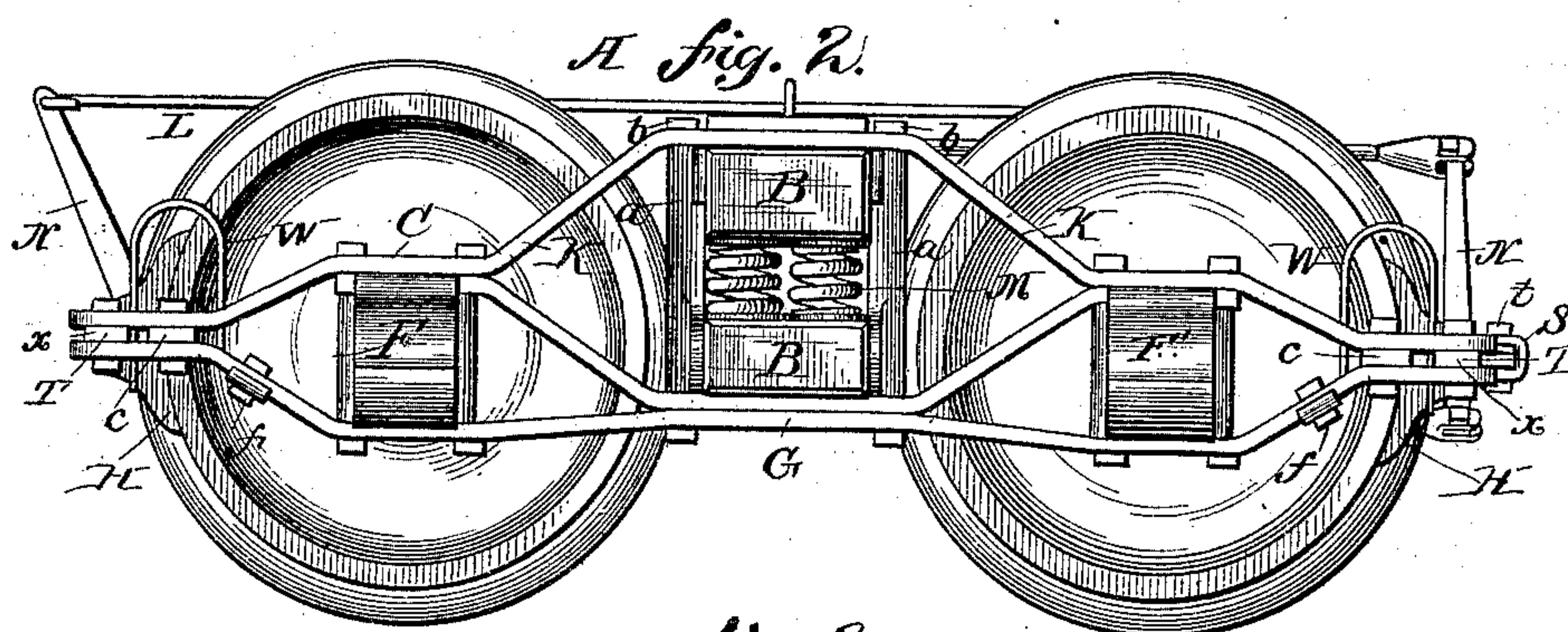
2 Sheets—Sheet 2.

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No. 316,562.

Patented Apr. 28, 1885.



Witnesses:
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H. J. Jagers.

Inventor:
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UNITED STATES PATENT OFFICE.

JOHN S. NAERY, OF NEW ALBANY, INDIANA.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 316,562, dated April 28, 1885.

Application filed September 24, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. NAERY, a citizen of the United States, and a resident of New Albany, in the county of Floyd and State of Indiana, have invented certain new and useful Improvements in Car-Brakes, of which the following is a specification.

My invention relates to certain new and useful improvements in car-brakes, the object being to produce a cheap, simple, and effective brake which may be applied to any of the well-known forms of trucks now employed, and one which will exert great force against the treads of the wheels with the use of a comparatively small amount of power.

To these ends the invention consists in the novel construction and arrangement of the parts of the breaking mechanism, as fully set forth hereinafter, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a car-truck embodying my invention. Fig. 2 is a side elevation thereof. Fig. 3 is a plan, and Fig. 4 is a modified form, of truck-frame adapted for use with my improved brake.

A designates a car-truck consisting of cross-beams B B, secured to side frames or trusses, C C, which are supported at their ends by wheels in the usual manner. The side frames, C C, may be of any suitable construction, those shown consisting of oppositely-arranged arched bars K K, forming a truss-like structure resting at its respective ends, where the arched bars meet, on the journal-boxes F F.

Below each side frame, C, and constituting part thereof, is arranged a longitudinal tie-bar or brace, G, secured at or near its ends to the under side of the journal-boxes F F.

The arched bars K K are braced and secured together near their center by interposed standards *a a*, through which and the arched bars and braces G pass bolts *bb*, firmly holding the parts in their proper relative positions.

Instead of fixedly securing the upper cross-beam, B, to the side frames, as is the lower beam, it is preferably movably supported between the standards *a a* on springs M M, interposed between the beams, and thus affording a yielding bearing for the body of the car.

To afford a very strong and rigid support for the attachment of the brake-levers T, I preferably extend each upper arched bar, K,

and brace G beyond its point of connection to the journal-boxes F F a sufficient distance to form bearings or pivot-points in advance of the supporting-wheels. The ends of each upper arched bar and brace G are bent toward each other, as clearly shown in Fig. 2, and where they meet are bolted or otherwise secured together with an interposed block, *c*, which latter holds the ends apart sufficiently to receive between them the brake-levers. The outer end of each brake-lever T is pivoted at *x* to one of the extensions of the side frames, outside of the supporting-wheels, while the inner ends of each pair of said levers lap a short distance, and are movably connected together by an encircling band or dog, S, which latter is held in its proper position by a bolt, *t*, passing through said band or dog and through slots *p* in the inner ends of said levers. To the inwardly-projecting ends of the dogs S are pivoted operating-levers N, connected by suitable tie-rods, L, to the cross-beam B and source of power in the usual manner.

To the levers T, directly opposite the periphery of each supporting-wheel, is pivotally attached a brake-shoe, H, provided with a slot in its outer side sufficiently deep to receive the entire width of said beam, so that the edges of the slot and beam will be flush, leaving no objectionable projections. The terminations of the slots in the brake-shoes are slightly convex, so as to permit of a limited lateral movement of the shoes, whereby a flat braking-surface is at all times presented, no matter what the inclination of the levers T may be with respect to the center of the wheels.

Supported at one end in brackets *f*, bolted to and projecting inwardly from the side frames, C, in advance of the journal-boxes, are inverted U-shaped springs W, adapted to bear with their opposite end against the levers T, to force the brakes away from the wheels when they are released.

Instead of lengthening each brace G and upper arched-bar, K, to form the end extensions of the truck-frame in one with the main portion thereof, as shown in Fig. 2, said extensions may be made separately and bolted to the frame at its points of attachment to the axle-boxes F, as shown in the modification, Fig. 4. In this instance the extension is com-

posed of two separate bars, I I, shaped in like manner as the lengthened ends of the brace G and upper arched bar, K, and are secured together at their outer extremities by suitable bolts or rivets, with an intervening block, c, to give them the necessary spread for the reception of the brake-levers. The inner ends of the bars I I are secured to the main structure by bolts i i, passing through bosses e e in the sides of the journal-boxes and through the ends of the side frames, thus firmly holding the parts together.

By this latter construction it will be observed that my improvements can be easily removed, should occasion require, and may also be as readily applied to any of the well-known forms of car-trucks now in use without the necessity of any material alterations of their frames.

As the pivot-points of the brake-levers are outside of the wheels, thus permitting the attachment of the shoes only a very short distance from the fulcrum of the levers, it will be seen that by the use of a comparatively small amount of power the brakes may be applied with great force, owing to the amount of leverage.

My brake while embodying the desirable qualities of cheapness, owing to its exceeding simplicity of construction, is at the same time very effective in its operation, durable, and may be easily applied to cars now in general use.

Although I have shown and described a particular form of truck to which my invention is applicable, I wish it to be understood that I do not limit myself by such construction, as it will be evident that the invention may be applied to any of the well-known forms of trucks now in use with equal facility.

I claim—

1. The combination, with a car-truck, of brake-levers pivoted to the frame thereof outside of the supporting-wheels, and directly and movably connected to each other at their inner ends, means for operating said levers, and brake-shoes connected thereto inside of the pivot-points of the levers, substantially as set forth.

2. The combination, with a car-truck hav-

ing truss-like side frames extending beyond the supporting-wheels, of brake-levers pivoted to said extensions outside of said wheels, and connected at their inner extremities by an encircling-dog having its inwardly-projecting arm arranged at an angle to said encircling portion, and means for operating said levers, substantially as set forth.

3. The combination, with a car-truck having truss-like side frames, said truss-frames being extended beyond the supporting-wheels, of brake-levers pivoted to said extended ends outside of said wheels and movably connected at their inner ends, means for operating said levers, brake-shoes pivotally connected to the levers between their extremities, and springs supported by the extended frames and adapted to bear against the brake-levers, substantially as set forth.

4. The combination, with a truck-frame having detachably-connected extremities projecting beyond the supporting-wheels, of brake-levers pivoted to the extremities of said extensions outside of said wheels, and connected at their inner ends by an encircling-dog provided with an angularly-arranged arm, means for operating said levers, slotted brake-shoes having convex bearings and pivoted to said levers inside of their pivot-points, and brackets secured to the extended frames and carrying U-shaped springs adapted to bear against the brake-levers, substantially as set forth.

5. The combination, with the truck-frame, of brake-levers pivoted thereto outside of the supporting-wheels, means for operating the same, and slotted brake-shoes pivoted to said levers, the slots being of a depth equal to the width of the levers and terminating in convex bearings, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JNO. S. NAERY.

Witnesses:

A. LEMMON, Sr.,
F. E. DISHMAN.