(No Model.)

F. D. PARADISE.

CAR BRAKE.

No. 403,285. Patented May 14, 1889.

Fig. 1.

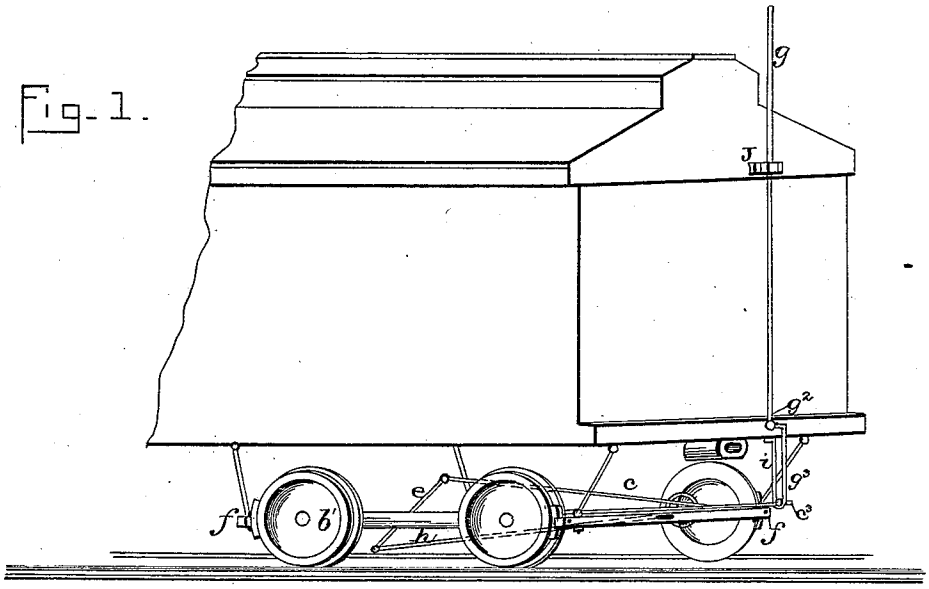


Fig. 2.

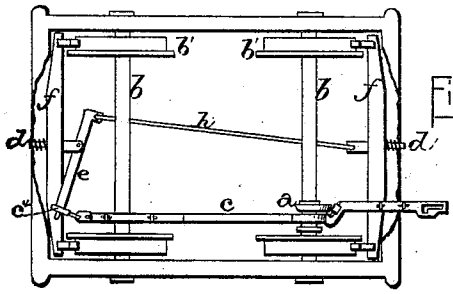


Fig. 3.

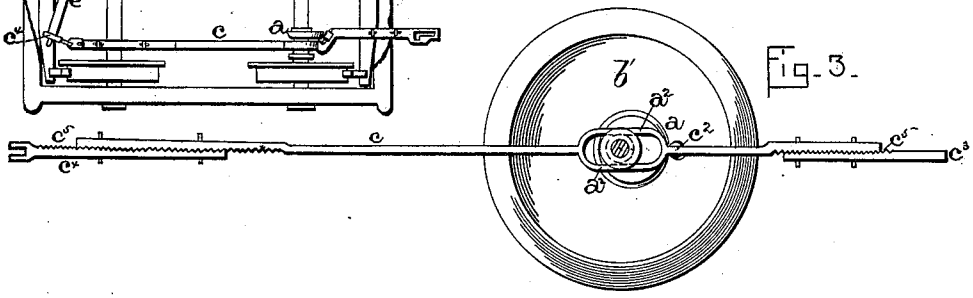
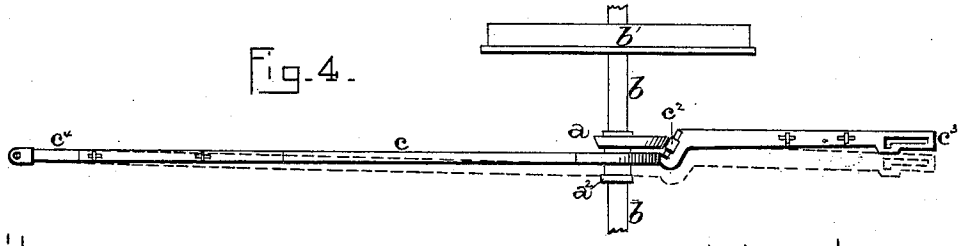


Fig. 4.



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UNITED STATES PATENT OFFICE.

FRANK DANAS PARADISE, OF CHICAGO, ILLINOIS.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 403,285, dated May 14, 1889.

Application filed December 26, 1888. Serial No. 294,573. (No model.)

To all whom it may concern:

Be it known that I, FRANK DANAS PARADISE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in a Device for Applying the Brakes to Railroad or other Cars, of which the following is a specification.

My invention relates to improvements in brakes as applied to railway and other cars in which a bevel-faced cam-wheel operates in conjuction with a sliding bar connected to the brake-lever and beams of the ordinary railway-cars; and the objects of my improvements are, first, to provide means whereby the motion and force of a moving car are used to put the pressure of the brakes upon the car-wheels; second, to afford facilities for the proper adjustment of the brakes to the wheels; third, to reduce the labor and time occupied in the present method of hand-brakes on railroad-cars. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of my device as applied to a car. Fig. 2 is a plan view of my device and car-trucks applied and connected to the present method of car-brakes. Fig. 3 is an enlarged elevation of my device, showing construction and mode of applying to the car-axle. Fig. 4 is a plan view of my device.

Similar letters refer to similar parts throughout the several views.

a is a bevel-faced cam-wheel, with sleeve and collar a^2 fixed to the car-truck axle *b* of any car.

c is a pivoted sliding-bar connection, pivoted at c^4 to the brake-lever *e*, and is operated or placed in connection with the cam-wheel *a*.

c^3 is a friction-roller arranged to connect and disconnect and operate with the movement of the cam-wheel *a* when the car is in motion. The connection and disconnection of the cam-wheel and pivoted sliding bar are performed by inserting the end g^3 of hand-lever *g* into the slot in the end of the pivoted sliding bar at c^3, as shown in elevation, Fig. 1. By moving the hand-lever *g*, which is pivoted at g^2, this movement connects or disconnects the pivoted sliding bar *c* and friction-roller c^2 to or from the cam-wheel *a*.

At each end of the pivoted sliding bar *c* is a take-up or adjusting device, made by notching the two pieces at the ends, as shown in elevation in Fig. 3, and slotting the bolt-holes and securing by bolts, as represented. On the ends of the jaw-bolts passing through the center of brake-beams at *d* are placed coil-springs to relieve the sudden jar imparted by the cam-wheel through its connections when applying the brakes.

The connection and *modus operandi* of my device as applied and operated upon ordinary cars is as follows: I first place the coil-springs upon the brake-beams on the ends of the jaw-bolts at *d*, (see plan, Fig. 2,) then connect the tie-rod *h* to the jaw-bolt at one end and the other end to the short end of the brake-lever *e*. This brake-lever *e* is secured by pivot to the jaw-bolt *d*, as shown in Fig. 2. The cam-wheel *a*, with its collars and sleeve a^2, is placed in position upon the axle *b* of the car-truck, so that the pivoted sliding bar *c* (a loosely-connected part of the cam-wheel *a*,) connects with the end of the brake-lever *e* at c^4. The other end of the pivoted sliding bar passes through a stirrup, *i*, fixed to the car-body, and into the slot at c^3 is inserted the end of the hand-lever *g* at g^3. (See elevation, Fig. 1.) This hand-lever is pivoted to the body of the car at g^2, and the handle extends to the top of the car and is secured by the guard J, which is notched, so that in one notch the connection to cam-wheel is made which places the brakes on. In the other notch the cam-wheel is disconnected from the pivoted sliding bar, as shown in dotted lines in Fig. 4, and brakes are off. The movement that applies the brakes is the thrust of the cam-wheel *a*, forcing the pivoted sliding bar *c* in the direction of pulling the brakes onto the wheels. As soon as the cam has carried the bar the full length of its throw, the end of the hand-lever *g* at g^3 follows the slot in the end of the pivoted sliding bar at c^3 and drops into the extension side notch of c^3 and holds the brakes on until they are thrown off by placing the hand-lever *g* into the opposite notch in the guard J.

Upon the end of the hand-lever at g^3, I place a loose thimble or sleeve, to act as a friction-roller against the sides of the slot at c^3.

I am aware that prior to my invention car-

brakes have been made to operate by chains and friction-wheels. I therefore do not claim such a combination, broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a device for applying brakes to railroad and other cars, of a cam-wheel with a bevel-face and a sleeve and collars fixed to the axle of the truck, all substantially as set forth.

2. The combination, in a device for applying brakes to railway and other cars, of a pivoted sliding bar with adjustable ends and yoke for securing same to the sleeve of the cam-wheel on the sleeve or axle, and a friction-roller on the sliding bar, substantially as described.

3. The combination, in a device for applying brakes to railway and other cars, of a pivoted hand-lever provided with a friction-thimble on its end, and the pivoted sliding lever provided with a slot, all substantially as set forth.

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Witnesses:
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