J. JOHNSON.

CAR-BRAKE.

No. 188,056. Patented March 6, 1877.

Fig. 2.

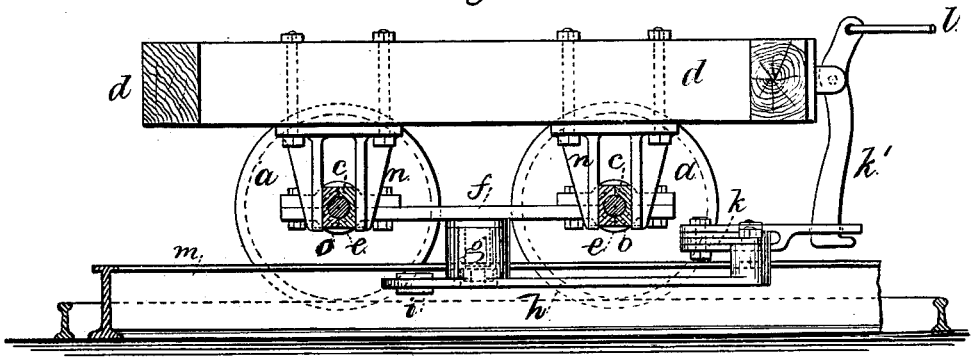


Fig. 1.

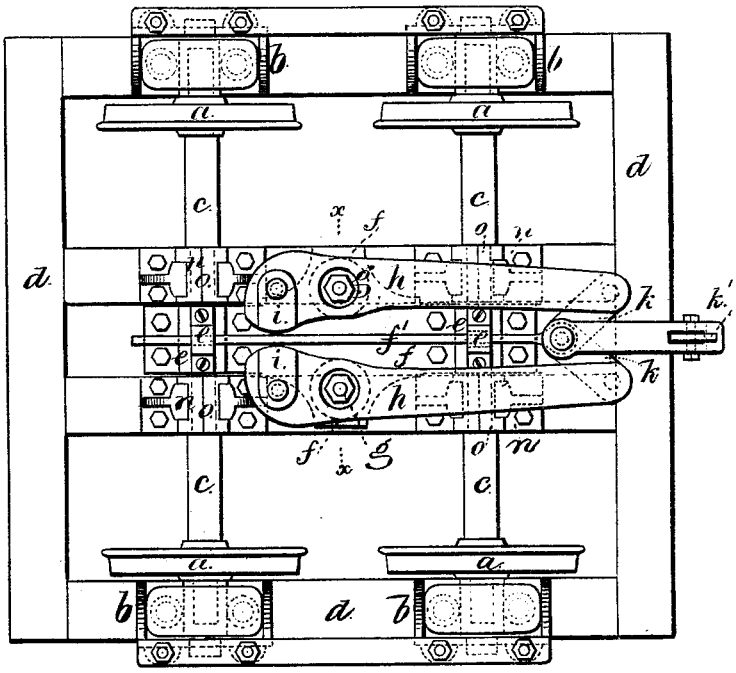
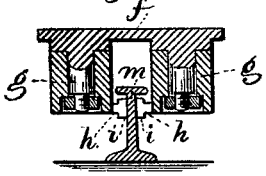


Fig. 3



Witnesses

Chas. A. Smith

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UNITED STATES PATENT OFFICE.

JOB JOHNSON, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **188,056**, dated March 6, 1877; application filed January 15, 1877.

To all whom it may concern:

Be it known that I, JOB JOHNSON, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Railway-Brakes, of which the following is a specification:

This invention is especially intended for elevated railways, where the risk of loss of life from running off the track is greater than on ordinary railways; but my improvements are available upon railways generally.

The object of the invention is to arrest the movement of the train without interfering with the running-gear or track, so that the wheels, axles, and rails are free from injury or strain in stopping the train.

I employ a compound grasping-lever for the brake, and cause the same to act upon a rail that is placed central, or nearly so, to the track, and especially adapted to such grasping-lever brake, so as to act in stopping the train, and also in holding the same firmly upon the track. This central brake-rail is intended to be laid either the entire length of the railway, or only of a sufficient length at stations to be operative in braking up the train.

In the drawing, Figure 1 is an inverted plan of the brake and truck. Fig. 2 is a side view of the brake, partially in section; and Fig. 3 is a cross-section at the line *x x*.

The wheels *a*, pillow-blocks *b*, and axles *c* are of ordinary construction, and are applied upon a truck-frame, *d*. The axles *c*, however, may be reduced near the middle, or provided with collars, so as to receive the bearing-boxes *e e* of the frame *f*, that carries the center bolts or studs *g* of the brake-levers *h h*. These levers *h* are connected, by the links *k*, lever *k'*, and chain or rod *l*, to any ordinary hand-wheel or brake-operating device.

The frame *f* and levers *h h* maintain a definite relation to the rails upon which the wheels *a* run, because the frame *f* receives its support from the axles *c*, and the truck-frame and car are free to rise and fall upon the springs; hence the levers *h h* will also remain in their proper position relatively to the brake-rail *m*, which is laid in the center of the track, and secured to the cross-ties with the requisite strength of fastenings, so that when the compound grasping-brake *h h* is operated, and the shoes *i i* upon such levers *h* brought against opposite sides of the rail, such rail is clamped, and the friction acts to stop the train without strain upon the wheels or axles.

It is to be understood that the frame *f* is sustained, and the endwise strain in stopping the car transferred from the car or truck-frame *d* to such frame *f* by the pillow-blocks *n* upon the said frame *d*. These pillow-blocks are represented as receiving the boxes *o o* upon the axles *c*, at each side of the frame *f*, so as to support the axles; but it will generally be preferable to employ standards or pillow-blocks directly at the sides or ends of the frame *f*, so that the power to stop the car may be exerted, through the levers and frame *f*, directly upon the standards and pillow-blocks upon the truck or car-frame.

By this construction of compound-lever brake and brake-rail the wheels are preserved from wear, injury, and undue strain.

In order to steady the brake-levers and prevent them swinging aside out of line with the central rail, should that rail not be continuous, I make use of the guide-bar *f'*, sliding lengthwise in bearing-loops on the boxes *e*, and this bar *f'* is connected at one end to the joint of the toggle-links *k*, so as to retain the same in the line of the center, or nearly so.

I claim as my invention—

1. The compound brake-levers *h* upon the frame *f*, in combination with the axles, wheels, and pillow-blocks *n*, substantially as and for the purposes set forth.

2. The combination, with the frame *f* and boxes *e*, of the boxes *o* and pillow-blocks *n*, substantially as set forth.

3. The guide-bar *f'* and links *k*, in combination with the brake-levers *h* and frame *f*, for the purposes and as set forth.

Signed by me this 11th day of January, A. D. 1877.

JOB JOHNSON.

Witnesses:

GEO. T. PINCKNEY,

CHAS. H. SMITH.